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Before the
Committee on Natural Resources
House Subcommittee on Water and Power
HR 745 – To Reauthorize the Water Desalination Act of 1996

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Chairman McClintock, members of the Subcommittee, I am Bob Quint, Senior Advisor at the Bureau of Reclamation (Reclamation). I am pleased to provide the views of the Department of the Interior (Department) on HR 745, legislation to reauthorize the Water Desalination Act of 1996, Public Law 104-298 (Desalination Act). The Department supports this bill.

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 745 amends section eight of the Desalination Act to extend the appropriation authority for research as well as development and demonstration projects through the year 2018.

The bill is consistent with the existing Desalination and Water Purification Research (DWPR) Program implemented by Reclamation. The Desalination Act and its subsequent extensions[1] 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. The Act has also funded -- through Congressional direction –construction of the Brackish Groundwater National Desalination Research Facility (BGNDRF) in 2008 ($17M) and continues to fund annual facility operating costs of $1M. The majority of the facility's research bays are currently used for collaborative work with industry and universities. 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

Approximately $56 million have been appropriated from FY 1998 through FY 2012. In FY2011, Reclamation awarded $1.47M in new research agreements, with partners providing $1.30M of cost-sharing. FY2012 funding was provided for ongoing research projects and in addition funded one new project. Reclamation is currently reviewing FY2013 DWPR research proposals. It is anticipated that over $1.1M in new research agreements will be funded in FY2013. 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.

- 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 the salt concentrate discharged from an inland desalting plant. The disposal of salt from inland desalters is currently a major part of a plant's capital and operating costs. This study was completed in September 2007.[2]

- Slant wells were tested for a seawater intake in Orange County (California). This novel approach to seawater intake under the seafloor avoids environmental issues such as impingement and entrapment and is planned for use in a new seawater desalination plant. This phase of the work on the plant was completed in April 2008.[3]

- The DWPR program funded the evaluation of approaches and technologies to treat membrane concentrate to provide solutions to growing challenges of concentrate management. This study evaluated needs, issues, promising technologies, economics, and practical considerations of concentrate treatment. Technologies were highlighted, including zero liquid discharge options, with potential to increase the implementation of desalination to diversify water supply portfolios. This project was completed in May of 2009.[4]

- DWPR funding contributed to the successful testing of a renewable energy coupled desalination system. The study evaluated an integrated wind-driven water desalination solution. The scope included defining the market for integrated windwater desalination systems, economic analysis and cost of water estimates, and control issues that address the intermittency of the wind resource. This project was completed in July of 2009.[5]

- The Long Beach Water Department developed and patented a two-pass nanofiltration process intended to reduce the energy requirement for desalting through Reclamation's DWPR Program. Long Beach collaborated with the Bureau of Reclamation and the Los Angeles Department of Water and Power in construction and operation of a 300,000-gallons-per-day seawater desalination prototype facility. This study was completed in March of 2013.[6]

The DWPR Program provides Reclamation the authority to support applied research that lowers the cost of desalinated water, and thereby enables communities to diversify their sources of water supply. The Department supports the continued extension of the authority via HR 745.

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

[2] DWPR Report No. 149.
[3] DWPR Reports No. 151, 152 and 153.
[4] DWPR Report No. 155.
[5] DWPR Report No. 146.
[6] DWPR Report No. 158.