



**American Water Works
Association**

The Authoritative Resource on Safe Water SM

Government Affairs Office
1300 Eye Street NW
Suite 701W
Washington, DC 20005-3314
T 202.628.8303
F 202.628.2846

Headquarters Office
6666 West Quincy Avenue
Denver, CO 80235-3098
T 303.794.7711
F 303.347.0804
www.awwa.org

CLIMATE CHANGE

Background

Most leading scientists and researchers believe that global climate change is occurring. While much of the public views this issue through the lens of “global warming,” in fact climate change will present different challenges for different regions of the globe, and will carry consequences that go far beyond changing temperatures.

In particular, there is strong evidence that global climate change is having an impact upon the world’s water resources. Some impacts already experienced include:

- Changes in patterns of precipitation, resulting in an increase in the frequency of extreme weather events such as droughts and flooding;
- Increased water and wastewater temperatures, possibly resulting in public health risks associated with higher concentrations of certain organisms in water supplies;
- Decreased snowpack and varying stream flow patterns, leading to inadequate recharge of storage reservoirs; and,
- Rising sea levels, resulting in an increased risk of drinking water aquifer contamination due to salt water aquifer migration.

The uncertainty caused by climate change poses a daunting challenge for drinking water utilities as they rely upon historical climate patterns to manage source water supplies, runoff patterns and treatment infrastructure. Utilities must continue to provide uninterrupted, high-quality service to their customers. As a result, they must be able to quickly identify and implement adaptation measures and mitigation strategies to address potential climate change impacts.

The nation’s existing drinking water infrastructure is already in need of hundreds of billions of dollars worth of investments and this need will only be exacerbated over the coming decades due to the potential impacts of climate change. For example, intense rainfall events are predicted to increase in frequency in many parts of the United States. As a result, higher levels of pollutant runoff, as well as increases in turbidity and sedimentation, will degrade reservoirs and rivers that are used as drinking water sources, leading to higher treatment expenses to make drinking water safe for consumption.

Recommendations

One of the earliest and most profound impacts of climate change will be on water resources. Indeed, in many areas of the country, these impacts are already being felt to a significant degree, and drinking water utilities are affected. It is not an exaggeration to say that the ability to provide a reliable year-around supply of safe drinking water is at risk in some areas of the country. We urge Congress to provide funding for research that addresses the impacts of climate change on water resources and to provide funding to drinking water utilities for the implementation of climate change adaptation measures and mitigation strategies. Specifically, Congress should:

1. Fund a comprehensive, unified, and coordinated federally sponsored applied research program that will develop decision-support tools, identify adaptation and mitigation strategies, and provide better information on the impacts of climate change on drinking water quantity and quality. The research must address, or support the ability to

address, global climate change models; climate change vulnerability assessments; water conservation methods; energy efficiency management techniques; and the development of alternative water sources through methods such as reuse, recycling, and desalination.

2. Increase funding to drinking water utilities to provide for the implementation of mitigation strategies and adaptation measures to address the environmental and public health risks that may result from climate change.
3. Develop policies that directly address the potential water supply and availability variations that are forecast for different regions of the U.S.
4. Consider the potential for unintended consequences of alternative energy technologies (such as biofuel development and carbon sequestration projects) on groundwater resources when developing new policies and legislation.
5. Offer incentives encouraging water utilities to reduce their carbon emissions when feasible, including credit for advanced efforts under any new cap-and-trade system.
6. Encourage the implementation of energy-saving, pollution-reduction, and alternative energy projects by drinking water utilities. Examples include the use of energy recovery systems in water distribution systems and power generating facilities, where water passes from a high-pressure zone to a lower-pressure zone.

Stable and predictable funding for federal research and climate change adaptation projects must be assured. Congress should consider allocating any revenues resulting from any greenhouse gas cap-and-trade program to the research outlined above.

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