

Ensuring Healthy Watersheds and Sustainable, Secure Water Supplies



We are seeing the very real impacts of water scarcity in the West...working with our partners, we can bring some relief to these areas through innovative efforts that will provide communities with new or more flexible sources of water, support jobs, and stretch the limited water supplies.

*Sally Jewell, Secretary of the Interior
February 2, 2015*

The Nation and particularly the West, which is the fastest growing region in the United States, face serious water challenges related to climate change and competing demands. Adequate and safe water supplies are fundamental to the health, economy, security, and environment of the country. Intensifying droughts, variable hydrology, and extreme weather events aggravate water shortages and floods, contribute to impaired water quality, and deplete groundwater resources. At the same time, population growth and new demands, including energy development, are increasing competition for supplies.

Extreme and exceptional drought continues in many basins and in some places reservoir supplies are averaging almost half of their historic levels. Snowpack, which acts like reservoir storage for many western basins, is diminishing. The aquifers on which millions of Americans rely for freshwater are being depleted at an accelerating rate, particularly where drought is forcing water users to increasingly depend on underground sources of freshwater. At the same time, the cost of maintaining water infrastructure continues to increase. New approaches are needed to ensure the resilience of the Nation's water infrastructure in the face of climate change and more volatile natural events, and to provide prudent maintenance necessary to reliably deliver water supplies.

The Federal government provides leadership and support for sustainable water stewardship. Interior works as a partner to increase reliability of water supplies for the American people by providing better tools for water management, promoting water conservation and efficiency, and wisely operating, maintaining, and improving infrastructure. Recognizing the primary role States and Tribes play

in managing water resources and the critical need to address these challenges, Interior provides leadership across watershed basins and continues to make water conservation a priority through partnerships.

WATERSMART SUSTAIN AND MANAGE AMERICA'S RESOURCES FOR TOMORROW

Interior's collaborative WaterSMART initiative works to secure and enhance water supplies to benefit people, the economy, and the environment, and identifies adaptive measures that help to address climate change and future demands. The Department's 2016 budget includes \$58.1 million for water sustainability efforts through the Bureau of Reclamation, an increase of \$7.5 million from 2015 enacted. The budget also includes \$31.0 million for the U.S. Geological Survey WaterSMART Availability and Use Assessment initiative, a \$14.6 million increase from 2015 enacted.

In 2014 and 2015, Interior continued efforts to promote sustainable water strategies and improve water management through science, collaboration, and cooperation. These approaches are demonstrated through further implementation and development of the Water Census, Reclamation Basin Studies, WaterSMART Grants, Water Reclamation and Reuse projects, and Cooperative Watershed Management programs featuring joint activities like the Western Watershed Enhancement Partnership, and a new Drought Response program. Comprehensive basin-wide approaches such as these are critical to assess water demands, evaluate the availability of and risks to water supplies, and plan for the impacts of reduced availability and increased demands in collaboration with Interior's partners.

SUPPORTING RESILIENT WATER MANAGEMENT

Resilience through Water Data and Tools. Throughout the West, drought, increasingly severe wildfires, and ecological changes resulting from climate and land use change are already impacting water supplies and the natural and human systems that depend on them. Developing data, science, and tools to understand these changes and support State, tribal, local, Federal, and other water and land managers in preparing and responding to changing conditions is critical to the resilience of communities. In 2014, the President announced the Climate Data Initiative, an effort to leverage the Federal government's extensive, freely available data resources relevant to climate to stimulate innovation and private-sector entrepreneurship in support of national climate change preparedness. The USGS contributed to more than 40 water and climate datasets for the Climate Data Initiative's Water Theme, as well as a range of software tools available to help analyze and assess impacts of a changing climate on the water cycle. Managers can use this information to help inform decisions about their water resources. In 2015 and 2016, USGS will work with other Federal and non-Federal partners to expand water resource data sets, improve methods for exchanging water data, and enhance water resource decision support tools.

