Agency Priority Goal Action Plan

Water Conservation and Supply Enhancement

Goal Leader: Brenda Burman, Commissioner, Bureau of Reclamation

Deputy Goal Leader: Robert Wolf, Director of Program and Budget, Bureau of Reclamation

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Fiscal Year 2019, Quarter 4

Overview

Goal Statement

- Increase the available water supply in the Western States through conservation-related programs to help provide a more sustainable and secure water supply, reducing the impact of drought for the benefit of the public and the economy. By September 30, 2019, the Bureau of Reclamation will facilitate water conservation capacity of 155,732 acre-feet to help reduce the impact of drought.

Challenge

- The Nation faces an increasing set of water resource challenges: aging water-related infrastructure, rapid population growth, and depletion of groundwater resources.
- Water issues and challenges are especially increasing in the West due to prolonged drought.
- The primary challenges and risks that influence achievement of the Priority Goal include the availability of water measurement data, the projects proposed from year-to-year, state water laws, the ability to complete environmental compliance, and local cost-sharing ability.

Opportunity

- A sustainable water supply is critical to address current and future water shortages, degraded water quality, and increased demands for water and energy from growing populations, recognition of environmental water requirements, and water inequity for Indian tribes and rural communities disadvantaged by financial need or geographic isolation.

Goal Structure & Strategies

Implementation strategy overview

In facilitating water conservation, Reclamation will negotiate formal agreements or provide cost-shared grants on a competitive basis for the following types of on-the-ground projects:

- Projects that line or pipe canals, resulting in conserved water.
- Projects that improve irrigation flow measurement accuracy and result in reduced spills and over-deliveries.
- Projects that include the installation of automated systems, such as components that allow for remote operation of gates or remote monitoring of delivery system conditions to increase efficiency.
- Other similar water efficiency and conservation projects that save water; mitigate conflict risk in areas at a high risk of water conflict; and accomplish other benefits to increase the reliability of existing supplies.

All pending agreements and grant proposals will be evaluated using criteria that give priority to projects that save the most water, that address how water savings will help to address water supply sustainability, that complement on-farm irrigation improvements, that implement improvements connected to existing Reclamation activities, and exceed the minimum 50 percent non-Federal cost share requirement.

Summary of Progress – FY19 Q4

- **Level of Results Achieved**
  - Reclamation exceeded the FY 2019 Water Conservation Goal of 155,732 by 14,348 acre-feet, with a total of 170, 080 acre-feet of water conservation capacity.

- **Likelihood of Success**
  - High

- **Basis for the Assessment**
  - Water savings identified in description of projects funded in FY 2018 and FY 2019.

- **Actions planned to ensure achievement of the goal**
  - No additional actions required at this time.

Key Milestones

FY 2019 Milestone Summary					
Key Milestone	**Actual Q2**	**Actual Q3**	**Planned Q4**	**Actual Q4**	**Comments**
WaterSMART Grants					
Funding Opportunity Announcement released	1/31/2019				
First level review of proposals complete		4/12/2019			
Final selection of projects		6/21/2019			
Funding awarded			~~9/30/2019~~	→	FY 2019 funding will be awarded in FY 2020.
TitleXVI					
Funding Opportunity Announcement released	3/4/2019				
First level review of proposals complete		5/7/2019			
Final selection of projects			9/30/2019	8/27/2019	
Funding awarded			~~9/30/2019~~	→	FY 2019 funding will be awarded in FY 2020.
CALFED					
Funding Opportunity Announcement released	2/14/2019				
First level review of proposals complete		6/07/2019			
Final selection of projects			9/30/2019	9/30/2019	
Funding awarded			9/30/2019	9/20/2019	Partially met. Two grants under the Agriculture Water Use and Efficiency Program will be awarded in FY 2020.
Yakima River Basin Water Enhancement Project					
Funding awarded for Phase II construction			9/30/2019	1/30/2019	
WaterSMART Desalination Construction Projects					
Funding Opportunity Announcement released		4/29/2019			
First level review of proposals complete			9/30/2019	7/30/2019	
Final selection of projects			9/30/2019	8/27/2019	
Funding awarded			~~9/30/2019~~	→	FY 2019 funding will be awarded in FY 2020.

