BUREAU OF RECLAMATION

Notice of Funding Opportunity No. R22AS00023

WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2022



U.S. Department of the Interior

August 2021

Mission Statements

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated Island Communities.

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

Cover photo: West Cache Irrigation Company's South Fields Earthen Canal Piping Project in Utah, which was an FY 2019 Water and Energy Efficiency Grant project. Photo courtesy of West Cache Irrigation Company.

Synopsis

Federal Agency Name:	Department of the Interior, Bureau of Reclamation, Water Resources and Planning Office
Funding Opportunity Title:	WaterSMART Grants: Water and Energy Efficiency Grants for fiscal year (FY) 2022
Announcement Type:	Notice of Funding Opportunity (NOFO)
Funding Opportunity Number:	R22AS00023
Catalog of Federal Domestic Assistance Number:	15.507
Dates: (See NOFO Sec. D.4)	Application due date: Wednesday, November 3, 2021, 4:00 PM Mountain Daylight Time (MDT)
Eligible Applicants: (See NOFO Sec. C.1)	**Category A:** States, Indian Tribes, irrigation districts, and water districts; any state, regional, or local authority whose members include one or more organizations with water or power delivery authority; and other organizations with water or power delivery authority. **Category B:** Nonprofit conservation organizations that are acting in partnership and with the agreement of an entity described in Category A. All applicants must be located in the Western United States or United States Territories as identified in the Reclamation Act of June 17, 1902, as amended and supplemented.
Recipient Cost Share: (See NOFO Sec. C.2)	50 percent or more of project costs
Federal Funding Amount: (See NOFO Sec. B.1)	**Funding Group I:** Up to $500,000 per agreement **Funding Group II:** Up to $2,000,000 per agreement
Estimated Number of Agreements to be Awarded: (See NOFO Sec. B.1)	Approximately 40-45 projects, contingent on appropriations.

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Application Checklist

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

√	What to submit	Required content	Form or format	When to submit
	Mandatory Federal Forms: Application for Federal Financial Assistance Budget Information Assurances Disclosure of Lobbying Activities	See Sec. D.2.2.1	SF-424, SF-424A, SF-424B, SF-424D and SF-LLL forms may be obtained at www.grants.gov/web/grants/forms/sf-424-family.html	*
	Title page	See Sec. D.2.2.2	Page 15	*
	Table of contents	See Sec. D.2.2.3	Page 15	*
	Technical proposal: Executive summary Technical Project description Evaluation criteria	 See Sec. D.2.2.4 See Sec. D.2.2.4 See Sec. E.1	 Page 15 Page 16 Page 29	* * * *
	Project Budget: Funding plan Budget proposal Budget narrative	 See Sec. D.2.2.5 See Sec. D.2.2.5 See Sec. D.2.2.5	 Page 17 Page 19 Page 21	* * * *
	Environmental and cultural resources compliance	See Sec. F.2.1	Page 45	*
	Required permits or approvals	See Sec. D.2.2.6	Page 23	*
	Letters of support	See Sec. D.2.2.7	Page 24	*
	Official Resolutions	See Sec. D.2.2.8	Page 24	**
	Unique Entity Identifier and System for Award Management	See Sec. D.3	Page 24	***

* Submit materials with your application.

** Document should be submitted with your application; however, please refer to the applicable section of the NOFO for extended submission date.

*** Should be completed prior to the application deadline; however, please refer to the applicable section of the NOFO for extended initiation date.

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Acronyms and Abbreviations

AFY	acre-feet per year
AMI	advanced metering infrastructure
ASAP	Automated Standard Application for Payments
ARC	Application Review Committee
CE	Categorical Exclusion
CEC	Categorical Exclusion Checklist
CFR	Code of Federal Regulations
CWA	Clean Water Act
Department	U.S. Department of the Interior
DUNS	Data Universal Number System
EA	Environmental Assessment
EIS	Environmental Impact Statement
E.O.	Executive Order
EQIP	Environmental Quality Incentives Program
ESA	Endangered Species Act
ET	evapotranspiration
FAPIIS	Federal Award Performance Integrity Information System
FAQ	Frequently Asked Question
FERC	Federal Energy Regulatory Commission
FONSI	Finding of No Significant Impact
FY	fiscal year
GIS	Geographic Information Systems
LOPP	Lease of Power Privilege
MTDC	modified total direct costs
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NOFO	Notice of Funding Opportunity
NRCS	Natural Resources Conservation Service
OM&R	operations, maintenance, and replacement
P.L.	Public Law
Reclamation	Bureau of Reclamation
SAM	System of Award Management
SCADA	Supervisory Control and Data Acquisition and Automation
SOR	System Optimization Review
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
WaterSMART	Sustain and Manage America's Resources for Tomorrow

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Section A. Funding Opportunity Description

A.1. Program Information

The U.S. Department of the Interior's (Department) WaterSMART (Sustain and Manage America's Resources for Tomorrow) Program provides a framework for Federal leadership and assistance to stretch and secure water supplies for future generations in support of the Department's priorities. Through WaterSMART, the Bureau of Reclamation (Reclamation) leverages Federal and non-Federal funding to work cooperatively with States, Tribes, and local entities as they plan for and implement actions to increase water supply sustainability through investments in existing infrastructure and attention to local water conflicts. Water and Energy Efficiency Grants provide support for priorities identified in Presidential Executive Order (E.O.) 14008: *Tackling the Climate Crisis at Home and Abroad* (E.O. 14008) and aligned with other priorities, such as those identified in Presidential Executive Order 13985: *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government* (E.O. 13985). Water and Energy Efficiency Grants also support the goals of the Interagency Drought Relief Working Group established in March 2021 and the National Drought Resiliency Partnership.

Drought conditions across the West impact a wide range of communities and sectors, including agriculture, cities, Tribes, the environment, recreation, hydropower producers, and others. The western United States is experiencing its worst drought this century—historic in both duration and severity - threatening to kill crops, spark wildfires, and harm public health. As of July, the U.S. Drought Monitor indicates that more than 93% of the land in nine of the Western states is in drought conditions, and nearly 60% of the area is experiencing extreme or exceptional drought. Through WaterSMART, Reclamation provides financial assistance to water managers for projects that seek to conserve and use water more efficiently and accomplish other benefits that contribute to sustainability in the Western United States.

Through Water and Energy Efficiency Grants, Reclamation provides financial assistance to support projects that result in quantifiable and sustained water savings, implement renewable energy components, and support broader sustainability benefits. Water and Energy Efficiency Grants are a component of Reclamation's WaterSMART Grants Program, which also includes Water Marketing Strategy Grants and Small-Scale Water Efficiency Projects. For further information on the WaterSMART Grants Program, please see www.usbr.gov/watersmart/index.html.

This Water and Energy Efficiency Grants Notice of Funding Opportunity (NOFO) provides funding for projects that result in quantifiable water savings, implement renewable energy components, and support broader sustainability benefits. These projects conserve and use water more efficiently; increase the production of renewable energy; mitigate conflict risk in areas at a high risk of future water conflict; and accomplish other benefits that contribute to sustainability in the Western United States.

A list of Frequently Asked Questions (FAQ) about WaterSMART and this NOFO can be found online at www.usbr.gov/WaterSMART/weeg/faq.html. The list of FAQs will be updated periodically during the application period. For further information on WaterSMART Grants, please see www.usbr.gov/watersmart/weeg/index.html. For further information on the WaterSMART Program, please see www.usbr.gov/WaterSMART.html.

A.2. Objective of this Funding Opportunity Announcement

The objective of this NOFO is to invite eligible applicants (Section C.1) to leverage their money and resources by cost sharing with Reclamation on projects that seek to conserve and use water more efficiently; increase the production of renewable energy; mitigate conflict risk in areas at a high risk of future water conflict; enable farmers to make additional on-farm improvements in the future, including improvements that may be eligible for Natural Resources Conservation Service (NRCS) funding; and accomplish other benefits that contribute to sustainability in the Western United States.

A.3. Statutory Authority

This NOFO 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 (P.L.) 111-11 (42 United States Code [U.S.C.] 10364).

A.4. Other Related Funding Opportunities

Through **WaterSMART Grants**, Reclamation also provides other funding opportunities. Through **Small-Scale Water Efficiency Projects**, Reclamation provides funding for small-scale water management projects (up to $75,000 in Federal funding for each project) that have been identified through previous planning efforts. Reclamation has developed a streamlined selection and review process to reflect the small-scale nature of these projects.

Through the **Drought Response Program**, Reclamation provides funding to help build resilience to drought. Through **Drought Contingency Planning**, Reclamation supports the development of drought contingency plans with participation from a diverse set of stakeholders. Reclamation also provides funding for **Drought Resiliency Projects** that increase water supply flexibility and improve water management to build long term resilience to drought and are supported by an existing drought contingency plan.

Reclamation is introducing a new category of funding under WaterSMART in FY 2022: **Environmental Water Resources Projects**. Funding will be provided to support projects focused on environmental benefits and that have been developed as part of a collaborative process to help carry out an established strategy to increase the reliability of water resources. Projects under this new category of funding may be eligible for up to 75% Federal funding. Sponsors of Drought Resiliency Projects, Water and Energy Efficiency Grants, or Cooperative Watershed Management Program Phase II projects that are focused on environmental benefits and that meet other requirements should apply under this new funding opportunity.

While the Environmental Water Resources Projects NOFO is available for projects focused primarily on environmental benefits, evaluation criteria in the Water and Energy Efficiency Grants NOFO continue to prioritize projects that provide environmental and sustainability benefits and enhance drought resiliency.

For information on the timing for these NOFOs, please visit the WaterSMART Program website: www.usbr.gov/watersmart/.

A.5. Collaboration with the Natural Resources Conservation Service

Reclamation and NRCS are collaborating to align program resources in areas of the Western United States where our mission areas overlap to improve the impact of the agencies' respective drought resiliency and water efficiency investments. Applicants under WaterSMART Grants receive additional consideration in the evaluation process for delivery system improvements that complement on-farm improvements supported by NRCS, such as those funded through their Environmental Quality Incentives Program (EQIP). Contingent on available appropriations, NRCS provides dedicated EQIP funding to support on-farm water efficiency improvements by producers served by water delivery systems improved through a WaterSMART Grant.

Please note that NRCS will have a separate application process for the on-farm components of selected projects.

Under this NOFO, consideration will be given under *Section E.1.4. Evaluation Criterion D—Complementing On-Farm Irrigation Improvements* for proposals that describe on-farm efficiency work that is currently being completed or is anticipated to be completed in collaboration with NRCS in the area (e.g., with a direct connection to the district's water supply). Please contact your state NRCS office for more information regarding NRCS assistance. You can find the contact information for your state NRCS office on the United States Department of Agriculture's website, www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/states/.

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Section B. Award Information

B.1. Total Project Funding

The President's FY 2022 budget request includes $15 million for WaterSMART Grants. Reclamation will determine the final amount of funding available for award under this NOFO once final FY 2022 appropriations have been made. The amount of funding available for awards under this NOFO will depend on the demand for funding under this and other categories of WaterSMART Grants. Any awards are subject to a determination by Reclamation that FY 2022 appropriations are available. Applications submitted under this NOFO may also be considered if other funding becomes available in FY 2023 or subsequently.