Interior, along with other partners, is continuing work with the Department of Agriculture on the Western Watershed Enhancement Partnership to build resilience for critical water resource infrastructure. In August 2014, a new joint watershed restoration agreement for C.C. Cragin Reservoir in Central Arizona was signed, joining the Salt River Project, National Forest Foundation, City of Payson, Reclamation, and the U.S. Forest Service in collaborative efforts to assess and implement treatments that protect the municipal water supply and minimize wildfire and flood risks. Interior is also continuing its partnership with the Environmental Protection Agency in the Urban Waters Federal Partnership to restore urban waterways and reconnect city populations with flowing rivers and streams in their immediate neighborhood. Cleaning up and restoring local water resources is essential to human health, the economic vibrancy of communities, and an overall improved quality of life.

National Water Census – The main WaterSMART activity conducted by USGS is the National Water Census. An important component of Interior's water sustainability strategy is to inform the public and decisionmakers about the status and changes over time of the Nation's freshwater resources. The USGS National Water Census works to provide a more accurate picture of the quantity and quality of the Nation's water resources for beneficial uses and provide a basis for improved forecasting of water availability for future economic, energy production, and environmental uses. Through this effort, USGS works directly with stakeholders to identify the critical information gaps needed to inform management decisions and uncertainties.

The USGS research conducted under WaterSMART includes characterizing long-term trends in streamflow, assessing groundwater availability, quantifying water losses to the atmosphere, estimating water use requirements, and developing tools to understand the ecological impacts of changes in water availability. Three USGS Geographic Focus Area Studies in the Apalachicola-Chattahoochee-Flint Basin, the Colorado River Basin, and the Delaware River Basin, are an important part of this effort. They contribute to ongoing assessments of water availability in large watersheds with potential water use conflicts, provide opportunities to test and improve approaches

PRIORITY GOAL WATER CONSERVATION

GOAL: Enable capability to increase the available water supply in the western States through conservation-related programs to ensure adequate and safe water supplies.

METRIC: By September 30, 2015, the Department of the Interior will further enable the capability to increase the available water supply for agricultural, municipal, industrial, and environmental uses in the western United States through Reclamation water conservation programs to 840,000 acre-feet, cumulatively since the end of 2009.

The Department is proposing to extend this goal to increase the available water supply by 975,000 acre-feet by the end of 2016.

to water availability assessment, and inform and ground truth the Water Census with local information. These studies enabled researchers to adopt a place-based approach to integrate diverse lines of scientific investigation while integrating feedback from stakeholders on their science needs and most critical uncertainties.

Basin Studies – The WaterSMART program’s basin studies component leverages funding and technical expertise from Reclamation in a collaborative effort with knowledgeable State, tribal, and local water practitioners. Basin studies aim to identify practical, implementable solutions to existing or anticipated water shortages and to support related efforts to ensure sustainable water supplies. The basin studies conducted to date advance the state of knowledge about the dynamics of each particular watershed and generate a collective expertise to formulate constructive actions to address imbalances. In 2014, the Department of the Interior selected the Upper Red River Basin in Oklahoma, Upper Deschutes Basin in Oregon, and Missouri River Headwaters Basin in Montana for basin studies. In 2016,

Reclamation is continuing strong partnerships with local water and conservation managers to conduct ongoing comprehensive water studies of river basins in Arizona, California, Colorado, Kansas, Montana, Oklahoma, and Oregon. For both 2015 and 2016, the budget supports one or two new basin studies in the western U.S. and one new West-wide climate risk impact assessment.

WaterSMART Grants – Through WaterSMART Grants, Reclamation awards competitive, cost-shared assistance for water management improvements with a near-term impact on water and energy efficiency. In 2016, Reclamation anticipates funding over 40 new WaterSMART Grant projects, contributing to achievement of the Priority Goal for water conservation.

