

# Committee on Resources

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**TESTIMONY OF IRELA BAGUE**  
**GOVERNING BOARD MEMBER**  
**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
**BEFORE THE WATER & POWER SUBCOMMITTEE**  
**COMMITTEE ON RESOURCES**  
**U.S. HOUSE OF REPRESENTATIVES**  
**JULY 24, 2003**

Chairman Calvert and Members of the Subcommittee, my name is Irela Bague and I am a member of the Governing Board of the South Florida Water Management District from Miami - Dade County. I very much appreciate having the opportunity to testify today on that portion of your legislation that would authorize a new competitive grant program to fund desalination projects among other things.

The mission of the South Florida Water Management District is to manage and protect the water resources of central and southern Florida by balancing and improving water quality, flood control, natural systems and water supply. The District covers all or part of 16 counties that stretch from the headwaters of the Kissimmee River near Orlando, all the way to the Florida Keys -- and coast to coast from Fort Myers to Fort Pierce. Our region encompasses the major population centers of Miami-Dade, Broward, and Palm Beach Counties, along with the unique Everglades ecosystem. Over 6.5 million people live within the boundaries of our District.

Like other water resource managers throughout the United States, we are struggling to address the long term challenges posed by drought, increasing population, and competing demands from business, agriculture, and the environment. These challenges recently led us to join together with water agencies from other States including California and Texas to form the United States Desalination Coalition, a group dedicated to advocating an increased Federal role in advancing desalination, both seawater and brackish, as a viable long term tool for meeting our Nation's water supply needs.

Most experts, including the Department of the Interior, agree that large portions of the United States are facing a water supply crisis of potentially immense portions as the population continues to grow and few new sources of water are developed. In places like California, Florida, Texas, New Mexico, and Georgia urban areas are struggling to meet the demands of exploding populations despite the fact that water supplies

have remained the same or even decreased over the last ten to fifteen years. Water conservation and the emergence of water recycling as a tool for meeting non-potable demands have stretched available supplies farther and farther. But in many cases the savings resulting from conservation and recycling don't even begin to make up for water supply losses attributable to environmental restoration programs that have forced the dedication of huge amounts of available water to environmentally sensitive areas such as the Everglades or the California Bay - Delta ecosystem.

As outlined in the Interior Department's Water 2025 white paper, policy makers increasingly have to deal with water supply crises resulting from failures of past policy makers to address competing demands of people and the environment for a finite water supply. As a result, there is a growing realization that the country cannot afford these kinds of crises. The social, economic, and environmental consequences of water supply crises are simply too severe.

It is our belief that the answer, in part, to averting future water supply crises and ensuring that clean water is available to families, farms, and businesses lies in desalinating seawater and brackish surface and groundwater and making that water available for municipal and industrial uses. Consider for a moment some of the benefits of seawater desalination:

Renewable Supply of "New" Water Provided

Regional Security Through Supply Redundancy

Drought-Proof Supply

Source of High Quality Water

No Water Rights or Third Party Agreements Needed

So, given all of the benefits of desalination what, you may ask, is going on in the United States today? In some respects I would say that we stand at the threshold of a new era of water supply that will be characterized by the development of many new seawater and brackish groundwater desalination projects. This is due to a collision of three factors. The water supply crises I outlined, the recognized benefits of desalination that I just described, and -- perhaps most importantly - the "new" economics of desalination brought on by the tremendous advances in the area of membrane technology over the past decade have reduced the cost of desalinating an acre foot of seawater from \$2,000 in 1990 to under \$900 today. The collision of these three factors is resulting in a rush by water utilities to plan for the development of desalination projects and facilities all across the United States.

Throughout the United States there are a significant number of seawater and brackish water desalination projects in various stages of planning and development. The most notable is the recently completed Tampa facility in my own State that will eventually produce 28 million gallons per day of new water for the Tampa Bay region. Other projects being considered in Florida include Fort Myers, Palm Beach, Fort Lauderdale, and Volusia County.

Whether or not these projects and others like them in California and elsewhere get built in time to address the mounting water supply crises is largely dependent on whether the Federal government makes a commitment to invest in this new infrastructure as it has previously in all manner of other important water related infrastructure including potable water treatment, irrigation, flood control, and wastewater treatment. That is why the legislation that you have introduced, Mr. Chairman, is potentially so important. We applaud your efforts to establish a new, competitive grant program that would in part help fund the development of

desalination facilities. The U.S. Desalination Coalition recognizes that this legislation is truly a work in progress and we look forward to working with you and other Members of Congress to develop a comprehensive program to accelerate desalination in the United States. To that end I would like to enumerate several principles that we think should be at the center of any new desalination program.

**First, any program to provide financial assistance to entities developing desalination projects must be national in scope.** The benefits of desalination are national in scope and any program designed to provide a new Federal investment in these facilities must be available to all 50 states.

**Second, we believe that at the center of any new program to accelerate the development of seawater and brackish water desalination projects there should be a mechanism created to provide energy assistance payments to entities developing these projects over a finite period of time.** Despite the tremendous advances in membrane technology that have reduced the costs of desalinating water, energy costs remain high and are responsible for approximately 30% of the overall cost of desalinated water. The best way to accelerate the development of these projects is by lowering the net cost of desalinated water to a point where it is equivalent to other supplies. We believe that this can best be accomplished by providing energy assistance payments of approximately 62 Cents per Thousand Gallons to entities that successfully develop desalination projects. We would recommend that these payments be limited to the initial ten years of a project's operation. The U.S. Desalination Coalition has recommended a performance based, competitive system to provide this form of assistance on a pilot basis to a limited number of projects and we hope that you will consider this approach going forward.

**Third, because brackish water desalination projects typically lack a large urban population base with which to repay capital construction costs and the issue of concentrate disposal is more complicated and expensive, some form of construction grant assistance should be available to entities developing brackish water desalination facilities.** Likewise, we do not believe that this form of assistance is necessary to encourage the development of seawater desalination facilities. The energy assistance payments previously described should be sufficient to encourage the rapid development of these facilities.

Mr. Chairman, we appreciate your leadership in attempting to comprehensively address America's water supply crisis. We and the other members of the United States Desalination Coalition look forward to working with you and other Members of Congress to develop a new Federal initiative based upon the foregoing principles to address some of these problems and to spur the development of a new generation of water supply projects based on desalination.

In closing I would like to leave you with a quote from President John F. Kennedy some 41 years ago:

**"If we could produce fresh water from salt water at a low cost, that would indeed be a service to humanity, and would dwarf any other scientific accomplishment."**

Those are strong words coming from the man who launched our Nation's voyage to the stars and they are

words worth pondering as we move further into the 21<sup>st</sup> Century.

Thank you again for inviting me to testify today. I would be happy to answer any questions that you may have.

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