

**Statement of J. William McDonald, Acting Commissioner
Bureau of Reclamation
U.S. Department of the Interior
Before the
House Natural Resources Committee
on
Federal Responses to Drought in California
March 31, 2009**

Chairman Rahall and members of the Committee, I am Bill McDonald, Acting Commissioner of the Bureau of Reclamation. I am pleased to appear before you today to discuss the Department of the Interior's responses to the drought conditions currently impacting California.

As you know, three consecutive years of dry hydrologic conditions have cut deeply into California's available water supply. Water shortages this year are threatening severe consequences for farms, ranches, fishing communities, and the environment throughout the state. Governor Schwarzenegger's February 27 declaration of a drought emergency in California demonstrates the gravity of the situation. Many California communities are reeling from the impacts of drought magnified by the national economic crisis, as a result of which farmers face tight credit markets and workers displaced from agriculture are unable to find alternative employment in other economic sectors.

The Administration acutely appreciates the social and economic hardships being visited on California by this drought. Conditions confronting California call for decisive, coordinated action by all levels of Government, including federal resource agencies. We must all work together to address the needs of municipal, industrial, and agricultural water users as well as the fragile ecosystems that depend upon water in order to function.

Today I will describe the Department of the Interior's (Department's) activities to address the impacts of drought on federal lands, fisheries, and water users in California. I will start by describing what Reclamation is doing both short-term to adjust Central Valley Project operations to drought conditions and long-term to provide tools to prevent and deal with future water shortages. Then, I will talk about drought responses by other bureaus within the Department. Finally, I will explain how the Department is coordinating its drought response actions with the U.S. Department of Agriculture (USDA), the National Oceanic and Atmospheric Administration (NOAA) and the State of California.

Central Valley Project Operations and Drought Response

Reclamation's Central Valley Project (CVP) delivers water for farms, homes and factories and is also the primary source of water for many of California's wetlands, fisheries, and state, private, and national wildlife refuges. CVP facilities stretch from the Cascade Mountains near Redding in the north almost 500 miles to the Tehachapi Mountains near Bakersfield in the south. In a normal water year, the Central Valley Project delivers about 7 million acre-feet of water for agriculture, urban, and wildlife use.

During this drought period, Reclamation is closely coordinating with the State of California, the U.S. Fish and Wildlife Service, NOAA's National Marine Fisheries Service, and other Federal, State, and local organizations as it allocates scarce project water supplies. Earlier this month,

based on March 1 runoff forecasts, Reclamation updated its initial 2009 allocation; such updates are occurring on a regular basis and reflect changing water availability. As of March 30, CVP agricultural water service contractors north of the Delta will be allocated 5 percent, or 19 thousand acre-feet, of contract water supplies under their CVP contracts. CVP agricultural water service contractors south of the Delta will likely receive no allocation. Municipal and industrial water service contractors will likely be allocated 55 percent, or 111 thousand acre-feet, of their CVP supply north of the Delta and 50 percent, 155 thousand acre-feet, south of the Delta, with adjustments to meet minimum public health and safety needs. Water for State and Federal wildlife refuges provided for in the Central Valley Project Improvement Act is made available in two categories, Level 2 and Level 4. Level 2 water is the water supply delivered through the CVP and the refuges will be receiving 100% of this Level 2 supply this year. Level 4 water is purchased for the refuges, but it is likely that, due to the drought, Level 4 water will not be available for purchase this year. If no Level 4 water is available, refuges will receive approximately 71%, 396 thousand acre-feet, of the amount of water needed to meet the refuge requirements identified in the Central Valley Project Improvement Act, or 556 thousand acre-feet.

These allocations will be revisited again based on the April 1 runoff forecast.

In an average water year, allocations are approximately 100 percent for agricultural water service contractors north of the Delta and 65 percent for agricultural water service contractors south of the Delta. Senior water rights holders always receive their full allocation first. These initial 2009 allocations illustrate the severity of the water supply crisis. Storms in February and early March provided some helpful precipitation but have not ended significant water supply shortages. Due to persistent drought conditions, reservoir storage is currently at 6.8 million acre-feet, far below the average 9.3 million acre-feet normally in the storage at this time of year, even though precipitation is approaching normal in the state.

