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Advancing the Science of Water®

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PRESS RELEASE

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Leading Drinking Water Research Group Examining Climate Change's Effect on the Nation's Drinking Water Supply and Quality

WASHINGTON, D.C. — Representatives of the Awwa Research Foundation (AwwaRF), the nation's leading drinking water research organization, briefed Congress on how climate change is affecting the quality and quantity of the public's drinking water supply.

AwwaRF began sponsoring research to assess and plan responses to the impacts of climate change as early as 2003. The studies, summarized in the 2006 report *Climate Change and Water Resources: A Primer for Municipal Water Providers*, give water providers a realistic grasp on the nature of the risks posed by climate change.

Research done on behalf of the Foundation's 900 water utility members concludes that the climate scientists agree overwhelmingly that climate shift is occurring more rapidly than can be attributed to natural causes. Among the first and most critical impacts will be changes to precipitation patterns around the world in this century. This will directly affect the availability of drinking water and the water used in our homes (bathing, cooking), as well as water needed for agriculture and food production.

Water utilities throughout the United States as well as Europe, Australia, and Asia are concerned that extended changes in precipitation will lead (and have already led) to extended droughts. Climate change is also generating greater intensity of rainfall, which will increase erosion, flooding and difficulty of capturing excess water for storage. The timing of precipitation will also affect the reliability of water supplies if too much falls in too short a time. Storage capacity is inadequate for quantities that will be needed for use over longer periods than in the past.

Key conclusions on climate change reported include:

- Global rain and snowfall will likely *increase* as temperatures rise, but not uniformly across the planet. Such variation makes contingency planning difficult.
- Global precipitation will likely be less frequent but more intense, leading to risk of flooding.
- As the globe warms, more precipitation will fall as rain, rather than snow. Snow packs will decline, and warmer temperatures will begin the melt season earlier. Rain will replace snow, and rain falling on snow sets the stage for greater winter and spring runoff, and a risk of floods.
- As temperatures rise, periods of drought will increase. Droughts lead to greater likelihood of forest fires in forested areas as an earlier loss of snowpack, drier summer soils and stressed trees become fodder for fires.
- Rising temperatures are expected to lead to rising sea levels, which impact coastal area water quality.

What does that mean for our drinking water, and water utility planning?

- Droughts, flooding and forest fires can have severe impacts on water quality. Droughts lead to greater accumulation of sediment in existing reservoirs; while floods and forest fires lead to severe sediment and debris flows to downstream water sources.
- Changes in snowpack, the melt season and runoff can aggravate deficiencies in storage capacity. Water utilities may have to invest in greater water storage capacity as runoff levels become more extreme.

- Rising sea levels threaten coastal area drinking water as salt-water intrudes on freshwater aquifers; as sedimentation patterns change, and as new levels lead to severe storm-surge flooding. These changes will likely affect water utility infrastructure.
- Weather change, and warmer temperatures, could lead to increased demand for industrial, municipal and agricultural water.

Additionally, Awwa Research Foundation and its members are examining a number of other critical issues related to climate change. Current research underway looks at:

- Mitigating increasing damage to watersheds and water quality through extreme events such as wildfires and hurricanes.
- Creating new sources of through water recycling and desalination. Conducting research to understand the public's concerns about water reuse.
- Helping water utilities reduce greenhouse gas emissions.
- Examining how water providers/utilities meet the public's demand and need for water by examining water conservation and water saving technologies.
- Exploring regionalization of water supplies.
- Factoring in climate change into utilities long-term water supply planning.
- Convening climate change experts from the US and Great Britain to identify the highest priority research topics.
- Examining climate changes issues in building new water facilities.

About the Awwa Research Foundation (AwwaRF)

The Awwa Research Foundation (AwwaRF) is a member-supported, international, nonprofit organization that sponsors research to enable water utilities, public health agencies, and other professionals to provide safe and affordable drinking water to the public. With more than 900 subscriber members in the U.S. and abroad, AwwaRF has funded and managed more than 1,000 projects valued at more than $400 million. More information on the Awwa Research Foundation is available at www.AwwaRF.org .

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