Title XVI Water Reclamation and Reuse Program – Title XVI projects develop and supplement urban and irrigation water supplies through water reuse, thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply. In 2016, Reclamation will provide

WATERSMART (dollars in millions)			
	2015 Enacted	2016 Request	Change
BUREAU OF RECLAMATION ^{1/}			
WaterSMART Grants	19.0	23.4	+4.4
Basin Studies	3.9	5.2	+1.4
Cooperative Watershed Management.....	0.3	0.3	0
Resilient Infrastructure	1.5	2.5	+1.0
Drought Response ^{1/}	0	2.5	+2.5
Title XVI Water Reclamation and Reuse Program.....	21.5	20.0	-1.5
Water Conservation Field Services	4.5	4.2	-0.2
Subtotal, Reclamation	50.6	58.1	+7.5
U.S. GEOLOGICAL SURVEY ^{2/}			
Ecosystems	0.5	3.3	+2.8
Climate and Land Use Change.....	3.5	6.7	+3.2
Water Resources.....	12.4	19.8	+7.4
Core Science Systems.....	0	1.2	+1.2
Subtotal, U.S. Geological Survey.....	16.4	31.0	+14.6
TOTAL, WATERSMART PROGRAM	66.9	89.0	+22.1

^{1/} The Consolidated and Further Continuing Appropriations Act of 2015 provided Reclamation additional funding for Western Drought Response of \$50.0 million. At the time of budget preparation, these funds have yet to be distributed by program, but a portion may be allocated to projects and programs within Reclamation’s WaterSMART programs

^{2/} In 2016 USGS expanded the scope of WaterSMART to include research on drought. Funding for drought activities in 2015 has been added for comparison purposes.

funding for seven congressionally authorized Title XVI projects for planning, design, and construction activities.

Drought Response – In 2015, Reclamation is implementing the Drought Response program—a comprehensive new approach to drought planning and implementation actions such as water marketing solutions to address municipal water shortages, installing water measurement devices to improve efficiency and measure drought impacts, and other small-scale improvements to increase water supply reliability. In 2016, Reclamation is increasing the funding for these types of activities.

Resilient Infrastructure – In 2015, Reclamation is implementing the Resilient Infrastructure program, through which Reclamation proactively maintains and improves existing infrastructure for system reliability, safety, and efficiency for water conservation to prepare for new weather extremes and support healthy and resilient watersheds. Reclamation is developing, implementing, and testing an enhanced decisionmaking criteria framework for selecting infrastructure investments and identifying opportunities to integrate operational efficiencies more compatible with climate variability adaptation goals, as part of ongoing infrastructure investments.

Cooperative Watershed Management – Reclamation’s program continues to be very successful in building locally based support. In August 2014, six groups in California, Colorado, Montana, and New Mexico were selected to establish or expand watershed groups. These grants build capacity to address water quality, ecosystem, and endangered species issues at the local level in basins. In 2015 and 2016, Reclamation will establish or expand four to six watershed groups in each year.

RESOLVING LAND AND WATER CLAIMS

Water rights are one of the most important trust resources held by Tribes and the United States as trustee. American Indian Tribes generally have senior or the first right to use water under the law. However, in many neighboring places and basin sharing communities, water resources were developed or used before Tribes were able to put water to use, leaving many Tribes without access to water or the infrastructure to put it to use. Securing water rights and ensuring permanent access to a clean and reliable water supply is an important component to tribal nationhood, quality of life, economic security,

and prosperity for Indian Tribes, and is necessary to sustain fundamental cultural values.

The 2016 budget makes significant new investments to improve Interior’s capacity to work with and support Tribes in the resolution of their water rights claims and develop sustainable water sharing agreements and management activities. These investments are critical to enabling Interior to bring about a more holistic and responsive approach to supporting Tribes and working with other non-Federal water stakeholders. Many of the projects supported in these agreements bring clean and potable water to tribal communities, while other projects repair crumbling irrigation and water delivery infrastructure upon which tribal economies depend. These investments not only improve the health and well-being of tribal members and preserve existing economies but, over the long term, bring the potential for jobs and economic development as a result of the available stable water supplies. Settlements also can provide opportunities to develop more comprehensive water sharing agreements that support watershed and basin scale stewardship of water resources.

