

**Statement of David Murillo, Deputy Commissioner, Operations
Bureau of Reclamation
U.S. Department of the Interior
Before the
Natural Resources Committee
Subcommittee on Water and Power
House of Representatives**

**HR. 460 – Bonneville Unit Clean Hydropower Facilitation Act
April 17, 2012**

Chairman McClintock and members of the Subcommittee, I am David Murillo, Deputy Commissioner for Operations of the Bureau of Reclamation. I am pleased to be here today on behalf of the Assistant Secretary for Water and Science who oversees the Central Utah Project Completion Act activities to present the Administration's views on HR 460, the Bonneville Unit Clean Hydropower Facilitation Act. The proposed legislation is associated with development of hydropower on the Diamond Fork System, Bonneville Unit, Central Utah Project.

The Central Utah Project Completion Act (CUPCA) provides for the completion of the construction of the Central Utah Project (CUP) by the Central Utah Water Conservancy District (CUWCD). CUPCA also authorizes programs for fish, wildlife, and recreation mitigation and conservation; establishes an account in the Treasury for deposit of appropriations and other contributions; establishes the Utah Reclamation Mitigation and Conservation Commission to coordinate mitigation and conservation activities; and provides for the Ute Indian Water Rights Settlement.

Hydropower development on CUP facilities was authorized as part of the Colorado River Storage Project Act (CRSPA) under which the Central Utah Project is a participating project. The development of hydropower on the Diamond Fork System has been contemplated since the early days of the CUP. The 1984 Environmental Impact Statement on the Diamond Fork System described the construction of five hydropower plants with a combined capacity of 166 MW of power.

However, these hydropower plants were never constructed and the 1999 Environmental Impact Statement on the Diamond Fork System presented a plan which specifically excluded the development of hydropower, stating "there are no definite plans or designs, and it is not known if or by whom they may be developed."

Although hydropower development was not included, construction of pipelines and tunnels for the Diamond Fork System were completed and put into operation in July 2004. Under full operation the Diamond Fork System will annually convey 101,900 acre-feet of CUP Water and 61,500 acre-feet for Strawberry Valley Project water users.

In 2002 CUPCA was amended to authorize development of Federal project power on CUP facilities. With this new amendment plans for hydropower development at Diamond Fork were included in the 2004 Utah Lake System Environmental Impact Statement and the 2004

Supplement to the Definite Plan Report for the Bonneville Unit (DPR). These documents describe the construction of two hydropower plants on the existing Diamond Fork System for a total generating capacity of 50 MW.

Section 208 of CUPCA included provisions that power on CUP features would be developed and operated in accordance with CRSPA and CUP water diverted out of the Colorado River Basin for power purposes would be incidental to other project purposes.

There are two options for hydropower development on the Diamond Fork System: 1) Federal project development or 2) private development under a Lease of Power Privilege contract with the United States.

Under the first option the CUWCD would construct the Diamond Fork hydropower plants under contract with the United States and contribute an upfront local cost share of 35 percent of the construction costs. In addition to the hydropower plant construction costs, the costs of conveyance facilities upstream of Diamond Fork System that are allocated to power would have to be repaid. The DPR allocates costs of the CUP according to project purposes. The reimbursable costs allocated to power are \$106 million based upon the costs of developed features upstream of the Diamond Fork System. It is anticipated that under this option, these allocated costs would be repaid through an arrangement among Interior, CUWCD, and the Western Area Power Administration (WAPA).

Under the second option, private hydropower could be developed. Although the DPR and 1999 EIS describe Federal hydropower development, they also provide the option for a Lease of Power Privilege arrangement with the United States. Under this arrangement Interior would implement a competitive process to select a lessee for private development of hydropower at Diamond Fork. The lease arrangement would require repayment of the \$106 million of upstream costs plus annual payments to the United States for the use of the Federal facilities, amounting to at least a 3 mil rate paid by the lessee to the United States.

HR 460 does not preclude Federal development of hydropower, but it does increase the likelihood of private development. If enacted, this bill would indefinitely defer the \$106 million in costs allocated to power development in the Diamond Fork System under section 211 of CUPCA, thus reducing the cost of hydropower development at this site. This bill would increase the likelihood that a private developer would pursue a Lease of Power Privilege arrangement because the private developer would not, under this legislation, be required to repay the \$106 million of construction costs that were allocated to power as would be required under existing law.

We understand and appreciate the goal of this legislation of facilitating the development of hydroelectric power on the Diamond Fork System.

However, as stated in testimony last year on companion legislation, the Administration has serious concerns about losing our ability to recoup the Federal investment made in these facilities as set forth in this legislation. The Federal Government may benefit in the medium term from the annual payments for the use of Federal facilities that would be paid if a lessee entered into a

Lease of Power Privilege arrangement for production of hydroelectric power on the Diamond Fork System. Assuming only a summer water supply as under current deliveries, these payments are estimated at about \$400,000 a year starting the year that the project is completed and continuing for the life of the project. However, because payment of \$106 million of allocated power costs would be postponed indefinitely, it is unclear what the long-term fiscal implications of enactment of this legislation would be and how the United States Treasury would be made whole. This legislation would potentially permanently postpone anticipated receipts to the U.S. Treasury at the expense of the Federal taxpayer. While it is not clear at this time whether a nonfederal developer would propose a hydroelectric project at Diamond Fork under current law, if this were to occur, repayment of the allocated power costs would begin after the hydroelectric project is completed and average \$5.3 million a year for 40 years.