Key Indicators

Estimated Acre-feet of Potential Water Savings (As of September 30, 2019)						
	FY 2018		FY 2019		Cumulative through FY 2019	
Water Conservation & Supply Enhancement	Planned	Actual	Planned	Actual	Planned*	Actual
WaterSMART Grants	37,000	38,198	90,000	91,460	128,198	129,658
Title XVI	4,823	8,995	6,500	21,096	15,495	30,091
CALFED	1,800	3,350	4,000	5,006	7,350	8,356
YRBWEP	192	635	554	1,340	1,189	1,975
WaterSMART Desalination Construction Program			3,500	0	3,500	0
Total	43,815	51,178	104,554	118,902	155,732	170,080

*FY 2018 Actual + FY 2019 Planned = Cumulative through FY 2019 Planned

Summary of Progress – FY19 Q4

Noteworthy examples of projects funded under the Water Conservation Goal:

- **Kansas Bostwick Irrigation District, Open Lateral Conversion to Buried Pipeline System**
  Reclamation Funding: $300,000 **Total Project Cost: $650,151**
  The Kansas Bostwick Irrigation District, in northern Kansas, will convert 4.1 miles of open lateral canal into a buried pipeline system. The project is expected to conserve 724 acre-feet of water annually, which is currently lost to evaporation, seepage and operational spills. The water conserved will allow for reduced diversions from the Republican River.

- **Henry's Fork Ground Water District, Irrigation Flow Measurement Project**
  Reclamation Funding: $300,000 **Total Project Cost: $664,000**
  The Henry's Fork Ground Water District, located in eastern Idaho, along with the Madison Ground Water District, will install advanced water flow measurement devices on 86 groundwater wells. The project will allow for accurate measurements of groundwater withdrawals to better manage and stabilize aquifer depletion in the area. The project is expected to result in annual water savings of 4,348 acre-feet, which will reduce groundwater withdrawals and surface water usage and increase drought resiliency in the area.

Summary of Progress – FY19 Q4

Noteworthy examples of the projects funded under the Water Conservation Goal continued:

- **El Paso Utilities Public Service Board, Advanced Water Purification Facility**
  Reclamation Funding: $3,500,000 Non-Federal Funding: $10,500,000
  El Paso Water Utilities Public Service Board will construct an Advanced Water Purification Facility to treat wastewater for potable reuse. The treated water will be conveyed directly to the City's distribution system, making this facility the first large scale, direct-to-distribution potable reuse project in the United States.

- **South Coast Water District, Doheny Ocean Desalination Project**
  Reclamation Funding: $6,000,000 Non-Federal Funding: $18,000,000
  The Doheny ocean water desalination facility includes a seawater intake, conveyance and distribution system, desalination plant, brine disposal, and solids handling facilities. The project will improve water supply reliability by producing up to 5,321 acre-feet per year of potable water for the District.

Summary of Progress – FY19 Q4

Noteworthy examples of projects under the CALFED Program that contributed the Water Conservation Goal:

- **Shafter-Wasco Irrigation District, Leonard Avenue Conveyance Improvement Project**
  Reclamation Funding: $500,000 **Total Project Cost: $1,559,787**
  The District will install a new 27" pipeline along a 1.5-mile alignment in Shafter, California, connecting a District lateral to an existing neighboring district lateral where the water will be banked for future use during periods of drought. By having this water available, the District will help to mitigate on-farm groundwater pumping, and therefore alleviate some of the overdraft on the groundwater basin. Annual water savings will be 2,880 acre-feet per year; lifetime water savings will be 144,000 acre-feet over the 50-year life of the project.

- **South San Joaquin Municipal Utility District, In-District Recharge Spreading and Recovery Facility**
  Reclamation Funding: $500,000 **Total Project Cost: $1,162,926**
  The District will construct 40 acres of spreading ponds and install a recovery well within the District's boundaries. The project will give the District operational flexibility to absorb surface water when it is available for recharge so that it can be recovered for irrigation in peak-demand months or dry periods. Annual water savings will be 1,116 acre-feet per year; lifetime water savings will be 55,800 acre-feet over the 50-year life of the project.