B.2. 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). ***In general, no more than $2,000,000 will be awarded to any one applicant under this NOFO. However, Category B applicants may be considered for multiple awards of up to $2,000,000 per project if the Category A partners are different.***

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 non-Federal 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 the following two funding groups.

B.2.1. Funding Group I

Up to $500,000 in Federal funds provided through this NOFO will be available for smaller, on-the-ground projects.

- In general, projects funded under Funding Group I should be completed within two years of award (see Section C.3.3. *Length of Projects* for additional information).
- It is expected that more awards will be made for projects in Funding Group I than Funding Group II (described below).

B.2.2. Funding Group II

Up to $2,000,000 in Federal funds provided through this NOFO 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 may be funded on an annual basis, for a period of up to 3 years, with a maximum of $2,000,000 available for the entire project. 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 fiscal year [FY] 2023 and FY 2024 funding).

- Recipients must demonstrate sufficient progress to receive subsequent funding for remaining phases of the project.
- It is expected that a smaller number of awards will be made for projects in Funding Group II than Funding Group I.

B.3. Environmental and Cultural Resource Compliance

All projects selected for funding under this NOFO will be required to comply with the National Environmental Policy Act (NEPA) and other Federal environmental and cultural resource laws and other regulations.

B.4. Assistance Instrument

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 the Program Coordinator identified in Section G. *Agency Contacts.*

Section C. Eligibility Information

C.1. Eligible Applicants

Under P.L. 111-11, Section 9502, applicants eligible to receive an award under this Funding Opportunity include:

Category A applicants:

- States, Indian Tribes, irrigation districts, and water districts;
- State, regional, or local authorities, the members of which include one or more organizations with water or power delivery authority; and
- Other organizations with water or power delivery authority.

Category B Applicants:

- Nonprofit conservation organizations that are acting in partnership with, and with the agreement of, an entity described in Category A. Category B applicants must include with their application a letter from the Category A partner, stating that they are acting in partnership with the applicant and agree to the submittal and content of the proposal.

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: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming, American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and Puerto Rico.

Those not eligible include, but are not limited to, the following entities:

- Federal Governmental entities
- Individuals
- Institutes of higher education
- 501(c)4 organizations
- 501(c)6 organizations

C.2. Cost Sharing Requirements

Applicants must be capable of cost sharing **50 percent or more** of the total project costs. The total project cost is defined as the total allowable costs incurred under a Federal award and all required cost share and voluntary committed cost share contributions, including third-party contributions.

Cost share may be made through cash, costs contributed by the applicant, or third-party in-kind contributions. Third-party in-kind contributions include the value of non-cash contributions of property or services that benefit the federally assisted project and are contributed by non-Federal third parties, without charge. 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. Please see Section D.2.2.8 *Official Resolution* and Section D.2.2.5.1 *Funding Plan and Letters of Commitment* for more information regarding the documentation required to verify commitments to meet cost sharing requirements.

Other sources of Federal funding may not be counted towards the required cost share. The exception to this requirement is where the Federal statute authorizing a program specifically provides that Federal funds made available for such program can be applied to matching or cost sharing requirements of other Federal programs, such as awards to tribal organizations under P.L. 93-638, as amended. *If it is determined that the Federal funding cannot be applied towards the non-Federal cost share, the work associated with the funding may be removed from the proposed project.*

C.2.1. Cost Share Regulations

All cost-share contributions must meet the applicable administrative and cost principles criteria established in 2 Code of Federal Regulations (CFR) Part 200, available at www.ecfr.gov.

C.2.2. Third-Party In-Kind Contributions

Third-party in-kind contributions may be in the form of equipment, supplies, and other expendable property, as well as the value of services directly benefiting and specifically identifiable to the proposed project. Applicants may not include as part of their cost-share for projects funded under this NOFO the cost or value of third-party 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. Applicants should refer to 2 CFR §200.434 *Contributions and donations* for regulations regarding the valuation of third-party in-kind contributions, available at www.ecfr.gov.

C.3. Eligible Projects

C.3.1. Eligible Projects

Water conservation and renewable energy projects eligible for funding under this NOFO are described below. Applications may include anyone, or a combination, of the types of projects described. In general, if you are seeking funding for multiple projects (e.g., a piping project and a hydropower 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 $2,000,000 will be awarded in any FY to any one applicant under this NOFO.

C.3.1.1. Water Conservation Projects

Water conservation projects 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 F.2.4. Requirements for Agricultural Operations under Public Law 111-11, Section 9504(a)(3)(D)* of this NOFO for further information. Eligible water conservation projects include:

- **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
  - Improving existing conveyance and delivery infrastructure
- **Municipal Metering:** Projects that install meters, resulting in measurable water savings. Projects include, but are not limited to:
  - Installing end-user water service meters, e.g., for a residential or commercial building unit
  - Installing distribution system meters associated with production and/or leakage quantification. Note that distribution system meters will not receive points for quantifiable water savings under Evaluation Criterion A: Quantifiable Water Savings (Section E. 1.1.). Accordingly, to receive points under Evaluation Criterion A, these projects must be paired with a complementary project component that will result in water savings, e.g., pipe installation using upgraded materials or individual water service meters.
- **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
- **Supervisory Control and Data Acquisition and Automation (SCADA)**: 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.)
- **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, which are eligible for WaterSMART Grants funding. Projects include, but are not limited to:

- Removing turf
- Installing Smart irrigation controllers
- Installing high-efficiency nozzles (e.g., sprinkler heads)

- **High-Efficiency Indoor Appliances and Fixtures:** Projects that promote installation of high-efficiency indoor appliances 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, which are eligible for WaterSMART Grants funding.
- **Commercial Cooling Systems**: Projects to retrofit or replace large evaporative cooling units (cooling towers) to reduce consumptive water use and energy, such as conversion to air-cooled units or high-efficiency cooling towers.

C.3.1.2. Renewable Energy Projects

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

C.3.1.2.1. 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:

- Developing new hydropower capacity by installing a new hydropower facility or uprating (i.e., increasing) the capacity of an existing hydropower facility
- Bringing existing mothballed hydropower capacity back online through facility investment
- Installing solar-electric, wind energy, or geothermal power systems (e.g., replacing fossil fuel powered pumps with renewable energy-based pumps)

Proposals including a renewable energy component typically require additional permitting not needed for other water management improvements (e.g., canal lining). In evaluating these proposals, Reclamation may consider the applicant's progress in obtaining requisite permits – e.g., for hydropower projects, 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 requisite permits, as applicable.

Note that improvements to Federal facilities that are implemented through any project awarded funding through this NOFO 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 F.2.5. *Title to Improvements Under Public Law 111-11, Section 9504(a)(3)(D)*.

Applicants proposing renewable energy development may wish to contact the Program Coordinator listed in Section G. *Agency Contacts*, prior to the application deadline to discuss the requirements listed above.

C.3.2. Ineligible Projects

Any project not specifically described in *Section C.3.1. Eligible Projects* is not eligible under this NOFO. The following subsections further explain ineligible projects.

C.3.2.1. Operations, Maintenance, and Replacement

Projects that are considered normal operations, maintenance, and replacement (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
- Sealing cracks in canals and/or pipes, including those sealant projects intending to improve facilities with inherent design and construction flaws
- Replacing broken meters with new meters of the same type
- Replacing leaky pipes with new pipes of the same type
- Completion of one-time leak detection surveys

Applicants that have questions regarding OM&R are encouraged to contact the Program Coordinator listed in Section G. *Agency Contacts*, prior to the application deadline for further information.

C.3.2.2. Water Reclamation, Recycling, and Reuse

Water reclamation, reuse, and desalination projects are not eligible for funding under this NOFO. Entities seeking funding for these types of projects should consider Reclamation's Title XVI Water Reclamation and Reuse Program and Drought Response Program. If you have questions about a water reclamation, reuse, or desalination project please contact Ms. Amanda Erath at 303-445-2766 or aerath@usbr.gov.

C.3.2.3. Groundwater Recharge

Groundwater recharge projects are not eligible. Applicants proposing such projects should consider applying for funding under the WaterSMART Drought Resiliency Projects NOFO. See the WaterSMART Drought Response Program webpage, www.usbr.gov/drought/, for more information.

C.3.2.4. Water Purchases

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

C.3.2.5. Building Construction

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

C.3.2.6. Pilot Projects

A project that proposes to conduct a pilot study to evaluate technical capability, economic feasibility, or viability for full-scale implementation, or to test an unproven material or technology is not eligible for Federal funding under this NOFO.

C.3.2.7. Projects Receiving Other Federal Financial Assistance

Projects or activities that are funded under another Federal Financial Assistance agreement are not eligible for funding under this NOFO.

C.3.2.8. New Conveyance Infrastructure

A project that proposes to construct new conveyance to allow for the distribution of additional or new water supplies is not eligible. Applicants proposing such projects should consider applying for funding under the WaterSMART Drought Resiliency Projects NOFO. See the WaterSMART Drought Response Program webpage, www.usbr.gov/drought/, for more information.

C.3.3. Length of Projects

In general, Funding Group I projects should be completed within two years of award. Funding Group II projects should be completed within three years of award and each year 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 hydropower project installations may require additional time to secure necessary permits.

Reclamation will determine the capability of an applicant to complete the proposed project within the timeframe identified in the application.

Section D. Application and Submission Information

D.1. 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 NOFO by emailing the Notice of Funding Opportunity staff at bor-sha-fafoa@usbr.gov.

D.2. Content and Form of Application Submission

All applications must conform to the requirements set forth below.

D.2.1. Application Format and Length

The technical proposal and criteria section (defined below) shall be limited to a maximum of **50** consecutively numbered pages. If this section of the application exceeds 50 pages, only the first 50 pages will be evaluated. The font shall be at least 12 points in size and easily readable. Page size shall be 8½ by 11 inches, including charts, maps, and drawings. Margins should be standard 1-inch margins. Oversized pages will not be accepted.

Applications will be prescreened for compliance to the above page number limitation. Excess pages will be removed and not considered in the evaluation of the proposed project.

D.2.2. Application Content

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

- Mandatory Federal Forms. Note, applications submitted by consultants must contain an SF-424 and SF-424D that is manually signed by an authorized representative of the entity applying.
    - SF-424 Application for Federal Assistance.
    - SF-424A Budget Information – Construction Programs
    - SF-424D Assurances – Construction Programs
    - SF-LLL Disclosure of Lobbying Activities (if applicable)

These forms may be obtained at www.grants.gov/web/grants/forms/sf-424-family.html.

- Title page
- Table of contents
- Technical proposal and evaluation criteria (limited to **50** pages)
  - Executive summary
  - Project location
  - Technical project description
  - Evaluation criteria
  - Performance Measures
- Project budget
  - Funding plan and letters of commitment
  - Budget proposal
  - Budget narrative
- Environmental and cultural resources compliance
- Required permits or approvals
- Letters of project support
- Official resolution

It is highly recommended that application packages be structured in the order identified above.