Since its construction, the authorized purposes of the CVP have been expanded to meet changing public values. Meeting all water supply demands is increasingly challenging even during normal hydrologic conditions. Reclamation has always been a forward-looking agency, and I believe we have operated our integrated water delivery system to meet the needs of our customers to the greatest degree possible.

Reclamation's Drought Relief Efforts

Secretary Salazar has directed Reclamation to work closely with the State of California under the Reclamation States Emergency Drought Relief Act of 1991 (P.L. 102-250, as amended) to facilitate water transfers via the State's Drought Water Bank. Reclamation will continue to work with Governor Schwarzenegger's cabinet-level drought response team while preparing for the possibility that dry conditions could continue into water year 2010.

On a day-to-day basis, Reclamation is also exploring all options available under our legal authorities and California water law to help relieve drought impacts on CVP waters users, to provide any available operational flexibility to convey and store water, to facilitate additional transfers and exchanges, and to expedite any related environmental review and compliance actions. This is happening now on an ongoing basis throughout the state.

Over the past several years, Reclamation has directed resources into various initiatives intended to avoid or ameliorate the impacts of droughts in California. Since 2004, Reclamation has awarded \$7.5 million in grants to 36 projects in California under the Challenge Grant Program. The improvements resulting from these grants are projected to create or conserve about 200,000 acre-feet of water annually for agricultural and urban uses. We recognize that this is just a fraction of the water delivered annually in California, but this is an example of Reclamation's proactive work.

In addition to Reclamation's drought mitigation efforts through the Challenge Grant Program, Reclamation has funded water management improvements and water conservation efforts in the Mid-Pacific Region through the Water Conservation Field Services Program (WCFSP) and the CALFED Water Use efficiency Grant Program. Since 2005, Reclamation has funded over \$4 million for 110 water conservation projects under the WCFSP, and \$6 million for 31 projects through CALFED.

As you know, the recently enacted American Recovery and Reinvestment Act (Public Law 111-5) provides monies that Reclamation can expend under existing authorities such as the Drought Act and the CVP Improvement Act. I want you to know that Reclamation and the Department are actively considering, where consistent with the Recovery Act, the use of stimulus monies for immediate drought relief projects. An announcement providing specific plans will be made in the coming weeks.

U.S. Fish and Wildlife Service Responses to Drought

Many National Wildlife Refuges managed by the U.S. Fish and Wildlife Service (Service) in California receive water through the CVP and are anticipating decreased water deliveries because of the ongoing drought. Refuge managers have worked through various habitat management scenarios in anticipation of reduced water allotments. They are adapting management practices to ensure that water is used to provide the greatest benefit to migratory birds and other wildlife.

In addition to managing wildlife refuges, the Service is responsible for administration of the Endangered Species Act (ESA). Most relevant for the current drought, the Service has been working closely with Reclamation, the California Department of Water Resources (DWR), and other State and Federal agencies and stakeholder groups to prevent the extinction of Federally-listed delta smelt—a fish that survives only in the Sacramento-San Joaquin Delta and is listed as threatened under the ESA. Under the ESA, operations of the CVP and State Water Project must be consistent with the Reasonable and Prudent Alternative (RPA) identified in the Service's Biological Opinion (BO) for the delta smelt. The BO was issued by the Service in December of 2008, based on the Project Description and Biological Assessment submitted to the Service by Reclamation and DWR. The BO provides for more flexible water operations than were in effect under the court order that had been in place since fall of 2007. The current BO allows for a dynamic implementation process, changing as weather conditions, hydrology and distribution of delta smelt change. By law, it is limited to addressing the impacts of project operations on the smelt, although all parties recognize that there are other significant stressors in the Delta.

Changing water project operations is not sufficient to restore the function of the Bay-Delta ecosystem. To that end, the Service is working with Reclamation, the State of California, the

water users (the Potentially Regulated Entities or PREs), the environmental community, and other State and Federal agencies as they develop the Bay Delta Conservation Plan (BDCP)—a planning and environmental permitting process to restore habitat for Delta fisheries and ensure reliable delivery of water supplies to Californians. The BDCP is being developed to meet the requirements of a Federal Habitat Conservation Plan (HCP) under the ESA, and will also incorporate measures to adapt to increased drought conditions.

