

# United States Senate

September 20, 2017

COMMITTEES:  
ENVIRONMENT AND PUBLIC WORKS  
FINANCE  
FOREIGN RELATIONS  
SMALL BUSINESS

COMMISSION ON SECURITY  
AND COOPERATION IN EUROPE

The Honorable Gene L. Dodaro  
Comptroller General of the United States  
Government Accountability Office  
441 G St., NW  
Washington, DC 20548

Dear Comptroller Dodaro:

We request that the Government Accountability Office (GAO) study what is known about the effects of climate change on the nation's domestic water systems and the potential fiscal risks posed by those effects, as well as evaluate federal actions that may be taken to reduce such risks.

Drinking water infrastructure requires the management of several related systems—drinking water, stormwater, and wastewater. Each component is threatened by the anticipated consequences of climate change. Sewer systems and wastewater treatment plants across the United States are beginning to see the effects of changing hydrologic conditions along the coasts and inland. Along the coasts, rising sea levels cause saltwater to enter sewer systems, reducing volume available for wastewater conveyance, causing backups in the system, and straining treatment plant systems. As seas continue to rise, the oceans will completely inundate some of these plants by the end of the century. Inland, increasingly unpredictable and severe precipitation events infiltrate pipes and cause surges in the wastewater system.

Concerns with the safety of America's drinking water infrastructure does not end at pipe, reservoir, pump station, and treatment plants. Many threats to drinking water infrastructure can be attributed to the sources of drinking water, such as polluted water bodies, depleted aquifers, and inadequate storage. As watersheds continue to be affected by climate change, water infrastructure upgrades will be required to meet new demands and ensure safe source waters. With proper planning, education, and conservation, utilities are making strides to ensure demand is met for decades to come.

Around 80% of drinking water in the United States comes from surface waters such as rivers, lakes, and reservoirs, with the remaining 20% from groundwater aquifers. In total, there are approximately 155,000 active public drinking water systems across the country. According to the American Society of Civil Engineers, most Americans—just under 300 million people—receive their drinking water from one of the nation's 51,356 community water systems.<sup>[1]</sup> Of these, just 8,674 systems, or 5.5%, serve more than 92% of the total population, or approximately 272.6 million people.

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<sup>[1]</sup> American Society of Civil Engineers, *Conditions and Capacity*, ASCE's 2017 Infrastructure Report Card (2017), <https://www.infrastructurereportcard.org/drinking-water/conditions-capacity/>

The U.S. Environmental Protection Agency (EPA) sets legal limits for over 90 contaminants in drinking water. The Safe Drinking Water Act (SDWA) allows states to set and enforce their own drinking water standards as long as the standards meet or exceed EPA's minimum national standards. With sufficient funding and proper oversight, smaller systems that serve under 10,000 people can mitigate risks and maintain safe water quality. Identifying the risks of climate change to drinking water infrastructure and adopting resiliency measures can ensure this record of safety continues.

Climate change presents opportunities and challenges to enhance resilience and reduce potential future losses through adaption actions, rather than simply pursuing a reactive approach of funding after a crisis occurs. Building resiliency may require changes in the design, construction, maintenance, and funding of drinking water, stormwater, and wastewater systems.

To further understand and address the fiscal risks resulting from climate change impacts to the federal-aid drinking water programs and opportunities to build resiliency into water infrastructure and funding systems, we would like GAO to examine the following questions:

- How will climate change affect the ability of communities to manage drinking water and how prepared are drinking water facilities for the effects of stronger storms, increased flood events, saltwater intrusion, and increased droughts in their respective regions?
- To what extent do federal drinking water infrastructure programs encourage adaptations to prepare for the effects of climate change on such infrastructure?
- To what extent are communities using EPA's source protection program to adapt to the effects of potential climate change?
- To what extent are sewer systems and wastewater treatment plants prepared to address the impacts of sea level rise, storm surge, and high precipitation on stormwater and wastewater management?
- What federal action can be taken to help federal, state and local government officials with this problem?

Thank you for your prompt attention to this matter. If you have any questions regarding this request, please coordinate with Mae Stevens at (202) 228-642, [Mae\\_Stevens@cardin.senate.gov](mailto:Mae_Stevens@cardin.senate.gov).

Sincerely,



Benjamin L. Cardin  
United States Senator



Sheldon Whitehouse  
United States Senator