

## **I. Background Information**

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Area of Expertise: drinking water policy

The Association of Metropolitan Water Agencies (AMWA) is an organization of the largest publicly owned drinking water systems in the United States. AMWA's membership serves more than 127 million Americans with drinking water from Alaska to Puerto Rico.

AMWA is the nation's only policy-making organization solely for metropolitan drinking water suppliers.

AMWA is committed to the collection and exchange of scientific and technical information to support competitive utility operations, effective utility leadership, safe and secure water supplies and effective public communication on drinking water quality. Water utilities need decision-relevant information from the Climate Change Science Program in order to best perform their essential jobs of providing safe water to the public.

## **II. General Comments**

### **First General Comment:**

AMWA is committed to the collection and exchange of scientific and technical information to support competitive utility operations, effective utility leadership, safe and secure water supplies and effective public communication on drinking water quality. Water utilities need decision-relevant information from the Climate Change Science (CCSP) Program in order to best perform their essential jobs of providing safe water to the public.

**Reviewer's name, affiliation: Diane VanDe Hei, Erica Brown; AMWA**

### **Second General Comment:**

AMWA supports a strong research plan that will help the water sector (drinking water, wastewater and stormwater) utilities respond to the impacts of global climate change upon the nation's drinking water supplies. A comprehensive, unified, and coordinated federal research program is essential for developing decision support tools, adaptation and mitigation strategies, and for helping utilities access better information on the impacts of climate change on drinking water quantity and quality.

AMWA encourages EPA, the National Oceanic and Atmospheric Administration (NOAA), and the other federal agencies conducting climate change research to develop

reliable modeling systems and regional projections of freshwater quality and quantity changes and to offer clear guidance on how water utilities may prepare for changing climate conditions over the next several decades.

**Reviewer's name, affiliation: Diane VanDe Hei, Erica Brown; AMWA**

**Third General Comment:**

AMWA concurs with the comments submitted by the Water Utility Climate Alliance (WUCA). WUCA is comprised of eight metropolitan drinking water utilities, seven of which are also AMWA members. AMWA is collaborating with the WUCA to leverage resources to assist water utilities in responding and adapting to the impacts of climate change on their ability to provide drinking water to millions of American homes and businesses.

**Reviewer's name, affiliation: Diane VanDe Hei, Erica Brown; AMWA**

**Fourth General Comment:**

Scientific research has found that warming temperatures are likely to impact the hydrological cycle and threaten drinking water supplies in the United States in a number of ways, including increased evaporation reducing water storage capacity, rising sea levels threatening inland water supplies, changes in seasonal rainfall patterns, reduced mountain snowpack, and increased water contamination as a result of heavier storm intensity and increased turbidity and sedimentation.

Water utilities must begin planning now for their expected water supply needs and water availability realities over the next several decades. Climate change threatens to make current forecasting models irrelevant, so new regional projections are needed to help water utilities plan for the next 20 – 50 years.

In addition, America's water infrastructure is in need of billions of dollars worth of improvements in the coming decades, even absent the additional stresses that will be imposed by climate change. Increased investment in this infrastructure and the development of alternative water supplies will help utilities adapt to these serious challenges.

Therefore, to address these issues and enable the water sector to adapt to the new and potentially unknown challenges that will result from climate change, AMWA encourages the CCSP to work to ensure that climate change research is comprehensive, unified, and coordinated between the federal organizations involved in CCSP research. This is essential for the development of decision support tools, adaptation and mitigation strategies, improved information on the impacts of climate change on water quantity, stormwater management and wastewater treatment and more reliable regional projections of freshwater quality and quantity changes. This information can be applied by water utilities that are trying to better understand the situation and plan adaptation strategies.

**Reviewer's name, affiliation: Diane VanDe Hei, Erica Brown; AMWA**

**Fifth General Comment:**

AMWA encourages the CCSP to address, or support the ability to address the following issues that are pertinent for water sector utilities. Several of these issues were also raised in the comments submitted by WUCA:

- Global climate change models that address precipitation changes and other issues pertinent to water quantity. These models need to be refined and downscaled to reduce uncertainty in the model projections.
- Assessments to determine the vulnerability of different regions and watersheds to the likely impacts of climate change over different timeframes. Water utilities need this information to ensure they have secured adequate water supplies as they plan ahead for the needs of the next 20-50 years.
- Improved quality and accessibility of regionally resolved information regarding climate impacts on temperature, precipitation patterns, hydrology, water quality, extreme events and ecosystems.
- Decision support tools for planning, decision-making and policy-making that can accommodate deep uncertainty and the potential for abrupt climate change.
- The collection, maintenance, and accessibility of data and key databases with attention toward making the data more useful for decision-making purposes.
- Coordination with research and findings being developed internationally, particularly in regions of the world that are experiencing and responding to the effects of climate change now, such as Australia.
- Enabling better access by stakeholders to regional climate information and technical expertise through Regional Integrated Sciences and Assessments (RISA) and other programs.

**Reviewer's name, affiliation: Diane VanDe Hei, Erica Brown; AMWA**

**Sixth General Comment:**

In November 2005, the CCSP held a workshop to discuss the role of CCSP's decision support activities with regard to assessments and the use of climate information. AMWA is in agreement with several of the recommendations that are detailed in the summary of that workshop (<http://www.climate-science.gov/workshop2005/finalreport/default.htm>) and encourages the CCSP to include in its revised research plan how it intends to incorporate these recommendations in order to better support decision making by local governments, such as water sector utilities.

Specifically, AMWA concurs with the suggestion that the CCSP frame its assessments with "more user input and involvement to increase salience, legitimacy, and trust. This dialogue should begin when an assessment is initiated to maximize opportunity for input from stakeholders and increase understanding of the assessment process. Regarding the utilization of climate information, one of the most common themes was that the information must be communicated in a way that stakeholders and decision makers can understand and respond. This process should encourage the role of intermediaries and

bridging organizations to work with users to help them develop the capacity to use the information effectively, in part through relating the information to their unique decision-making approaches.”

AMWA urges the CCSP to work develop partnerships with water sector organizations to improve communication and input between the CCSP organizations and the water sector.

**Reviewer's name, affiliation: Diane VanDe Hei, Erica Brown; AMWA**

### **III. Specific Comments**

**Page 3, Lines 12-15:** AMWA concurs with the comments submitted by the Water Utility Climate Alliance, and reiterates its comment specific to the “importance of the CCSP reaching out to the user community with regard to the cross-cutting elements and working groups mentioned here in order to develop robust partnerships.”

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**Page 3, Lines 32-34:** AMWA concurs with the comments submitted by the Water Utility Alliance, and reiterates its comment specific to the importance of the CCSP holding more workshops that will include attendance by water sector (drinking water, wastewater and stormwater) utilities and stakeholders.

The water sector needs decision support tools that will help drinking water, wastewater and stormwater utilities address impacts of climate change on drinking water quantity and quality. Water sector utility participation in such events would help insure that the research and work CCSP supports is less academic and can be applied by decision makers.

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