D.2.2.1. Mandatory Federal Forms

The application must include the following standard Federal forms:

D.2.2.1.1. SF-424 Application for Federal Assistance

A fully completed SF-424, Application for Federal Assistance signed by a person legally authorized to commit the applicant to performance of the project must be submitted with the application. Failure to submit a properly signed SF-424 may result in the elimination of the application from further consideration.

D.2.2.1.2. SF-424 Budget Information

A fully completed SF-424A must be submitted with the application.

D.2.2.1.3. SF-424 Assurances

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

D.2.2.1.4. SF-LLL Disclosure of Lobbying Activities

A fully completed and signed SF-LLL, Disclosure of Lobbying Activities is required is required if the applicant has made or agreed to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. *Note—this form cannot be submitted by a contractor or other entity on behalf of an applicant.*

D.2.2.2. 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, email address, and telephone of the project manager.

D.2.2.3. Table of Contents

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

D.2.2.4. Technical Proposal and Evaluation Criteria

The technical proposal and evaluation criteria (**50** pages maximum) include:

(1) Executive summary

(2) Project location

(3) Technical project description

(4) Evaluation criteria

(5) Performance measures

*DI.*2.2.4.1. Executive Summary

The executive summary should include:

- The date, applicant name, city, county, and state
- Please indicate whether you are a Category A applicant or a Category B applicant. If you are a Category B applicant, please briefly explain how you are acting in partnership with a Category A partner. Note: If you are a Category B applicant, you must include a letter from the Category A partner confirming that they are partnering with you and agree to the submittal and content of the proposal. See Section C.1. *Eligible Applicants.*
- A one-paragraph project summary that provides the location of the project, a brief description of the work that will be carried out, any partners involved, expected benefits, and how those benefits relate to the water management issues you plan to address. Please note: this information will
  be used to create a summary of your project for our website if the project is selected for funding. For example, note the following description of a project selected for funding in FY 2020:

fExample: The Bard Water District, located in southern California near the Arizona border, along with the Quechan Indian Tribe, will construct conveyance improvementsor the Five Gates structure, which is a series of gated culverts that act as a major chokepoint in the District's delivery system. The District will replace the existing Five Gates structure with new more advanced metal gates and 560 feet of pipeline to increase water use efficiency and reliability through optimal flow rates, reduced leakage, and reduced operational losses. The project is a top priority for the District and the Tribe and is expected to result in annual water savings of 1,452 acre-feet, which will remain in the Lower Colorado River System.

- State the length of time and estimated completion date for the proposed project. ***Note: proposed projects should <u>not</u> have an estimated construction start date that is prior to July 2022.***
- Whether or not the proposed project is located on a Federal facility.

D.2.2.4.2. Project Location

Provide detailed information on the proposed project location or project area including a map showing the specific geographic location. For example, {project name}is located in {state and county} approximately {distance} miles {direction, e.g., northeast} of {nearest town}. The project latitude is {##°##'N} and longitude is {###°##'W}.

D.2.2.4.3. Technical Project Description

Provide a more comprehensive description of the technical aspects of your project, including the work to be accomplished and the approach to complete the work. This description should provide detailed information about the project including materials and equipment and the work to be conducted to complete the project. This section provides an opportunity for the applicant to provide a clear description of the technical nature of the project and to address any aspect of the project that reviewers may need additional information to understand.

Please do not include your project schedule and milestones here; that information is requested in response to the Readiness to Proceed criterion described in Section E.1.5.2. In addition, please avoid discussion of the benefits of the project, which are also requested in response to evaluation criteria described in Section E.1. This section is solely intended to provide an understanding of the technical aspects of the project.

Please note, if the work you are requesting funding for is a phase of a larger project, please only describe the work that is reflected in the budget and exclude description of other activities or components of the overall project.

D.2.2.4.4. Evaluation Criteria

The evaluation criteria portion of your application should thoroughly address each criterion and subcriterion in the order presented to assist in the complete and accurate evaluation of your proposal.

(See Section E.1. *Technical Proposal: Evaluation Criteria* for additional details, including a detailed description of each criterion and subcriterion and points associated with each.)

It is suggested that applicants copy and paste the evaluation criteria and subcriteria in Section E.1.* Technical Proposal: Evaluation Criteria *into their applications to ensure that all necessary information is adequately addressed.

D.2.2.4.5. Performance Measures

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved). For more information calculating performance measure, see Appendix A: *Benefit Quantification and Performance Measure Guidance.*

All Water and Energy Efficiency Grants 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 Water and Energy Efficiency Grants 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. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of Water and Energy Efficiency Grants.

Note: program funding may be used to install necessary equipment to monitor progress. However, program funding may not be used to measure performance after project construction is complete (these costs are considered normal operation and maintenance costs and are the responsibility of the applicant).

D.2.2.5. Project Budget

The project budget includes:

(1) Funding plan and letters of commitment

(2) Budget proposal

(3) Budget narrative

If the proposed project is selected, the awarding Reclamation Grants Officer will review the proposed pre-award costs to determine if they are consistent with program objectives and are allowable in accordance with the authorizing legislation. Proposed pre-award costs must also be compliant with all applicable administrative and cost principles criteria established in 2 CFR Part 200, available at www.ecfr.gov, and all other requirements of this NOFO**. Costs incurred prior to July 1, 2021 are not eligible project costs under this NOFO and should not be included in the proposed budget estimate.**

Please note that the costs for preparing and submitting an application in response to this NOFO, including the development of data necessary to support the proposal, are not eligible project costs under this NOFO and must not be included in the project budget. In addition, Budget Proposals must not include costs for the purchase of water or land, or to secure an easement other than a construction easement. These costs are not eligible project costs under this NOFO.

D.2.2.5.1. Funding Plan and Letters of Commitment

Describe how the non-Federal 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. Letters of commitment shall identify the following elements:

- The amount of funding commitment
- The date the funds will be available to the applicant
- Any time constraints on the availability of funds
- Any other contingencies associated with the funding commitment

Commitment letters from third party funding sources should be submitted with your 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 will not make funds available for an award under this NOFO until the recipient has secured the non-Federal cost-share. Reclamation will execute a financial assistance agreement once non-Federal funding has been secured or Reclamation determines that there is sufficient evidence and likelihood that non-Federal funds will be available to the applicant subsequent to executing the agreement.

Please identify the sources of the non-Federal cost-share contribution for the project, including:

- Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments)
- Any costs that will be contributed by the applicant
- Any third-party in-kind costs (i.e., goods and services provided by a third party)
- Any cash requested or received from other non-Federal entities
- Any pending funding requests (i.e., grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied

In addition, please identify whether the budget proposal includes any project costs that have been or may be incurred prior to award. For each cost, describe:

- The project expenditure and amount
- The date of cost incurrence
- How the expenditure benefits the project

D.2.2.5.2. Budget Proposal

The total project cost (Total Project Cost), is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party contributions, that are necessary to complete the project.

Table 1.—Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	$
Costs to be paid by the applicant	$
Value of third-party contributions	$
TOTAL PROJECT COST	**$**

The budget proposal should include detailed information on the categories listed below and must clearly identify ***all*** items of cost, including those that will be contributed as non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from Reclamation, and any requested pre-award costs. Unit costs must be provided for all budget items including the cost of services or other work to be provided by consultants and contractors. Applicants are strongly encouraged to review the procurement standards for Federal awards found at 2 CFR §200.317 through §200.327 before developing their budget proposal.

If you have any questions regarding your budget proposal or eligible costs, please contact the grants management specialist identified in *Section G. Agency Contacts.*

It is also strongly advised that applicants use the budget proposal format shown in Table 2 or a similar format that provides this information. If selected for award, successful applicants must submit detailed supporting documentation for all budgeted costs. It is not necessary to include separate columns indicating which cost is being contributed as non-Federal cost share or which costs will be reimbursed with Federal funds.

Note: The costs of preparing bids, proposals, or applications on potential Federal and non-Federal awards or projects, including the development of data necessary to support the non-Federal entity's application are not eligible project costs and should not be included in the budget proposal (2 CFR §200.460).

Table 2.—Sample Budget Proposal Format

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	$/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 and Materials				
Item A				$
Item B				$
Contractual/Construction				
Contractor A				$
Contractor B				$
Third-Party Contributions				
Contributor A				$
Contributor B				$
Other				
Other				$
TOTAL DIRECT COSTS				**$**
Indirect Costs				
Type of rate	percentage	$base		**$**
TOTAL ESTIMATED PROJECT COSTS				**$**

D.2.2.5.3. Budget Narrative

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. Costs, including the valuation of third-party in-kind contributions, must comply with the applicable cost principles contained in 2 CFR Part §200, available at the Electronic Code of Federal Regulations (www.ecfr.gov).

D.2.2.5.3.1. Salaries and Wages

Indicate the Project Manager and other key personnel by name and title. The Project Manager must be an employee or board member of the applicant. Other personnel should be indicated by title alone. For all positions, indicate salaries and wages, estimated hours or percent of time, and rate of compensation. The labor rates must identify the direct labor rate separate from the fringe rate or fringe cost for each category. All labor estimates must be allocated to specific tasks as outlined in the applicant's technical project description. Labor rates and proposed hours shall be displayed for each task.

The budget proposal and narrative should include estimated hours for compliance with reporting requirements, including final project and evaluation. Please see Section F.3. *Reporting Requirements and Distribution* for information on types and frequency of reports required.

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.

D.2.2.5.3.2. Fringe Benefits

Identify the rates/amounts, what costs are included in this category, and the basis of the rate computations. Federally approved rate agreements are acceptable for compliance with this item.

D.2.2.5.3.3. Travel

Identify the purpose of each anticipated 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.

D.2.2.5.3.4. Equipment

If equipment will be purchased, itemize all equipment valued at or greater than $5,000. For each item, identify why it is needed for the completion of the project and how the equipment was priced. *Note: if the value is less than $5,000, the item should be included under materials and supplies.*

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.

If the applicant intends to use their own equipment for the purposes of the project, the proposed usage rates should fall within the equipment usage rates outlined by the United States Army Corps of Engineers within their Construction Equipment Ownership and Operating Expense

Schedule (EP 1110-1-8) at www.publications.usace.army.mil/USACE-Publications/Engineer-Pamphlets/u43545q/313131302D312D38.

Note: If the equipment will be furnished and installed under a construction contract, the equipment should be included in the construction contract cost estimate.

D.2.2.5.3.5. 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, engineering estimates, or other methodology). *Note: If the materials/supplies will be furnished and installed under a contract, the equipment should be included in the construction contract cost estimate.*

D.2.2.5.3.6. Contractual

Identify all work that will be accomplished by 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. For each proposed contract, identify the procurement method that will be used to select the consultant or contractor and the basis for selection.

D.2.2.5.3.7. Third-Party In-Kind Contributions

Identify all work that will be accomplished by third-party contributors, 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. Third-party in-kind contributions, including contracts, must comply with all applicable administrative and cost principles criteria, established in 2 CFR Part 200, available at www.ecfr.gov, and all other requirements of this NOFO.

D.2.2.5.3.8. Environmental and Regulatory Compliance Costs

Prior to awarding financial assistance, Reclamation must first ensure compliance with Federal environmental and cultural resources laws and other regulations ("environmental compliance"). Every project funded under this program will have environmental compliance activities undertaken by Reclamation and the recipient.