The Service is completing a series of scoping meetings across the State for the BDCP. The Service has also formed a Bay-Delta Field Office to work with water users, other Federal agencies, and California to help draft the BDCP, complete environmental reviews and comply with the ESA. The first draft of the BDCP and associated Draft Environmental Impact Statement are expected to be completed in the fall of 2009. The goal of the process is for the Service to be able to issue an Incidental Take permit for operation of the State Water Project and CVP in accordance with the BDCP in 2010.

USGS Responses to Drought

The USGS has an active streamgaging program in California that currently includes approximately 750 streamgages that monitor real-time streamflow conditions and provides decades of data on historic conditions. The USGS's WaterWatch web page (<http://water.usgs.gov/waterwatch/>) provides a real-time assessment of current surface water conditions as compared to historic streamflow values. The streamflow information provided by the USGS streamgaging network is extremely important for use by water resources managers in dealing with the drought.

In addition to ongoing streamgaging, USGS scientists are currently involved in evaluating soil moisture processes under a melting snow pack. What they have documented is that during the last few drought years the usual late fall rains did not appear and parched soils, dried by summer evapotranspiration, were then covered by snow. When the snow melted, much of the water was absorbed by soils to replenish the soil moisture deficit. USGS scientists are working to develop a real time soil moisture monitoring and modeling program to help reservoir operators in predicting actual snow melt deliveries to reservoirs taking soil moisture levels into account.

A likely outcome of this drought is increased groundwater pumping because of reduced surface water deliveries from the CVP and the State Water Project. Pumping could result in additional land subsidence, which would reduce canal grades and conveyance rates. The USGS has proposed studies to look at these impacts on exchange contractors and deliveries to Southern California. The USGS is also planning to use its groundwater modeling software, MODFLOW, to evaluate land surface changes from drought-induced subsidence, which indirectly affects runoff and stream gradients.

The USGS is working with water agencies throughout the State to help them develop more effective strategies for conjunctive use of ground water and surface water. This is a key component of drought planning and response. Increases in ground-water pumpage to make up for reduced surface-water supplies can lead to impacts such as land subsidence and seawater intrusion. The USGS is working with agencies to better quantify these potential impacts. From a planning perspective, water agencies are seeking USGS assistance in identifying and assessing

strategies for storing surplus water in aquifers during normal to wet years, so as to have additional supplies to draw from during future droughts.

The USGS is working to assess environmental and ecological factors relating to droughts. USGS scientists are updating the statistical evaluation of historic streamflows in California's rivers. This updating is important, because environmental flow standards in many rivers are based on these historical flow statistics. USGS scientists also are assessing alternative Delta conveyance options which support the Delta environment. Moving water through the Delta during wet periods is a critical component of supply reliability during droughts. However these diversions can affect Delta fish populations and associated environmental conditions. The USGS is working to quantify the effects of diversion-related flow changes on smelt entrained in pumping facilities, identify the factors causing declines in Delta fish populations, and determine the physical characteristics needed in Delta ecosystem restoration projects.

Grazing Policy during Drought

The Bureau of Land Management's (BLM) northeastern California field offices have worked with their Resource Advisory Council to develop a flexible grazing policy in response to drought conditions. Under this policy, ranchers who graze on public lands are allowed to either adjust the total numbers of livestock grazing on public lands or adjust the season of use (when livestock are put out to pasture and for how long). The policy is aimed at preventing damage to the range by stabilizing the amount of forage grazed. Given the current levels of precipitation, it is likely that the drought measures will be implemented this year. Most ranchers take the option of adjusting the season of use, which provides better rangeland protection during drought periods by extending the rest period and also enables easier management oversight by BLM.

Drought Impacts on Indian Country

The Department has important responsibilities to Indian tribes related to their Reservations, Rancherias and Indian Communities and associated resources. California has 107 federally recognized Indian tribes and bands throughout the State, and the drought is impacting their members and their resources as well as they face issues such as sufficient water supplies for irrigation, instream flows to protect and restore fishery resources, concerns regarding potential wildfire impacts, and even ensuring enough water for domestic use. Most notable could be the effects that the continued drought may have on tribal subsistence and ceremonial fish harvests and traditional gathering practices. Conversely, as many water users search for alternative sources and new partnerships, Indian tribes or bands may have important opportunities to develop win-win solutions regarding water resources with non-Indian neighbors. Currently, the Bureau of Indian Affairs is working with tribes to develop these types of arrangements. The Department is committed to assuring that Federal obligations to Indian tribes are addressed during this drought.