The 2016 budget for technical and legal support and for authorized settlements involving tribal water rights totals \$244.5 million, an increase of \$73.0 million over 2015 to strengthen the Department’s capacity to meet its trust responsibilities and more effectively partner with Tribes on water issues. This funding will support bureau contributions to strengthen the engagement, management, and analytical capabilities of the Indian Water Rights Office, increase coordination and expertise among bureaus and offices that work on these issues, and increase support to Tribes. In 2016, Interior will complete the funding requirements for the Taos Pueblo Indian Water Rights Settlement Act.

DROUGHT RESPONSE

Ongoing and multi-year droughts across the West are resulting in water shortages in many areas, impacting agriculture, municipalities, and ecosystem functions. For example, the ongoing 13-year drought in the Colorado River Basin is the worst for the basin during the last 100 years. In August 2014, Lake Mead reached its lowest level since it filled more than 75 years ago and Lake Powell started the water year more than 50 feet below 2012. The impacts of drought are far reaching and can exacerbate tensions over already scarce water resources, increase the risk of devastating fires, further challenge the resources

INDIAN LAND AND WATER SETTLEMENTS
(dollars in millions)

	2015 Enacted	2016 Request	Change
NEGOTIATION AND LEGAL SUPPORT			
Bureau of Reclamation.....	3.8	5.9	+2.0
Bureau of Indian Affairs.....	16.3	30.3	+14.0
Other Bureaus and Offices.....	3.7	4.6	+0.9
SUBTOTAL, NEGOTIATION AND LEGAL SUPPORT	23.9	40.8	+16.9
SETTLEMENT IMPLEMENTATION			
Bureau of Reclamation			
Ak Chin Indian Water Rights Settlement Act.....	14.1	15.3	+1.2
Aamodt.....	3.0	6.0	+3.0
Crow.....	2.0	12.8	+10.8
Navajo-Gallup Water Supply	81.0	89.7	+8.7
Taos Pueblos.....	4.0	4.0	0
Other Ongoing Settlement Ops. and Maint	7.9	8.2	+0.3
Subtotal, Reclamation	112.0	136.0	+24.0
Bureau of Indian Affairs			
Aamodt.....	6.2	15.6	+9.4
Navajo-Gallup Water Supply	9.0	17.8	+8.8
Taos Pueblos.....	15.4	29.2	+13.8
Navajo Nation Water Resources Trust Fund.....	4.0	4.0	0
Other Ongoing Settlement Ops. and Maint	1.0	1.0	0
Subtotal, Indian Affairs.....	35.7	67.7	+32.0
SUBTOTAL, SETTLEMENT IMPLEMENTATION.....	147.6	203.7	+56.0
TOTAL, SETTLEMENT FUNDING	171.5	244.5	+73.0

of States, Tribes, and local governments, and have potentially devastating effects on small communities across the West. Compounding these challenges is growing evidence that, within the changing climate, drought events are becoming more frequent and intense for some regions of the Country. The President’s 2013 Climate Action Plan recognizes the importance of managing drought to address the impacts of climate variability, highlighting the Department’s role in making investments to better understand and manage drought risks.

Recognizing the severity of the situation in the West, Interior is working with partners to take a number of steps to address the issue. In November 2014, Reclamation awarded \$9.2 million for 131 research projects within five research priority areas to help confront the ever widening imbalance between supply and demand, including increasing water supplies

through advanced water treatment technologies and optimizing water availability under a changing and variable climate. These research projects are leveraged with partners providing \$3.8 million in non-Federal cost sharing. In 2014, Reclamation also awarded \$17.8 million in WaterSMART water and energy grants and \$20.0 million for Title XVI water reclamation and reuse projects that contribute significantly to drought response and resilience. The 2015 and 2016 budgets include funding for similar efforts and increases for Resilient Infrastructure, the Drought Response program, and in 2016, implementation of the Administration’s Open Data Policy to provide better access to water data, projections, tools, and other information to partners.