Depending on the potential impacts of the project, Reclamation may be able to complete its compliance activities without additional cost to the recipient. Where environmental or cultural resources compliance requires significant participation by Reclamation, costs incurred by Reclamation will be added as a line item to the budget during development of the financial assistance agreement and cost shared accordingly (i.e., withheld from the Federal award amount). Any costs to the recipient associated with compliance will be identified during the process of developing a final project budget for inclusion in the financial assistance agreement.

D.2.2.5.3.9. Other Expenses

Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and why it is necessary. No profit or fee will be allowed.

D.2.2.5.3.10. Indirect Costs

Indirect costs are costs incurred by the applicant for a common or joint purpose that benefit more than one activity of the organization and are not readily assignable to the activities specifically

benefitted without undue effort. Costs that are normally treated as indirect costs include, but are not limited to, administrative salaries and fringe benefits associated with overall financial and organizational administration, operation and maintenance costs for facilities and equipment, and payroll and procurement services. If indirect costs will be incurred, identify the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable cost principles for the applicant's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.

Any non-Federal entity that does not have a current negotiated (including provisional) rate, except for those non-Federal entities described in appendix VII to 2 CFR §200, paragraph D.1., may elect to charge a *de minimis* rate of 10% of modified total direct costs (MTDC) which may be used indefinitely. For further information on MTDC, refer to 2 CFR §200.68 available at www.ecfr.gov.

If the applicant does not have a federally approved indirect cost rate agreement and is proposing a rate greater than the *de minimis* 10 percent rate, include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from the Department's Interior Business Center, Office of Indirect Cost Services, at www.doi.gov/ibc/services/finance/indirect-cost-services.

D.2.2.6. 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.

Note that improvements to Federal facilities that are implemented through any project awarded funding through this NOFO 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 P.L. 111-11, Section 9504(a)(3)(D). Reclamation may also require additional reviews and 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.

D.2.2.7. Letters of Support and Letters of Partnership

Please include letters from interested stakeholders supporting the proposed project. To ensure your proposal is accurately reviewed, please attach all letters of support/partnership letters as an appendix. Letters of support received after the application deadline for this NOFO will not be considered in the evaluation of the proposed project.

Category B applicants must include a letter from the Category A partner, stating that they are acting in partnership with the applicant and agree to the submittal and content of the proposal (see Section C.1. Eligible Applicants). Letters of Partnership must be received by the application deadline for this NOFO—otherwise the applicant will be considered ineligible, and the proposed project will not be evaluated.

D.2.2.8. 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 a financial assistance award under this NOFO, verifying:

- The identity of the official with legal authority to enter into an 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 grant or 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 to bor-sha-fafoa@usbr.gov up to 30 days after the application deadline.

D.3. Unique Entity Identifier and System for Award Management

All applicants (unless the applicant has an exception approved by Reclamation under 2 CFR §25.110[d]) are required to:

(i) Be registered in the System for Award Management (SAM) before submitting its application;

(ii) Provide a valid unique entity identifier in its application; and

(iii) Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency.

Meeting the requirements set forth above is mandatory. If the applicant is unable to complete registration by the application deadline, the unique entity identifier must be obtained, and SAM registration must be initiated within 30 days after the application deadline in order to be considered for selection and award. Reclamation will not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements. Additional information on how to complete SAM registration can be found at https://sam.gov/content/entity-landing.

D.4. Submission Date and Time

The deadline for submitting an application is:

- Wednesday, November 3, 2021, 4:00 p.m. Mountain Daylight Time

Applications received after the application deadline will not be considered unless it can be determined that the delay was caused by Reclamation mishandling or technical issues with the Grants.gov application system. Please note that difficulties related to an applicant's Grants.gov profile (e.g., incorrect organizational representative), the upload of documents to Grants.gov or an applicant's SAM registration are not considered technical issues with the Grants.gov system.

Please note that any application submitted for funding under this NOFO may be subjected to a Freedom of Information Act request (5 U.S.C. §552, as amended by P.L. No. 110-175), and as a result, may be made publicly available. Following awards of funding, Reclamation will post all successful applications on the Reclamation website, www.usbr.gov/WaterSmart/*, after conducting any redactions determined necessary by Reclamation, in consultation with the recipient.*

D.4.1. Application Delivery Instructions

The application may be submitted electronically through Grants.gov (www.grants.gov) or a hard copy may be submitted to either one of the following addresses. Under no circumstances will applications received through any other method (such as through GrantSolutions or by email or fax) be considered eligible for award.

By mail or USPS overnight services:

Bureau of Reclamation
Financial Assistance Operations
Attn: NOFO Team
P.O. Box 25007, MS 84-27133
Denver, CO 80225

All other express delivery and courier services:

Bureau of Reclamation
Attn: NOFO Team (MS 84-27133)
Denver Federal Center
Bldg. 67, Rm. 152
6th Avenue and Kipling Street
Denver, CO 80225

D.4.2. Instructions for Submission of Project Application

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

D.4.2.1. Applications Submitted by Mail, Express Delivery or Courier Services

Please follow these instructions to submit your application by mail, express delivery, or courier services.

- Applicants should submit one copy of all application documents for hardcopy submissions. Only use a binder clip for documents submitted. Do not staple or otherwise bind application documents.
- Hard copy applications may be submitted by mail, express delivery, or courier services to the addresses identified in this NOFO.
- 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, or 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.

D.4.2.2. Applications Submitted Electronically

If the applicant chooses to submit an electronic application, it must be submitted through Grants.gov (www.grants.gov). Proposals submitted through GrantSolutions will ***not*** be accepted. Reclamation encourages applicants to submit their applications for funding electronically through the URL: www.grants.gov/applicants/apply-for-grants.html. Applicant resource documents and a full set of instructions for registering with Grants.gov (www.grants.gov) and completing and submitting applications online are available at: www.grants.gov/applicants/apply-for-grants.html.

- Please note that submission of an application electronically requires prior registration through Grants.gov, which may take 7 to 21 days. Please see registration instructions at www.grants.gov/applicants/apply-for-grants.html. *In addition, please note that the Grants.gov system only accepts applications submitted by individuals that are registered and active in SAM as both a user and an Authorized Organizational Representative.*
- Applicants have 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 case 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 this NOFO. Applications received after this date and time due to weather or express delivery/courier performance will not be considered for award. Late

applications will not be considered unless it is determined that the delay was caused by Reclamation mishandling or technical issues with the Grants.gov application system. Please note that difficulties related to an applicant's Grants.gov profile (e.g., incorrect organizational representative), the upload of documents to Grants.gov, or an applicant's SAM registration are not considered technical issues with the Grants.gov system.

D.4.2.3. Acknowledgement of Application Receipt.

If an application is submitted by mail, express delivery, or courier, Reclamation will notify you via email that your application was received.

If an application is submitted through Grants.gov, you will receive an email acknowledging receipt of the application from Grants.gov. In addition, you will receive an email whether your application was successfully retrieved from Grants.gov.

Notification will be sent to the points of contact identified on the applicant's SF-424 Application for Federal Assistance.

D.5. Intergovernmental Review

This NOFO is not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs."

D.6. Automated Standard Application for Payments Registration

All applicants must also be registered with and willing to process all payments through the Department of Treasury Automated Standard Application for Payments (ASAP) system. All recipients with active financial assistance agreements with Reclamation must be enrolled in ASAP under the appropriate Agency Location Code(s) and the Data Universal Number System (DUNS) Number prior to the award of funds. If a recipient has multiple DUNS numbers, they must separately enroll within ASAP for each unique DUNS Number and/or Agency.

All of the information on the enrollment process for recipients, including the enrollment initiation form, can be requested by e-mail from sha-dro-asap_enr@usbr.gov.

Note that if your entity is currently enrolled in the ASAP system with an agency other than Reclamation, you must enroll specifically with Reclamation in order to process payments.

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Section E. Application Review Information

E.1. Technical Proposal: Evaluation Criteria

The following evaluation criteria prioritize projects that are intended to meet the objectives stated in Section 9504(a) of the Secure Water Act (P.L. 111-11) and that align with priorities of the Biden administration, including E.O. 14008: *Tackling the Climate Crisis at Home and Abroad* and E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. Applications should thoroughly address each criterion and any sub-criterion in the order presented below. 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. If the work described in your application is a phase of a larger project, only discuss the benefits that will result directly from the work discussed in the technical project description and that is reflected in the budget, not the larger project.

The evaluation criteria portion should be addressed in the technical proposal section of the application.

Evaluation Criteria: Scoring Summary	**Points:**
A. Quantifiable Water Savings	28
B. Renewable Energy	20
C. Sustainability Benefits	20
D. Complementing On-Farm Irrigation Improvements	10
E. Planning and Implementation	8
F. Collaboration	6
G: Additional Non-Federal Funding	4
H: Nexus to Reclamation	4
Total	***100***

Note: Since the NOFO is open to a variety of project types, Evaluation Criteria A-D may not apply to every project. For example, a water savings project (Criterion A) may not include implementation of a renewable energy component (Criterion B). Please provide as much detail and support as you can for those criteria in A-D that are applicable to your project. All applicants should respond to Evaluation Criteria E-H.

E.1.1. Evaluation Criterion A—Quantifiable Water Savings (28 points)

*Up to **28 points** may be awarded for this criterion. This criterion prioritizes projects that will conserve water and improve water use efficiency, supporting the goals of E.O. 14008. Points will be allocated based on the quantifiable water savings expected as a result of the project. Points will be allocated to give greater consideration to projects that are expected to result in more significant water savings.*

All applicants should be sure to address the following:

1) **Describe the amount of estimated water savings.** 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 include a specific quantifiable water savings estimate; do not include a range of potential water savings.

2) **Describe current losses:** Please explain where the water that will be conserved is currently going and how it is being used. Consider the following:

   a. *Explain where current losses are going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?*

   b. *If known, please explain how current losses are being used. For example, are current losses returning to the system for use by others? Are current losses entering an impaired groundwater table becoming unsuitable for future use?*

   c. *Are there any known benefits associated with where the current losses are going? For example, is seepage water providing additional habitat for fish or animal species?*

3) **Describe the support/documentation of estimated water savings:** Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations. Note: projects that do not provide sufficient supporting detail/calculations may not receive credit under this section. 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.

   *In addition, please note that the use of visual observations alone to calculate water savings, without additional documentation/data, are **not** sufficient to receive credit under this section. Further, the water savings must be the result of reducing or eliminating a current, ongoing loss, not the result of an expected future loss.*

4) **Please address the following questions according to the type of infrastructure improvement you are proposing for funding.** See Appendix A: *Benefit Quantification and Performance Measure Guidance* for additional guidance on quantifying water savings.

   (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:

a. 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.

b. 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.

c. 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)?

d. 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?

e. How will actual canal loss seepage reductions be verified?

f. 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 or tiered pricing, when existing individual user meters are replaced with advanced metering infrastructure (AMI) meters, and when new meters are installed within a distribution system to assist with leakage reduction. To receive credit for water savings for a municipal metering project, an applicant must provide a detailed description of the method used to estimate savings, including references to documented savings from similar previously implemented projects. Applicants proposing municipal metering projects should address the following:

a. 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.