Section 5 of HR 460 would prohibit the use of tax-exempt financing to develop any facility for the generation or transmission of hydroelectric power on the Diamond Fork System. This provision was added to the bill to prevent any loss of revenue to the Federal Government as a result of the financing mechanism used for development of hydropower at this site.

This concludes my testimony. I am happy to answer any questions.

**Statement of David Murillo, Deputy Commissioner for Operations
Bureau of Reclamation
Department of the Interior**

**Before the
Committee on Natural Resources
House Subcommittee on Water and Power
HR 2664 – To Reauthorize the Water Desalination Act of 1996**

April 17, 2012

Chairman McClintock, members of the Subcommittee, I am David Murillo, Deputy Commissioner for Operations at the Bureau of Reclamation (Reclamation). I am pleased to provide the views of the Department of the Interior (Department) on HR 2664, legislation to reauthorize the Water Desalination Act of 1996, Public Law 104-298 (Desalination Act). The Department supports this bill with the clarification described below.

The original Desalination Act divided the authorization for program activities into two areas. Desalination research and studies were authorized in section three of the Desalination Act, and demonstration and development were authorized in section four of the Desalination Act. Appropriations for these two programs were included in section eight of the Desalination Act. Sections three and four are active parts of the program as implemented today.

As introduced, HR 2664 amends section eight of the Desalination Act to extend the appropriation for research and studies through the year 2016, and authorizes additional funding for demonstration and development, allocating a maximum of \$2 million per year through 2016. Since introduction of HR 2664 in July of 2011, a separate extension of the Desalination Act's authority was adopted in the Fiscal Year 2012 omnibus appropriations bill, Public Law 112-74. It is our understanding that the bill sponsors intend to revise HR 2664 to provide for the program's reauthorization for five years beyond the current expiration date at the end of FY 2013. However, we recommend clarifications to section 2(d)(2) of the bill in order to be consistent with the annual funding level in Public Law 112-74.

The bill is consistent with the existing Desalination and Water Purification Research and Development (DWPR) Program implemented by Reclamation. The Desalination Act and its subsequent extensions¹ have given Reclamation the authority to support studies and projects across the country to advance the state of the art in desalination technology and lower the cost of desalinated water. These efforts are coordinated under the DWPR Program under our Research and Development Office in Denver, Colorado. The program supports work on innovations under cooperative agreements that require a minimum 50 percent non-federal cost share. Non-federal funding underlies the majority share of the Program's projects, with an exception for institutions of higher learning where up to \$1 million may be provided without cost share.

The program's accomplishments are numerous, and some of the recent highlights include:

¹ Extensions of PL 104-298 are found in PL 108-7, PL 109-13, PL 109-103, PL 110-5, and P.L. 112-74.

- Originally proposed to be a means of extracting water from saline groundwater using the natural temperature cycle as the driving force, the natural freeze-thaw process is currently commercialized as a process to reduce the quantities of impaired water produced by coal bed methane production. The last testing on treatment of saline groundwater by this process was completed in August 2002.²
- The DWPR program funded a consortium of membrane manufacturers to evaluate and establish a “standard” diameter for large reverse osmosis elements. This increases the economy of scale and reduces the costs and footprint. This 16-inch standard is currently being adopted for several plants overseas and is contemplated for several American plants. The project was completed in September 2004.³
- A DWPR project in Corpus Christi, Texas, was among the first to demonstrate that membrane filtration provided more reliable pretreatment for a seawater reverse osmosis plant than conventional clarification and filtration. This is becoming the method of choice for large-scale seawater desalination systems. This project was completed in September 2004.⁴
- Slant wells were tested for a seawater intake in Orange County. This novel approach to seawater intake under the seafloor avoids environmental issues like impingement and entrapment and is planned for use in a new seawater desalination plant. It is expected this technique will make California permitting for seawater desalination quicker. This phase of the work on the plant was completed in April 2008.⁵
- With funding from Reclamation’s DWPR Program, Eastern Municipal Water District in Perris, California, in cooperation with Corollo Engineering, carried out a landmark comparative study of how to dispose of concentrate, the salt remainder from an inland desalting plant. The disposal of salt from inland desalters is currently a major part of the capital and operating costs. This study was completed in September 2007.⁶

In addition to extending the program’s sunset and funding levels, HR 2664 also specifies certain research objectives and provides cost recovery authorities which Reclamation will apply at the Brackish Groundwater National Desalination Research Facility (Facility) in Otero County, New Mexico. Reclamation is partnered with New Mexico State University in a four-year research program with projects at or associated with the Facility focused on research, education, and outreach in water desalination.

Not every proposal for research develops into a viable product, and some proposals prove unsuited to further development, but that is part of the reality of technology research. The

² DWPR Report No. 71.

³ DWPR Report No. 114. DWPR reports can be downloaded from <http://www.usbr.gov/pmts/water/publications/reports.html>.

⁴ DWPR Report No. 106.

⁵ DWPR Reports No. 151, 152 and 153.

⁶ DWPR Report No. 149.

DWPR Program provides Reclamation the authority to do meaningful work in order to develop new technology that lowers the end cost of desalinated water, and enables communities to diversify their sources of water supply. The Department supports the continued extension of the authority via HR 2664 with the clarification suggested here.

This concludes my written statement. I am pleased to answer questions at the appropriate time.