The federal government is responsible for responding to major floods and runs the federal flood insurance program. It also has millions of dollars of its own infrastructure at risk from floods. Yet the government is failing to deal effectively with flood risks before the fact.

Let's begin with the levees that are the main defense against flooding. There are over 100,000 miles of levees across the United States, including about a fifth of all U.S. counties, many of which owned or operated by states, localities, or private entities. Safety regulation is spotty.

By way of background, there are actually two kinds Earthen levees are constructed from compacted soil that is typically covered with grass, gravel, stone, asphalt, or concrete, to help prevent erosion. Floodwalls, which are generally found in urban areas, are made of concrete. Levees require active maintenance such as removing trees or other vegetation, repairing concrete damage, or filling in animal burrows.

Surprisingly, the <u>GAO</u> reported, the federal government does not have a program overseeing all levees across the nation, and no national standards exist for levee safety Instead, the Corps attempts to oversee only the 15,000 miles of levees involving federal construction, maintenance, or rehabilitation. Under 5he 2014 law, FEMA and the Corps were also supposed to establish voluntary federal safety guidelines and a hazard classification system based solely on the potential consequences associated with a levee's failure, as opposed to the likelihood or probability of a levee failure."

As of mid-2016, these agencies had made little progress on some of their assigned tasks and no progress at all on others which they attributed to lack of resources. Apart from some work on incorporating FEMA information into an Army Corps data base, the situation was bleak:

"The agencies have taken no action on the remaining key national levee safetyrelated activities for which they were responsible and have missed several statutory deadlines for developing guidelines and reports. For example, the agencies took no action on . . . . the voluntary national levee-safety guidelines, due June 10, 2015; or a report, due June 10, 2015, that was to include, among other things, recommendations for legislation and other congressional actions necessary to ensure national levee safety. Additionally, according to agency officials we interviewed, the agencies have no current plan for implementing the remaining activities." In 2015, President Obama issued an order requiring greater flood precautions for federally funded infrastructure, especially critical facilities like hospitals. Although leaving room for some alternatives, the Obama Order authorized three main approaches to flood risk management for federal infrastructure:

"(i) the elevation and flood hazard area that result from using a climate-informed science approach that uses the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. . . . ;

"(ii) the elevation and flood hazard area that result from using the freeboard value, reached by adding an additional 2 feet to the base flood elevation for noncritical actions and by adding an additional 3 feet to the base flood elevation for critical actions;

"(iii) the area subject to flooding by the 0.2 percent annual chance flood."

Just days before Hurricane Harvey, Trump <u>rolled back</u> the Obama order, restoring a previous standard dating far back to the Carter Administration.The Obama order seems to have had three fatal flaws from a Trumpian perspective: it made construction more expensive, it was issued by Obama, and it involved climate change. In the long run, American taxpayers will find themselves paying out more in disaster relief for buildings they helped pay for in the first place, because the government failed to require proper flood precautions. In February, HUD quietly <u>reinstated</u> some of the Obama requirements for posthurricane housing funding, including a <u>directive</u> for them to take "continued sea level rise" into account. Presumably, Ben Carson didn't happen to notice this action. But other federal infrastructure spending remains subject only to the Carter-era rules.

This year's hurricane season should be a wake-up call. We need to get serious about flood risks and infrastructure. Those risks are only going to increase as sea level rises and extreme weather becomes more common.