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

c. For installing end-user water service meters, e.g., for a residential or commercial building unit., refer to studies in the region or in the applicant's service area that are 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.

d. Installation of distribution system meters will not receive points under this criterion. Accordingly, these projects must be paired with a complementary project component that will result in water savings in order for the proposal to receive credit for water savings, e.g., pipe installation using upgraded materials, or individual water service meters.

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

f. 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:

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

b. 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.

c. 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?

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

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

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

(4) **Turf Removal:** Applicants proposing turf removal projects should address the following:

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

b. 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?

c. 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?

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

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

(5) **Smart Irrigation Controllers, Controllers with Rain Sensor Shutoff, Drip Irrigation, and High-Efficiency Nozzles:** Applicants proposing smart irrigation controllers, controllers with rain sensor shutoff, drip irrigation, or high-efficiency nozzle projects should address the following:

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

b. 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?

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

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

e. Will site audits be performed before and after installation?

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

(6) **High-Efficiency Indoor Appliances and Fixtures:** Installing high- efficiency indoor appliances 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:

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

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

c. 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.

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

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

(7) **Commercial Cooling Systems:** Cooling towers are components of many refrigeration systems with many applications. They dissipate heat to the atmosphere through the evaporative process and are common in manufacturing processes where cooling is required. They are also used for cooling large commercial buildings. Cooling tower structures vary in size, design, and efficiency. Regardless, all cooling towers consume large volumes of water and energy.

Open-circuit or direct contact are the most common types of cooling towers. Water is supplied to the tower after gathering heat and then released in the upper tower levels. A fan near the base of the tower creates upward airflow. Closed-circuit towers are more efficient and closed-circuit towers with adiabatic cooling are more efficient yet.

Water and energy savings can be achieved by replacing or retrofitting older low efficiency cooling towers. Applicants proposing cooling system projects should address the following:

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

b. Was historical water consumption data evaluated to estimate the percent reduction in water demand?

c. Specify type (manufacturer and model) of cooling tower system to be installed and/or provide a detailed description of the system retrofit plan.

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 p. 52 of the NOFO for additional information).

E.1.2. Evaluation Criterion B—Renewable Energy (20 points)

*Up to **20 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 and reduced greenhouse gas emissions.*

For projects that include constructing or installing 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.

Note: an applicant may receive points under both Subcriteria No.B.1 and B.2 if the project consists of an energy efficiency component separate from the renewable energy component of the project. However, an applicant may receive no more than 20 points total under both Subcriteria No. B.1 and B.2.

E.1.2.1. Subcriterion No. B.1: Implementing Renewable Energy Projects Related to Water Management and Delivery

*Up to **20 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.*

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. Please explain how the power generated as a result of this project will be used, including any existing or planned agreements and infrastructure.

Describe the status of a mothballed hydro plant. For projects that are brining mothballed hydropower capacity back online, please describe the following:

- Clearly describe the work that will be accomplished through the WaterSMART Grant. Note: normal OM&R activities are not eligible for funding. The work being proposed must be an investment.
- Provide information about the capacity (in kilowatts) of the existing hydro system and the expected capacity once it is brough back on-line.

- Provide information about the duration that the hydro system has been offline and the reasons why it has been mothballed. Please include any regulatory reporting or filings (e.g., FERC filings) or other documentation regarding the system.

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:

- How the system will combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions
- Expected environmental benefits of the renewable energy system
- Any expected reduction in the use of energy currently supplied through a Reclamation project.
- Anticipated benefits to other sectors/entities.
- Expected water needs, if any, of the system.

AND/OR

E.1.2.2. Subcriterion No. B.2: Increasing Energy Efficiency in Water Management *Up to* ***10 points*** *may be awarded for projects that address energy demands and reduce greenhouse gas emissions 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 efficiency project (e.g., reduced pumping).

- If quantifiable energy savings is expected to result from the project, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.
- How will the energy efficiency improvement combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions.
- If the project will result in reduced pumping, 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 and energy usage?
- Please indicate whether your 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 any energy required to treat the water, if applicable?
- Will the project result in reduced vehicle miles driven, in turn reducing greenhouse gas emissions? Please provide supporting details and calculations.
- 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).

E.1.3. Evaluation Criterion C—Sustainability Benefits (20 points)

*Up to **20 points** may be awarded under this criterion. This criterion prioritizes projects that address a specific water and/or energy sustainability concern(s), including enhancing drought resilience, addressing the current and future impacts of climate change, and resolving water related conflicts in the region. In addition, this criterion is focused on the benefits associated with the project, including benefits to tribes, ecosystem benefits, and other benefits to water and/or energy supply sustainability.*

Enhancing drought resiliency. In addition to the separate WaterSMART Environmental Water Resources Projects NOFO, this NOFO places a priority on projects that enhance drought resiliency, through this section and other sections above, consistent with the SECURE Water Act. Please provide information regarding how the project will enhance drought resilience by benefitting the water supply and ecosystem, including the following:

- Does the project seek to improve ecological resiliency to climate change?
- Will water remain in the system for longer periods of time? If so, provide details on current/future durations and any expected resulting benefits (e.g., maintaining water temperatures or water levels).
- Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please describe the relationship of the species to the water supply, and whether the species is adversely affected by a Reclamation project or is subject to a recovery plan or conservation plan under the Endangered Species Act (ESA).
- Please describe any other ecosystem benefits as a direct result of the project.
- Will the project directly result in more efficient management of the water supply? For example, will the project provide greater flexibility to water managers, resulting in a more efficient use of water supplies?

Projects that are intended to improve streamflows or aquatic habit, and that are requesting $500,000 or more in Federal funding, must include information about plans to monitor the benefits of the project. Please describe the plan to monitor improved streamflows or aquatic habit benefits over a five-year period once the project has been completed. Provide detail on the steps to be taken to carry out the plan.

Addressing a specific water and/or energy sustainability concern(s). Will the project address a specific sustainability concern? Please address the following:

- Explain and provide detail of the specific issue(s) in the area that is impacting water sustainability, such as shortages due to drought and/or climate change, increased demand, or reduced deliveries.
- Explain and provide detail of the specific issue(s) in the area that is impacting energy sustainability, such as reliance on fossil fuels, pollution, or interruptions in service.
- Please describe how the project will directly address the concern(s) stated above. For example, if experiencing shortages due to drought or climate change, how will the project directly address and confront the shortages?

- Please address where any conserved water as a result of the project will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.
- Provide a description of the mechanism that will be used, if necessary, to put the conserved water to the intended use.
- Indicate the quantity of conserved water that will be used for the intended purpose(s).

Other project benefits. Please provide a detailed explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:

(1) **Combating the Climate Crisis:** E.O. 14008: *Tackling the Climate Crisis at Home and Abroad*, focuses on increasing resilience to climate change and supporting climate-resilient development. For additional information on the impacts of climate change throughout the western United States, see: https://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREReport.pdf. Please describe how the project will address climate change, including the following:

- Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.
- Does this proposed project strengthen water supply sustainability to increase resilience to climate change?
- Will the proposed project establish and utilize a renewable energy source?
- Will the project result in lower greenhouse gas emissions?

(2) Disadvantaged or Underserved Communities: E.O. 14008 and E.O. 13985 support environmental and economic justice by investing in underserved and disadvantaged communities and addressing the climate-related impacts to these communities, including impacts to public health, safety, and economic opportunities. Please describe how the project supports these Executive Orders, including:

a. Does the proposed project directly serve and/or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety through water quality improvements, new water supplies, new renewable energy sources, or economic growth opportunities.

b. If the proposed project is providing benefits to a disadvantaged community, provide sufficient information to demonstrate that the community meets the disadvantaged community definition in Section 1015 of the Cooperative Watershed Act, which is defined as a community with an annual median household income that is less than 100 percent of the statewide annual median household income for the State, or the applicable state criteria for determining disadvantaged status.

c. If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a

particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.

(3) **Tribal Benefits:** The Department of the Interior is committed to strengthening tribal sovereignty and the fulfillment of Federal Tribal trust responsibilities. The President's memorandum "Tribal Consultation and Strengthening Nation-to-Nation Relationships" asserts the importance of honoring the Federal government's commitments to Tribal Nations. Please address the following, if applicable:

a. Does the proposed project directly serve and/or benefit a Tribe? Will the project increase water supply sustainability for an Indian Tribe? Will the project provide renewable energy for an Indian Tribe?

b. Does the proposed project directly support tribal resilience to climate change and drought impacts or provide other tribal benefits such as improved public health and safety through water quality improvements, new water supplies, or economic growth opportunities?

(4) Other Benefits: Will the project address water and/or energy sustainability in other ways not described above? For example:

a. Will the project assist States and water users in complying with interstate compacts?

b. Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?

c. Will the project benefit a larger initiative to address sustainability?

d. Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?

E.1.4. Evaluation Criterion D—Complementing On-Farm Irrigation Improvements (10 points)

*Up to **10 points** may be awarded for projects that describe in detail how they will **complement on-farm irrigation improvements** eligible for NRCS financial or technical assistance.*

Note: Scoring under this criterion is based on an overall assessment of the extent to which the WaterSMART Grant project will complement ongoing or future on-farm improvements. Applicants should describe any proposal made to NRCS, or any plans to seek assistance from NRCS in the future, and how an NRCS-assisted activity would complement the WaterSMART Grant project. Financial assistance through EQIP is the most commonly used program by which NRCS helps producers implement improvements to irrigation systems, but NRCS does have additional technical or financial assistance programs that may be available. Applicants may receive maximum points under this criterion by providing the information described in the bullet points below. **Applicants are *not* required to have assurances of NRCS assistance by the application deadline to be awarded the maximum number of points under this sub-criterion.** Reclamation may contact applicants during the review process to gather additional information about pending applications for NRCS assistance if necessary.

Please note: On-farm improvements themselves are *not* eligible activities for funding under this NOFO. This criterion is intended to focus on how the WaterSMART Grant project will complement ongoing or future on-farm improvements. NRCS will have a separate application process for the on-farm components of selected projects that may be undertaken in the future, separate of the WaterSMART Grant project.

If the proposed project will complement an on-farm improvement eligible for NRCS assistance, please address the following:

- Describe any planned or ongoing projects by farmers/ranchers that receive water from the applicant to improve on-farm efficiencies.
    - Provide a detailed description of the on-farm efficiency improvements.
    - Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future?
    - If available, provide documentation that the on-farm projects are eligible for NRCS assistance, that such assistance has or will be requested, and the number or percentage of farms that plan to participate in available NRCS programs.
    - Applicants should provide letters of intent from farmers/ranchers in the affected project areas.
- Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement.
    - Will the proposed WaterSMART project directly facilitate the on-farm improvement? If so, how? For example, installation of a pressurized pipe through WaterSMART can help support efficient on-farm irrigation practices, such as drip-irrigation.

      OR
    - Will the proposed WaterSMART project complement the on-farm project by maximizing efficiency in the area? If so, how?
- Describe the on-farm water conservation or water use efficiency benefits that are expected to result from any on-farm work.
    - 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.
- Please provide a map of your water service area boundaries. If your project is selected for funding under this NOFO, this information will help NRCS identify the irrigated lands that may be approved for NRCS funding and technical assistance to complement funded WaterSMART projects.