Data Accuracy and Reliability

Means used to verify and validate measured values: Reclamation developed an application review committee (ARC) comprised of technical experts from across Reclamation to review proposals for funding. ARC members read and evaluate applications individually, using a pre-determined evaluation criteria. During these "consensus sessions" ARC members are encouraged to reach a general agreement on scores for each individual criterion and on the amount of water savings for which an applicant is given credit.

Data Sources Each fiscal year, Reclamation reports the water savings expected from water conservation activities funded that year toward the Department of the Interior's Priority Goal for Water Conservation. Water savings for each funded project are based on estimates of the number of acre-feet expected to be conserved each year once that project becomes operational. The estimates are provided by non-Federal project sponsors and are based on water measurement and accounting records, calculations by the project sponsor's engineering sources, hydrologic modeling, statistical analysis of historic climatic data, and other information.

Level of accuracy required for the intended use of the data: Reclamation requires documentation on how a water savings estimate provided in an application was derived. Each year's funding opportunity announcement describes in detail the types of data / documentation necessary for an applicant's water savings estimate to be accepted. The ARC determines the additional data / documentation supporting the estimate that is necessary; the ARC assesses and determines viability of the additional information provided and if inadequate documentation is provided for a particular project, Reclamation does not include water savings from the project in Priority Goal reporting.

Limitations to the data at the required level of accuracy: Since water savings estimates are provided by non-Federal project sponsors prior to undertaking the actual project, it is still possible that, despite a rigorous application review, that the actual water savings might vary from the estimate.

How the agency has compensated for such limitations if needed to reach the required level of accuracy: In order to improve on the accuracy of water savings estimates on the front end, Reclamation makes a concerted effort to improve the application and review each year. Applicants are required to include performance measures or methods of quantifying project benefits.

Additional Information

Contributing Programs: The following programs assist Reclamation in accomplishing its goal to enable capability to increase available water supply for agricultural, municipal, industrial, and environmental uses in the western United States:

- *WaterSMART Grants* (http://www.usbr.gov/WaterSMART): Reclamation provides competitive WaterSMART Grants that provide up to 50% of the cost of on-the-ground projects to save water, increase energy efficiency and the use of renewable energy in water management, address environmental issues, recover endangered species, and facilitate transfers to new uses.

- *Title XVI Program* (http://www.usbr.gov/watersmart/title/index.html): Through the Title XVI Water Reclamation and Reuse Program, authorized by P.L.I02-575 in 1992, Reclamation provides financial and technical assistance to local water agencies for the planning, design, and construction of water recycling and reuse projects, thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply.

- *CALFED Water Conservation Grants* (http://www.usbr.gov/watersmart/weeg/index.html): CALFED is a combined State of California and Federal program focused on the restoration of the Sacramento-San Joaquin Delta's ecosystem while improving water supply reliability for urban and agricultural water users. The goal of CALFED is to accelerate the implementation of cost-effective water conservation actions that provide state-wide benefits.

- *Yakima River Basin Water Enhancement Project (YRBWEP) (*https://www.usbr.gov/pn/programs/yrbwep/): The YRBWEP is to evaluate and implement structural and nonstructural measures to increase the reliability of the irrigation water supply and enhance streamflows and fish passage in the Yakima River basin.

- *WaterSMART Desalination Construction Program* (https://www.usbr.gov/watersmart/desalination/index.html): The Water Infrastructure Improvements for the Nation (WIIN) Act provides new authority to develop a program that will provide a path for ocean/brackish water desalination projects to receive Federal funding, in 2019.

Stakeholder / Congressional Consultations: Reclamation works collaboratively with non-federal, state, local and tribal governments, water districts, and other entities on a cost-shared basis to implement water management and conservation projects in the 17 Western states.

- Through the water conservation program oversight and through stakeholder engagement, Reclamation utilizes feedback into its conservation efforts to implement enhanced methodologies during program formulation. For example, based on applicant feedback, Reclamation revised the Title XVI funding opportunity to make it easier for applicants to request funding for ongoing work without having to break it into project phases. Similarly, Reclamation published the WaterSMART Strategic Implementation Plan in the Federal Register in March 2011 (http://www.usbr.gov/watersmart/docs/FedRegister_WaterSMART_Implementation_plan_FINAL.PDF) and incorporated comments into the final document.