

GAO Highlights

Highlights of [GAO-14-504T](#), a testimony before the Committee on the Budget, U.S. Senate

Why GAO Did This Study

Certain types of extreme weather events have become more frequent or intense according to the United States Global Change Research Program, including prolonged periods of heat, heavy downpours, and, in some regions, floods and droughts. While it is not possible to link any individual weather event to climate change, the impacts of these events affect many sectors of our economy, including the budgets of federal, state, and local governments.

GAO focuses particular attention on government operations it identifies as posing a “high risk” to the American taxpayer and, in February 2013, added to its High Risk List the area *Limiting the Federal Government’s Fiscal Exposure by Better Managing Climate Change Risks*. GAO’s past work has identified a variety of fiscal exposures—responsibilities, programs, and activities that may explicitly or implicitly expose the federal government to future spending.

This testimony is based on reports GAO issued from August 2007 to May 2014, and discusses (1) federal fiscal exposures resulting from climate-related and extreme weather impacts on critical infrastructure and federal lands, and (2) how improved federal technical assistance to all levels of government can help reduce climate-related fiscal exposures.

GAO is not making new recommendations but has made numerous recommendations in prior reports on this topic, which are in varying states of implementation by the Executive Office of the President and federal agencies.

View [GAO-14-504T](#). For more information, contact Alfredo Gomez at (202) 512-3841 or gomezj@gao.gov.

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BUDGET ISSUES

Opportunities to Reduce Federal Fiscal Exposures Through Greater Resilience to Climate Change and Extreme Weather

What GAO Found

Climate change and related extreme weather impacts on infrastructure and federal lands increase fiscal exposures that the federal budget does not fully reflect. Investing in resilience—actions to reduce potential future losses rather than waiting for an event to occur and paying for recovery afterward—can reduce the potential impacts of climate-related events. Implementing resilience measures creates additional up-front costs but could also confer benefits, such as a reduction in future damages from climate-related events. Key examples of vulnerable infrastructure and federal lands GAO has identified include:

- **Department of Defense (DOD) facilities.** DOD manages a global real-estate portfolio that includes over 555,000 facilities and 28 million acres of land with a replacement value DOD estimates at close to \$850 billion. This infrastructure is vulnerable to the potential impacts of climate change and related extreme weather events. For example, in May 2014, GAO reported that a military base in the desert Southwest experienced a rain event in August 2013 in which about 1 year’s worth of rain fell in 80 minutes. The flooding caused by the storm damaged more than 160 facilities, 8 roads, 1 bridge, and 11,000 linear feet of fencing, resulting in an estimated \$64 million in damages.
- **Other large federal facilities.** The federal government owns and operates hundreds of thousands of other facilities that a changing climate could affect. For example, the National Aeronautics and Space Administration (NASA) manages more than 5,000 buildings and other structures. GAO reported in April 2013 that, in total, these NASA assets—many of which are in coastal areas vulnerable to storm surge and sea level rise—represent more than \$32 billion in current replacement value.
- **Federal lands.** The federal government manages nearly 30 percent of the land in the United States—about 650 million acres of land—including 401 national park units and 155 national forests. GAO reported in May 2013 that these resources are vulnerable to changes in the climate, including the possibility of more frequent and severe droughts and wildfires. Appropriations for federal wildland fire management activities have tripled since 1999, averaging over \$3 billion annually in recent years.

GAO has reported that improved climate-related technical assistance to all levels of government can help limit federal fiscal exposures. The federal government invests tens of billions of dollars annually in infrastructure projects that state and local governments prioritize, such as roads and bridges. Total public spending on transportation and water infrastructure exceeds \$300 billion annually, with about 25 percent coming from the federal government and the rest from state and local governments. GAO’s April 2013 report on infrastructure adaptation concluded that the federal government could help state and local efforts to increase their resilience by (1) improving access to and use of available climate-related information, (2) providing officials with improved access to technical assistance, and (3) helping officials consider climate change in their planning processes.