Note: On-farm water conservation improvements that complement the water delivery improvement projects selected through this NOFO may be considered for NRCS funding and technical assistance to the extent that such assistance is available. For more information, including application deadlines and a description of available funding, please contact your local NRCS office. See the NRCS website for office contact information, www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/states/.

E.1.5. Evaluation Criterion E—Planning and Implementation (8 points)

*Up to **8 points** may be awarded for these subcriteria.*

E.1.5.1. Subcriterion E.1— Project Planning

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

Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place? Does the project address an adaptation strategy identified in a completed WaterSMART Basin Study? Please self-certify or provide copies of these plans where appropriate to verify that such a plan is in place. Including a specific excerpt or a link to the planning document may also be considered where appropriate.

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, Drought Contingency Plan or other planning efforts done to determine the priority of this project in relation to other potential projects.

(2) Describe how the project conforms to and meets the goals of any applicable planning efforts and identify any aspect of the project that implements a feature of an existing water plan(s).

(3) If applicable, provide a detailed description of how a project is addressing an adaptation strategy specifically identified in a completed WaterSMART Basin Study or Water Management Options Pilot (e.g., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes)

For more information on Basin Studies, including a list of completed basin studies and reports, please visit: www.usbr.gov/WaterSMART/bsp.

E.1.5.2. Subcriterion E.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. Please note, if your project is selected, responses provided in this section will be used to develop the scope of work that will be included in the financial assistance agreement.

Applications that include a detailed project implementation plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

- Identify and provide a summary description of the major tasks necessary to complete the project. Note: please do not repeat the more detailed technical project description provided in Section D.2.2.4.; this section should focus on a summary of the major tasks to be accomplished as part of the project.
- Describe any permits that will be required, along with the process for obtaining such permits.

- Identify and describe any engineering or design work performed specifically in support of the proposed project.
- Describe any new policies or administrative actions required to implement the project.
- Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: complete environmental and cultural compliance; mobilization; begin construction/installation; construction/installation (50% complete); and construction/installation (100% complete)

E.1.6. Evaluation Criterion F—Collaboration (6 points)

*Up to **6 points** may be awarded for projects that promote and encourage collaboration among parties in a way that helps increase the sustainability of the water supply.*

- Please describe how the project promotes and encourages collaboration. Consider the following:
- Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project. What is the extent of their involvement in the process?
- What is the significance of the collaboration/support?
- Will this project increase the possibility/likelihood of future water conservation improvements by other water users?
- Please attach any relevant supporting documents (e.g., letters of support or memorandum of understanding).

E.1.7. Evaluation Criterion G— Additional Non-Federal Funding (4 points)

*Up to **4 points** may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided using the following calculation:*

$$\frac{\text{Non-Federal Funding}}{\text{Total Project Cost}}$$

E.1.8. Evaluation Criterion H— Nexus to Reclamation (4 Points)

*Up to **4 points** may be awarded if the proposed project is connected to a Reclamation project or Reclamation activity. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.*

Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. Please consider the following:

- Does the applicant have a water service, repayment, or O&M contract with Reclamation?

- If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?
- Will the proposed work benefit a Reclamation project area or activity?
- Is the applicant a Tribe?

E.2. Review and Selection Process

The Federal government reserves the right to reject any and all applications that do not meet the requirements or objectives of this NOFO. Awards will be made for projects most advantageous to the Federal Government. Award selection may be made to maintain balance among the eligible projects listed in this NOFO. The evaluation process will be comprised of the steps described in the following subsections.

E.2.1. Initial Screening

All application packages will be screened to ensure that:

- The applicant meets the eligibility requirements stated in this NOFO.
- The applicant meets the unique entity identifier and SAM registration requirements stated in this NOFO (this may be initiated up to 30 days after the application deadline).
- The application meets the content requirements of the NOFO package, including submission of a technical proposal, including responses to the evaluation criteria, a funding plan, budget proposal, and budget narrative.
- The application contains a properly executed SF-424, Application for Financial Assistance and form SF-424D, Assurances Construction Programs and a completed SF-424A, Budget Information Non-Construction Programs (Note: the SF-424A may be used for both non-construction and construction activities).
- The application includes an official resolution, adopted by the applicant's board of directors, governing body, or appropriate authorized official (this may be submitted up to 30 days after the application deadline).
- The application and funding plan meets or exceeds the minimum non-Federal cost-share requirements identified in this NOFO.
- The project can be completed in two years for Funding Group I project, or in three years for Funding Group II project.

Reclamation reserves the right to remove an application from funding consideration if it does not pass all Initial Screening criteria listed above. An applicant that has submitted an application that is determined to be ineligible for funding will be notified along with other applicants, or sooner, if possible.

E.2.2. Application Review Committee

Evaluation criteria will comprise the total evaluation weight as stated in the Section E.1 *Evaluation Criteria*. Applications will be scored against the evaluation criteria by an Application Review Committee (ARC), made up of experts in relevant disciplines selected from across

Reclamation. The ARC will also review the application to ensure that the project meets the description of eligible projects and meets the objective of this NOFO.

During ARC review, Reclamation may contact applicants to request clarifications to the information provided, if necessary.

E.2.3. Red-Flag Review

Following the results of the ARC review, Reclamation offices will review the top-ranking applications and will identify any reasons why a proposed project would not be feasible or otherwise advisable, including environmental or cultural resources compliance issues, permitting issues, legal issues, or financial position. 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.

In addition, during this review, Reclamation will address any specific concerns or questions raised by members of the ARC, conduct a preliminary budget review, and evaluate the applicant's ability to meet cost share as required.

E.2.4. Managerial Review

Reclamation management will prioritize projects to ensure the total amount of all awards does not exceed available funding levels. Management will also ensure that all projects meet the scope, priorities, requirements, and objectives of this NOFO. Management may also prioritize projects to ensure that multiple project types are represented. After completion of the Managerial Review, Reclamation will notify applicants whose proposals have been selected for award consideration.

E.2.5. Pre-Award Clearances and Approvals

The following pre-award clearances and approvals must be obtained before an award of funding is made. 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 the date of initial selection). If the results of pre-award reviews and clearances are unsatisfactory, consideration of funding for the project may be withdrawn.

E.2.5.1. Environmental Review

Reclamation will forward all proposals to the appropriate Reclamation Regional or Area Office for completion of environmental compliance. To the extent possible, environmental compliance will be completed before a financial assistance agreement is signed by the parties. However, in most cases, the award will be made contingent on completion of environmental compliance. The financial assistance agreement will describe how compliance will be carried out. **Ground disturbing activities, including any construction or installation activities, may not occur until environmental compliance is complete and a notice to proceed is issued.**

Even in cases where environmental compliance work has been completed previously or is being completed by another Federal agency, Reclamation must still review and adopt such environmental compliance and issue a notice to proceed before ground disturbing activities may be initiated.

E.2.5.2. Budget Analysis and Business Evaluation

A Reclamation Grants Officer will also conduct a detailed budget analysis and complete a business evaluation and responsibility determination. During this evaluation, the Grants Officer will consider several factors that are important, but not quantified, such as:

- Allowability, allocability, and reasonableness of proposed costs
- Financial strength and stability of the applicant
- 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 Office of Management and Budget circulars

E.3. Federal Award Performance Integrity Information System

Prior to making an award with a Federal total estimated amount greater than $150,000, Reclamation is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently Federal Award Performance Integrity Information System [FAPIIS]) (see 41 U.S.C. §2313). An applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM. Reclamation will consider any comments by the applicant, in addition to the other information in FAPIIS, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 CFR §200.205.

E.4. Anticipated Announcement and Federal Award Date

Reclamation expects to contact potential award recipients and unsuccessful applicants in spring 2022, subject to the timing and amount of final FY 2022 appropriations. Financial assistance agreements will be awarded to applicants that successfully pass all pre-award reviews and clearances. Award recipients will be contacted individually to discuss the time frame for the completion of their agreement.

Section F. Federal Award Administration Information

F.1. Federal Award Notices

Successful applicants will receive by electronic mail, a notice of selection signed by a Reclamation Grants Officer. This notice is not an authorization to begin performance.

F.2. Administrative and National Policy Requirements

F.2.1. Environmental and Cultural Resources Compliance

All projects being considered for award funding will require compliance with 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), the 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 that findings under NEPA, and consultations, as appropriate, will support Reclamation's decision on whether to fund a project. Depending on the potential impacts of the project, Reclamation may be able to complete its compliance activities without additional cost to the recipient. Where environmental or cultural resources compliance requires significant participation by Reclamation, costs anticipated to be incurred by Reclamation will be added as a line item to the budget during development of the financial assistance agreement and cost shared accordingly. Any costs to the recipient associated with compliance will be identified during the process of developing a final project budget for inclusion in the financial assistance agreement.

Reclamation's estimated cost to complete environmental and cultural compliance activities will be withheld from the initial obligation of Federal funding. After compliance activities are completed, any remaining Federal funding will be obligated to the Agreement.

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 (e.g., grading, clearing, and other preliminary activities) on a project before environmental and cultural resources compliance is complete and a Reclamation Grants Officer provides written notification that all such clearances have been obtained. This pertains to all components of the proposed project, including those that are part of the applicant's non-Federal cost-share. An applicant that proceeds before environmental and cultural resources compliance is

complete may risk forfeiting Reclamation funding under this NOFO. Costs incurred for ground-disturbing activities performed prior to award are not eligible for reimbursement or cost share unless the recipient can provide documentation that Federal environmental and cultural resource clearances were obtained for the project prior to the commencement of the activities.

F.2.2. Approvals and Permits

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

F.2.3. Intangible Property (2 CFR §200.315)

a. Title to intangible property acquired under a Federal award vests upon acquisition in the non-Federal entity (see §200.59 *Intangible Property* [of this CFR]). The non-Federal entity must use that property for the originally authorized purpose and must not encumber the property without approval of the Federal awarding agency. When no longer needed for the originally authorized purpose, disposition of the intangible property must occur in accordance with the provisions in §200.313(e) *Equipment* [of this CFR]

b. The non-Federal entity may copyright any work that is subject to copyright and was developed, or for which ownership was acquired, under a Federal award. The Federal awarding agency reserves a royalty-free, nonexclusive, and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes, and to authorize others to do so.

c. The non-Federal entity is subject to applicable regulations governing patents and inventions, including government wide regulations issued by the Department of Commerce at 37 CFR §401, *Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Awards, Contracts and Cooperative Agreement*s.

d. The Federal government has the right to:

   (1) obtain, reproduce, publish, or otherwise use the data produced under a Federal award; and

   (2) authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes.

e. Freedom of Information Act

   (1) In response to a Freedom of Information Act (FOIA) request for research data relating to published research findings produced under a Federal award that were used by the Federal government in developing an agency action that has the force and effect of law, the Federal awarding agency must request, and the non-Federal entity must provide, within a reasonable time, the research data so that they can be made available to the public through the procedures established under the FOIA. If the Federal awarding agency obtains the research data solely in response to a FOIA request, the Federal awarding agency may charge the requester a reasonable fee equaling the full incremental cost of obtaining the research data. This fee should

reflect costs incurred by the Federal agency and the non-Federal entity. This fee is in addition to any fees the Federal awarding agency may assess under the FOIA (5 USC 552(a)(4)(A)).