The National Park Service Confronting the Drought

Resource managers at National Parks in California are using various mechanisms to address the extended drought situation. Meadows and wetlands are dependent on water, and are prone to invasion by exotic plant species when they are abnormally dry. As a result, Park Resource managers have to adjust invasive plant surveillance techniques in drought years. Conservation measures will be put in place in parks where campground water supplies are expected to be limited, including several sites in Yosemite National Park.

Park staff are also involved in ongoing efforts to learn more about the relationship between water availability and plant and wildlife management. For example, scientists at Mojave National Preserve are working with the California Department of Fish & Game (CDFG) and researchers at the University of Nevada-Reno to identify water sources in the park that are producing sufficient water to support wildlife. They are doing an in-depth study of the water usage habits of the mule deer that will help wildlife managers understand mule deer population dynamics and improve management decisions.

Predicting Fire Potential during Drought

The Interior bureaus and our land management partners are preparing to deal with the potential for widespread and intense fires in California this year as a result of multiple successive years of drought. Successive years of drought cause increased stress to the forest, accelerating the outbreak of forest disease and beetle infestations, which can in turn lead to increased fire risk. Interior bureaus operating in California are preparing to alter their deployment plans throughout the fire season to deal with predicted weather or ongoing fire incidents.

Interior has an organization in place to manage firefighting resources when multiple fires pose challenges to firefighting resource deployment. The National Multi-Agency Coordinating Group (NMAC) is located at the National Interagency Fire Center in Boise, Idaho. This group is comprised of fire managers and representatives from all the federal wildfire management agencies, the National Association of State Foresters, the National Interagency Coordination Center, the National Weather Service, and the military when conditions warrant. These managers establish national priorities and provide national leadership and direction for wildland fire activities. They are poised to plan for deployments in advance of predicted adverse weather incidents and respond quickly to effectively manage available resources.

In addition, the BLM's Fire and Aviation program is taking several steps to be prepared for the possibility of an active fire season in California. Because of the historically dry conditions, crews will be hired as early as possible and positioned according to where fire is most likely to occur. Initial attack efforts will be supplemented by Single Engine Air Tankers (SEATS), highly versatile aircraft that have a payload of up to 800 gallons. Should severe fire conditions warrant, out-of-state crews and mid-level fire managers may be ordered in to California to supplement existing resources. BLM in California also has an agreement with the Alaska Fire Service to bring in a Type 1 hotshot crew, the Midnight Suns, after the Alaska season ends (typically by mid-July) and position it where most needed.

Federal Drought Action Team

The Department understands that while periods of drought are inevitable and fairly common in the West, this dry cycle is demonstrating just how severe the impacts can be. A coordinated

response to this situation is crucial. Last month, the Department and the U.S. Department of Agriculture announced the formation of a Federal Drought Action Team. This group includes representatives appointed by Secretary of the Interior Salazar and Secretary of Agriculture Vilsack, along with executives from other Federal agencies, including the Corps of Engineers, NOAA, the Department of Labor, the Environmental Protection Agency, the Small Business Administration, the Council on Environmental Quality, and the Office of Management and Budget. The Action Team's charge will be to maximize the scope of aid delivered to drought-stricken communities in the minimum amount of time, and to expedite drought response actions.

With California currently facing one of its worst droughts in decades, the Drought Action Team will direct the appropriate departmental agencies and bureaus in working with Governor Schwarzenegger's state drought response team to minimize the social, economic, and environmental impacts of the current drought.

Conclusion

In conclusion, I want to emphasize that the entire Department is deeply aware of the human and environmental costs of prolonged drought. We continue to explore what actions in addition to those I have described we could take to ease the situation and fulfill our responsibilities as public land managers and as providers of water supplies for environmental purposes, irrigators, municipalities, and tribes. We note that drought response activities are underway in other affected states as well. We look forward to working with this Committee to identify effective ways to help communities cope with the impacts of drought. I would be pleased to answer any questions the Committee may have.