The Departments of the Interior, Agriculture, and Commerce are continuing their work with the State of California to accelerate water transfers and

exchanges, provide operational flexibility to store and convey water, expedite environmental review and compliance actions, and pursue new or fast-track existing projects that might help stretch California's water supplies. In December 2014, Reclamation, working with the Fish and Wildlife Service, National Marine Fisheries Service, and California's Departments of Fish and Wildlife and Water Resources, developed a draft Interagency 2015 Drought Strategy for the Central Valley Project and State Water Project that outlines a preliminary framework for the Drought Contingency Plan for Operations of the Central Valley Project and State Water Project, the Drought Contingency Biological Monitoring Plan, and other drought-related measures. Some of the other measures outlined include control of salt water intrusion in the Sacramento San Joaquin Delta, preservation of cold water pools in upstream reservoirs for various cold water species, and maintaining adequate protections for listed species and other fish and wildlife resources.

The USGS is providing California managers and residents with timely and meaningful data to help decisionmaking and planning for the State's water resources as drought affects streamflow across the State, reducing reservoir replenishment, and increasing groundwater depletion. In December 2014, the USGS released an interactive California Drought visualization website to provide the public with atlas-like, State-wide coverage of the drought and a timeline of its impacts on water resources. The USGS developed the interactive website as part of the Federal government's Open Water Data Initiative. The drought visualization page features high-tech graphics illustrating the effect of drought on regional reservoir storage from 2011-2014.

In the Colorado River Basin, Reclamation is working with the seven basin States to craft new strategies to ensure critical infrastructures, such as the Hoover and Glen Canyon Dams, continue to operate as intended and assist agricultural and municipal users to address current and future water challenges. In July 2014, Reclamation and municipal water providers in Arizona, California, Colorado, and Nevada signed a landmark water conservation agreement called the Colorado River System Conservation Program to help address the long-term imbalance on the Colorado River caused by years of drought conditions. The program's goal is to put in place a suite of proactive, voluntary measures that will reduce the risk of reaching critical reservoir levels. All water conserved under this program will stay in the river system, helping to boost the declining reservoir levels and protect the health of the entire river system. In addition, Reclamation and the International Boundary and Water Commission continue to implement an agreement with Mexico to allow storage of Mexican water in U.S. reservoirs, reducing and delaying the need for extraordinary shortage measures in the U.S.

In the Klamath River Basin, Interior is working with other Federal agencies, Oregon, California, Tribes, and local stakeholders to address the impacts of the ongoing drought by implementing authorized actions designed to alleviate the impacts of drought by reducing water demand in conjunction with activities that improve habitat, and restore fisheries. By implementing these actions, Interior is addressing the impacts of the drought in a manner that supports and sustains the agricultural, ranching, fishery, and tribal economies of the Basin.

\$20 MILLION AWARDED TO BUILD FIRST PUMPING PLANT FOR THE NAVAJO-GALLUP WATER SUPPLY PROJECT

In April 2014, Secretary of the Interior Sally Jewell announced the Bureau of Reclamation awarded a \$19.6 million construction contract to build the Tohlakai Pumping Plant, the first pumping plant for the Navajo-Gallup Water Supply Project, about eight miles north of Gallup, New Mexico.

The Navajo-Gallup project will deliver clean, safe drinking water to tribal and rural communities, many of which have been hauling water over long distances for far too long....This contract is another important step in honoring U.S. commitments to Indian Nations while providing lasting benefits for local economies and public health.

**Sally Jewell, Secretary of the Interior
April 1, 2014**

The overall project is a priority for the Navajo Nation which will provide the necessary water supply for future economic growth for the Navajo Nation in New Mexico. The current pumping plant will help many Navajo families east of Gallup, New Mexico get near-term groundwater for domestic use before the San Juan River water comes.

**Ben Shelly, President of the Navajo Nation
April 1, 2014**



Construction of the Tohlakai Pumping Plant, to be located in McKinley County, is expected to take an estimated 26 months to complete and provide nearly 140 direct and indirect jobs over that time. At the peak of construction, the Navajo-Gallup project will involve more than 600 jobs created at numerous project sites. Construction of the overall Navajo-Gallup project began in June 2012 and is on schedule for completion in 2024.

President Obama's proposed 2016 budget requests a total of \$107.5 million, \$89.7 million in Reclamation and another \$17.8 million in BIA, for the Navajo-Gallup Water Supply Project, which when completed, will have the capacity to deliver clean running water to a potential future population of approximately 250,000.