(2) Published research findings means when:

i. Research findings are published in a peer-reviewed scientific or technical journal; or

ii. A Federal agency publicly and officially cites the research findings in support of an agency action that has the force and effect of law. "Used by the Federal government in developing an agency action that has the force and effect of law" is defined as when an agency publicly and officially cites the research findings in support of an agency action that has the force and effect of law.

(3) Research data means the recorded factual material commonly accepted in the scientific community as necessary to validate research findings, but not any of the following: preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This "recorded" material excludes physical objects (e.g., laboratory samples). Research data also does not include:

i. Trade secrets, commercial information, materials necessary to be held confidential by a researcher until they are published, or similar information which is protected under law; and

ii. Personnel and medical information and similar information the disclosure of which would constitute a clearly unwarranted invasion of personal privacy, such as information that could be used to identify a particular person in a research study.

F.2.4. Requirements for Agricultural Operations under P.L. 111-11 §9504(a)(3)(B)

In accordance with P.L. 111-11 §9504(a)(3)(B) of 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 applicant
- Not to otherwise increase the consumptive use of water in the operation of the applicant, as determined pursuant to the law of the State in which the operation of the applicant is located

F.2.5. Title to Improvements P.L. 111-11 §9504(a)(3)(D)

If the activities funded through an agreement awarded under this NOFO 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, P.L. 111-11 §9504(a)(3)(D) that are not integral to existing water delivery operations shall reside with the project sponsor.

F.3. Reporting Requirements and Distribution

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

F.3.1. Financial Reports

Recipients will be required to submit a fully completed form SF-425 Federal Financial Report on at least a semi-annual basis and with the final performance report. The SF-425 must be signed by a person legally authorized to obligate the recipient.

F.3.2. Interim Performance Reports

The specific terms and conditions pertaining to the reporting requirements will be included in the financial assistance agreement.

Interim performance reports submitted on at least a semi-annual basis, that include the following information:

- A comparison of actual accomplishments to the milestones established by the financial assistance agreement for the period
- The reasons why established milestones were not met, if applicable
- The status of milestones from the previous reporting period that were not met, if applicable
- Whether the project is on schedule and within the original cost estimate
- Any additional pertinent information or issues related to the status of the project

F.3.3. Final Performance Reports

Recipients will be required to submit a final performance report encompassing the entire period of performance. The final performance report must include, but is not limited to, the following information:

- Whether the project objectives and goals were met
- Discussion of the benefits achieved by the project, including information and/or calculations supporting the benefits
- How the project demonstrates collaboration, if applicable
- A comparison of estimated costs vs. actual costs
- Photographs documenting the project are also appreciated

Note: Reclamation may print photos with appropriate credit to the applicant. Also, final reports are public documents and may be made available on Reclamation’s website or as requested.

F.4. Conflicts of Interest

F.4.1. Applicability

This section intends to ensure that non-Federal entities and their employees take appropriate steps to avoid conflicts of interest in their responsibilities under or with respect to Federal financial assistance agreements. In the procurement of supplies, equipment, construction, and services by recipients and by subrecipients, the conflict of interest provisions in 2 CFR 200.318 apply.

F.4.2. Requirements

Non-Federal entities must avoid prohibited conflicts of interest, including any significant financial interests that could cause a reasonable person to question the recipient's ability to provide impartial, technically sound, and objective performance under or with respect to a Federal financial assistance agreement.

In addition to any other prohibitions that may apply with respect to conflicts of interest, no key official of an actual or proposed recipient or subrecipient, who is substantially involved in the proposal or project, may have been a former Federal employee who, within the last year, participated personally and substantially in the evaluation, award, or administration of an award with respect to that recipient or subrecipient or in development of the requirement leading to the funding announcement.

No actual or prospective recipient or subrecipient may solicit, obtain, or use non-public information regarding the evaluation, award, or administration of an award to that recipient or subrecipient or the development of a Federal financial assistance opportunity that may be of competitive interest to that recipient or subrecipient.

F.4.3. Notification

Non-Federal entities, including applicants for financial assistance awards, must disclose in writing any conflict of interest to the Department’s awarding agency or pass-through entity in accordance with 2 CFR §200.112, *Conflicts of Interest*. Recipients must establish internal controls that include, at a minimum, procedures to identify, disclose, and mitigate or eliminate identified conflicts of interest. The recipient is responsible for notifying the Financial Assistance Officer in writing of any conflicts of interest that may arise during the life of the award, including those that have been reported by subrecipients.

F.4.4. Restrictions on Lobbying

Non-Federal entities are strictly prohibited from using funds under this grant or cooperative agreement for lobbying activities and must provide the required certifications and disclosures pursuant to 43 CFR §18 and 31 U.S.C. 1352.

F.4.5. Review Procedures

The Financial Assistance Officer will examine each conflict of interest disclosure on the basis of its particular facts and the nature of the proposed grant or cooperative agreement and will determine whether a significant potential conflict exists and, if it does, develop an appropriate means for resolving it.

F.4.6. Enforcement

Failure to resolve conflicts of interest in a manner that satisfies the Government may be cause for termination of the award. Failure to make required disclosures may result in any of the remedies described in 2 CFR §200.338, *Remedies for Noncompliance*, including suspension or debarment (see also 2 CFR §180).

F.5. Data Availability

F.5.1. Applicability

The Department is committed to basing its decisions on the best available science and providing the American people with enough information to thoughtfully and substantively evaluate the data, methodology, and analysis used by the Department to inform its decisions.

F.5.2. Use of Data

The regulations at 2 CFR §200.315 apply to data produced under a Federal award, including the provision that the Federal Government has the right to obtain, reproduce, publish, or otherwise use the data produced under a Federal award as well as authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes.

F.5.3. Availability of Data

The recipient shall make the data produced under this award and any subaward(s) available to the Government for public release, consistent with applicable law, to allow meaningful third-party evaluation and reproduction of:

1. the scientific data relied upon;
2. the analysis relied upon; and
3. the methodology, including models, used to gather and analyze data.

F.6. Releasing Applications

Following awards of funding, Reclamation may post all successful applications on the Reclamation website after conducting any redactions determined necessary by Reclamation, in consultation with the recipient.

Section G. Agency Contacts

There will be no pre-application conference. Organizations or individuals interested in submitting applications in response to this NOFO may direct questions to the Reclamation personnel identified below.

G.1. Reclamation Financial Assistance Contact

Questions regarding application and submission information and award administration may be submitted to the attention of the Notice of Funding Opportunity Team at bor-sha-fafoa@usbr.gov. Please note that staff availability on the day of the NOFO closing will be limited.

G.2. Reclamation Program Coordinator Contact

Questions regarding applicant and project eligibility and application review may be submitted to the attention of Mr. Josh German, WaterSMART Grants Program Coordinator, as follows:

By email: jgerman@usbr.gov

By phone: 303-445-2839

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Section H. Other Information

The following is a brief overview of NEPA, NHPA, and ESA. While these statutes are not the only environmental laws that may apply, 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 to award a financial assistance agreement under this NOFO. The descriptions below are intended to provide you with information about the environmental compliance issues that may apply to your projects.

H.1. Environmental and Cultural Resource Considerations

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants should consider 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. The application should include the answers to:

- Will the proposed 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.
- 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?
- 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 proposed project may have.
- When was the water delivery system constructed?
- Will the proposed 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.
- 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.
- Are there any known archeological sites in the proposed project area?
- Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?
- Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

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

H.2. Background on Federal Environmental and Cultural Resource Laws

H.2.1. National Environmental Policy Act

NEPA requires Federal agencies such as Reclamation to evaluate, during the decision-making process, the potential environmental effects of a proposed action and any reasonable mitigation measures. Before Reclamation can make a decision to fund an award under this NOFO, 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 **Department CE** or documentation of a **Reclamation CE** using a **Categorical Exclusion Checklist (CEC)**. If a CE is being considered, Reclamation will determine the applicability of the CE and whether extraordinary circumstances (i.e., reasons that the CE cannot be applied) exist. That process can take 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 (EIS)**, 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 **EIS** and **Record of Decision.** 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 that has 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 www.usbr.gov/main/offices.html with questions regarding NEPA

compliance issues. You may also contact the Program Coordinator for further information (see Section G. *Agency Contacts*).

H.2.2. National Historic Preservation Act

To comply with Section 106 of the NHPA, Reclamation must consider whether a proposed project has the **potential to cause effects to historic properties**, before it can complete an award under this NOFO. 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, the recipient 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 proposed 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
    - A determination as to whether the project would have an adverse effect and 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 projects proposed under this NOFO 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, proposed 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 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.

H.2.3. Endangered Species Act

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

Before Reclamation can approve funding for the implementation of a proposed 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 proposed 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, then 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 the 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.

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 a CEC, documented simultaneously. The best source of information concerning the compliance with the ESA in a particular project area is the local Reclamation environmental staff that can be helpful in determining the presence of listed species and possible effects that would require consultation with the USFWS or NOAA Fisheries Service. Contact your regional or area Reclamation office, www.usbr.gov/main/offices.html with questions regarding ESA compliance issues.

Appendix A: Benefit Quantification and Performance Measures

The following information is included to provide applicants additional guidance on pre- and post-project benefit quantification.

All WaterSMART Grants 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 or better managed, as a direct result of the project. A provision will be included in all assistance agreements with WaterSMART Grants 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 methods that may be used to estimate benefits pre-project and to verify benefits upon completion of the project. **However, the following is not intended to be an exhaustive 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 it applies to the proposed project.

Performance Measure A: Projects with Quantifiable Water Savings

The methods included below are examples that may be helpful in estimating the water conservation that will be realized upon completion of the proposed project and to verify this amount post-project.

Performance Measure A.1: Canal Lining/Piping

Canal lining or piping projects are implemented to decrease or eliminate canal water seepage and evapotranspiration. **The following information may be helpful in estimating the water conservation that will be realized upon completion of the proposed project and to verify this amount post-project.**

Pre-project estimation of benefits:

To calculate potential water savings, physical measurements of losses from seepage, evaporation, and/or transpiration are necessary. If evaporation will not be mitigated by the project (e.g., canal lining), evaporative losses should be estimated and deducted from the estimated water conservation. 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. Ponding test results should be provided in terms of both acre-feet per year (AFY) of seepage and cubic feet of seepage per square feet of canal surface per day (cfs/sf/day).
- **Inflow/outflow testing:** Measure the flow rate of 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. Inflow/outflow test results should be provided in terms of both AFY of seepage and cubic feet per second of seepage per cubic feet per second of canal flow per mile of canal (cfs/sf/mile).

If ponding or inflow/outflow tests cannot be performed, estimated historical seepage and evaporation rates for the canal reach may be based on a combination of soils/geology conditions, flow rates, diversion rates, irrigation methods and crops, weather information, and historical knowledge. Soils/geologic conditions can not represent the sole source for estimating seepage losses, but can be included as support for an estimate. Evaporation data are available at www.nws.noaa.gov/oh/hdsc/PMP_related_studies/TR34.pdf. A discussion should be included on why ponding or inflow/outflow tests cannot be performed that also includes a thorough description of the logic used in the estimation calculations 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. For piping projects, it is typically assumed all seepage and evaporation are eliminated with most types of pipe materials.
- 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 and delivery rates if adequate data exists. The adequacy of the data should be discussed with regard to methods used to measure diversion and delivery quantities. This type of verification should also include a comparison of historical canal efficiencies and post-project 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 the canal pre-project, this would be a 33% efficiency:

$$\frac{2\ acrefeet}{6\ acrefeet} \times 100\% = 33\%\ \text{efficiency}$$

If post-project, the irrigation district only needs to divert 4 acre-feet of water through the canal to deliver the 2 acre-feet, efficiency would improve by 17% to 50%:

$$\frac{2\ acrefeet}{4\ acrefeet} \times 100\% = 50\%\ \text{efficiency}$$

- Record reduction in water purchases by shareholders and compare to historical water purchases. Using this method would require consideration and explanation of other potential reasons for decreased water purchases (e.g., precipitation, temperature, etc.).

Useful references regarding canal seepage monitoring and verification include:

- www.usbr.gov/tsc/techreferences/mands/wmm/index.htm
- www.usbr.gov/tsc/techreferences/hydraulics_lab/pubs/PAP/PAP-0015.pdf
- gfipps.tamu.edu/files/2019/12/B-6218_Measuring-Seepage-Losses.pdf

Performance Measure 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.2.a. Municipal Metering

For projects that install or replace existing municipal end-user water service 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 individual water user meters with new meters, whether new technologies (automatic meter reading or AMI meters) will be employed
- Include a description of both pre- and post-project rate structuring.
- **Note:** Distribution system meters will not receive points for quantifiable water savings under Evaluation Criterion A: *Quantifiable Water Savings*. Accordingly, these projects must be paired with a complementary project component that will result in water savings in order for the proposal to be receive credit for water savings, e.g., pipe installation using upgraded materials, or individual water service meters.

The following information about municipal end-user water service meters and replacement may be helpful in estimating the water conservation that will be realized upon completion of the proposed project and to verify this amount post-project:

- Municipal water delivery meters are typically installed for each water user as well as at strategic locations within the distribution system to measure production, supply, and/or storage. Accurate measurement allows for demand assessments, 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 (i.e., higher rates for higher use). Replacing existing meters can also result in water savings when new technologies are employed.
- 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 installing meters will result in conserved water, please provide support for this determination (e.g., studies, previous projects, etc.). A logical scheme should be developed that compares pre- and post-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: A.2.b. Irrigation Metering

Measuring devices that may be installed can 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 being able to:

- Quantify system losses between measurement locations
- Quantify waste way (spill) flows
- Accurately bill customers for the actual amount of water delivered
- Facilitate accurate and equitable distribution of water within a district
- Allow for implementing 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 water conservation that will be realized upon completion and to verify this amount post-project for improved irrigation delivery system measurement.

Pre-project estimations of baseline data:

- Pre-project flows may be difficult to estimate without a measuring device in place. Ideally, temporary measurement devices or other methods to estimate flow rates may be used to estimate flow rates as accurately as possible.

- In lieu of temporary measurement devices, 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 a combination of soils/geology, delivery data, flow data, and weather data.

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

- Compare post-project water measurement (deliveries, diversions, and waste/spills) data to pre-project data or estimates—taking into account other factors which may have cause changes
- Survey users to determine utility of the devices for decision making
- Present how measurement devices were used to identify water losses which were previously unknown and how these will be addressed
- Document the benefits of any rate structure changes made possible by the installation of measuring devices (e.g., if districts that convert from non-metered to metered deliveries 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 A.3: SCADA and Geographic Information Systems (GIS)

Proposals may involve installing or expanding a SCADA or combined SCADA/GIS system that monitors flows in an individual district or in a basin that includes several districts. SCADA systems provide water managers with real-time data on the flow rates and volumes of water at key points within an irrigation 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 the SCADA or SCADA/GIS systems will 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, and enhanced productivity of human resources)
- The response process to SCADA or SCADA/GIS failures/outages
- Applicants are encouraged to review published reports on considerations when implementing a SCADA system (e.g., Freeman, B. and C. Burt, 2009. Practical experience with state-of-the-art technologies in SCADA systems, Irrigation Training and Research Center, California Polytechnic State University, San Luis Obispo, California.

The following performance measures may be helpful in estimating the water conservation that will be realized upon completion and to verify this amount post-project for installing a SCADA or SCADA/GIS system.

Pre-project estimations of baseline data:

- Collect data on diversions and deliveries to water users
- Collect data on waste way flows
- 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).
- Calculate if there was a reduction in wasteway flows and, if so, how much they were reduced.
- 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 A.4: Automation

Proposals may include system automaton projects aimed at *preventing or reducing* 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 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.
- Applicants are encouraged to review published reports on considerations when implementing an automation system (e.g., Freeman, B. and C. Burt 2009).

The following performance measures may be helpful in estimating the water conservation that will be realized upon completion and to verify this amount post-project for automating delivery system components.

Pre-project estimations of baseline data:

- Establish baseline data by measuring existing spillage or document historical spillage with existing data. A measuring device should be positioned to measure spillage losses. To account for temporal variations, a minimum of a one-year history of continuous pre-project measurements is desirable for future comparison to post-project water usage. Spillage volumes can vary substantially between wet and dry years, operational changes, etc.; therefore, some multi-year estimates of spillage are preferred.
- Track pre-project water diversions using district diversion records, supplier diversion records, and/or district-recorded delivery records. Spillage estimates may be based on these data in some cases.

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

- Measure spillage losses post-project and compare to pre-project data. Gather enough data to account for seasonal and temporal variations.
- 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.
- Report specific annual volume changes to spills, diversions, or deliveries due to system automation.

Performance Measure No. A.5: Drain and Spill Water Reuse Projects

Drain and spill water reuse can be a district-level or regional conservation effort that consists of recovering 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. Examples include:

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

The following performance measures may be helpful in estimating the water conservation that will be realized upon completion and to verify this amount post-project for drainage reuse projects:

Pre-project estimations of baseline data:

- A 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, as a function of operations, etc. Therefore, some multi-year measurements of drain water losses may be necessary.

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

- Measure post-project drainage flows and compare to flow data collected pre-project.
- Gather enough data to account for temporal variations.
- Take readings from measuring devices positioned to measure drain water loss. A system analysis can be done with the following calculation:

$$Drainage\ with\ project = (100\% - \%\ Reuse) \times Drainage\ without\ project$$

- Measure and record post-project water deliveries to fields, drainage water volumes entering reservoirs, and drainage water 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 users near the end of the canal, etc. If it is not possible to quantify these benefits in acre-feet, a narrative explanation may be acceptable.

Performance Measure A.6: Landscape Irrigation Measures

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

Landscape Irrigation Measures: A.6.a. Turf Removal

For turf removal projects, the applicant should consider the total estimated quantity of turf to be removed, the estimated historical annual average quantity of water applied per unit area of turf, and the estimated amount of water to be applied to any replacement landscape vegetation.

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, homeowners' 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 typically irrigate more efficiently relative to residential irrigation, so the actual turf removal savings for all types of users would be expected to be higher.

- *Winter/summer use data.* In the absence of dedicated irrigation meter data and where irrigation ceases during winter months, summer versus winter water use data can be compared to estimate irrigation use. This can be analyzed for a sample of users and combined with an estimate of the total area irrigated. 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 subtracts the assumed domestic (indoor) water use rates 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. A thorough explanation relating the source of the estimated domestic use percentage to the users in the turf-removal area should be supplied.

Post-project methods for quantifying benefits of turf removal projects:

- Site audits can be performed to measure the amount of turf removed at each location and report on the water use for any vegetation which was placed in the area were turf was removed. The water conservation per site can be calculated using the pre-project turf irrigation rate and the measured area of turf removed minus estimated water use of any replacement landscape vegetation.
- Before and after water use 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 during the pre- and post-periods.
- The project total savings should be calculated by summing the individual site savings.

Landscape Irrigation Measures: No. A.6.b. Smart Irrigation Controllers and Controllers with Rain Sensor Shutoff

A Smart irrigation controller automatically adjusts the amount of irrigation 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. Smart controllers have the potential to reduce landscape irrigation water use in situations where the landscape was initially being over-irrigated. In some cases, installation of Smart controllers has resulted in an increase in water use in situations where the landscape was initially being under-irrigated. For this reason, it is important to identify landscapes which are being over-irrigated prior to installation of a Smart controller.

Some timer-based irrigation controllers are equipped with an automatic shutoff mode that is triggered by a signal from a connected rain sensor. This prevents irrigation cycles from commencing or suspends irrigation when there is rainfall.

The following performance measures may be helpful in estimating the water conservation that will be realized upon completion and to verify this amount post-project for installing Smart controllers and controllers with rain sensor shutoff.

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 use data. Note that weather-based theoretical irrigation requirement estimates are not suitable for baseline estimations as this is typically the method implemented by the Smart controller for estimating irrigation times. Ideally, post-project the landscape will be being irrigated at this rate. 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.
- The historical average annual landscape irrigation rate per unit area should be estimated using the dedicated meter data, winter/summer use data, or assumed domestic use rate methods discussed under the turf removal section.
- 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. These can be summed to estimate the water conservation for the project.

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 Smart 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 monthly.

Landscape Irrigation Measures: A.6.c. Drip Irrigation and High-Efficiency Nozzles

High-efficiency landscape irrigation nozzles (sprinkler heads) and drip irrigation emitters apply water more uniformly and at a lower rate relative to conventional type nozzles. Improved application uniformity reduces the need to over-irrigate some areas in order to eliminate brown spots in turf. The lower application rate reduces runoff and while the stronger stream of water is less effected by wind. Note that the lower application rate can require that irrigation times be increased in order to adequately irrigate the landscape.

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.

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 operations to verify adjustments have been made to compensate for the new nozzles.

Performance Measure A.7: Commercial Cooling Systems

- Water and energy savings can be realized by replacing or retrofitting outdated low-efficiency cooling towers. Numerous options exist for replacing or retrofitting existing cooling towers. Replacing existing towers with new higher efficiency open- and closed-circuit and closed-circuit with adiabatic heating systems and/or retrofitting existing towers can reduce water and energy demands.

Pre-project estimations of baseline data

- Evaluate historical water and energy consumption data for existing system.
- Provide documentation on cooling tower system to be installed and/or provide a detailed description of existing system retrofit with basis for anticipated water and energy consumption.

Post-project suggested method for quantifying water and energy savings

- Compare pre-project consumption data relative to post-project data with consideration of any relevant factors such as chance in size or capacity.

Performance Measure B: Projects with Renewable Energy Benefits

The performance measures included below are examples that may be helpful in estimating a pre-project energy baseline and post-project energy benefits for energy projects that are expected to increase the use of hydropower in the management and delivery of water.

For hydropower projects, applicants should address the following as part of the performance measures they submit with their applications.

- Explain the methodology for calculating project hydropower capacity and generation benefits.
- Include an estimate of incremental hydropower capacity (measured in kilowatts) and annual generation (measured in kilowatt hours) resulting from the project.
- Describe what loads will be served by project hydropower generation.