



Coastal Flood Resilience News

September 4, 2025

This newsletter provides a summary of news and research journal articles related to coastal storms and rising sea levels. It is a product of the [Coastal Flood Resilience Project](#), a network of nonprofit organizations working for stronger programs to prepare for coastal storm flooding and rising sea levels along the coast of the United States. Prior issues of the CFRP News can be found [here](#).

Hurricane Katrina: 20 Years Later

August 29th is the 20th anniversary of landfall of Hurricane Katrina, which was [responsible](#) for 1,833 fatalities and approximately \$108 billion in damage (un-adjusted 2005 dollars). The anniversary generated dozens of articles reviewing the impacts of the storm and the prospects for avoiding future disasters; here are several of the best:

- This [article](#) from Columbia Climate School offers lessons learned from Katrina.
- This [article](#) in *The Guardian* provides an interesting overview of the storm and how it still shapes disaster management policy.
- This [article](#) in *Common Edge* by Jed Horne, Pulitzer Prize winning city editor of the Times-Picayune when Katrina struck, examines the cultural and social consequences of the storm and response.

Science

1. **Rebuttal to DOE Climate Report:** A group of 85 scientists has published a [report](#) making a strong rebuttal to the recent Department of Energy [report](#) minimizing climate change and risk. The rebuttal report includes a detailed chapter defending sea level rise projections (see page 243) and hurricanes (see page 162). The rebuttal report finds that the DOE report:

“...exhibits pervasive problems with misrepresentation and selective citation of the scientific literature, cherry-picking of data, and faulty or absent statistics. The DOE CWG report does not meet standards of quality, utility, objectivity and integrity appropriate for use in supporting policy making.”

This [article](#) from NPR describes how the Union of Concerned Scientists and Environmental Defense Fund have filed suit charging that the process DOE used to develop the report was illegal. This [article](#) from *Inside Climate News* provides more background information.

2. **Sea Level Projections Proven Accurate:** This [research](#), published in the journal of the American Geophysical Union, finds that sea level rise projections made in the 1990s were “remarkably accurate”.

“Here we show that the mid-range projection from the Second Assessment Report of the IPCC (1995/1996) was strikingly close to what transpired over the next 30 years, with the magnitude of sea-level rise underestimated by only ~1 cm.

This news [article](#) provides background information.

3. **AMOC Debate Continues:** This [article](#) in *The Guardian* reports on new research finding that the tipping point making collapse of the Atlantic Meridional Overturning Circulation unavoidable is likely to be passed within a few decades, although a full collapse could take hundreds of years. Decline or collapse of the AMOC would add two to three feet of sea level rise along the Atlantic coast.

Here is the [journal article](#), which concludes:

“Of particular concern is our finding that deep convection in many models stops in the next decade or two, and that this is a tipping point which pushes the northern AMOC into a terminal decline from which it will take centuries to recover, if at all. As a result, CMIP6 models point to a significantly higher risk than previously assumed for the AMOC to evolve to a state in which the northern AMOC has vanished.”

4. **AMOC Collapse Estimates:** This [new research](#) published in the journal of the American Geophysical Union uses “physics based indicators” to estimate probability of the start of AMOC collapse concluding:

“An analysis consisting of 25 different climate models shows that the AMOC could begin to collapse by 2063 (from 2026 to 2095, 25th to 57th percentiles) under an intermediate emission scenario (SSP2-4.5), or by 2055 (from 2023 to 2076, 25th to 75th percentiles) under a high-end emission scenario (SSP5-8.5). When the AMOC collapses, the Northwestern European climate changes drastically and this will likely induce severe societal impacts.

5. **Abrupt Changes in Antarctic:** [New research](#) published in the journal *Nature* points to “rapid, interacting and sometimes self-perpetuating changes in the Antarctic environment.” The authors note:

“A regime shift has reduced Antarctic sea-ice extent far below its natural variability of past centuries, and in some respects is more abrupt, non-linear and potentially irreversible than Arctic sea-ice loss....The tipping point for unstoppable ice loss from the West Antarctic Ice Sheet could be exceeded even under best-case CO₂ emission reduction pathways, potentially initiating global tipping cascades.”

This brief [report](#) from the Australian government provides background information.

6. **Overview of Recent Antarctic Science:** Susan Crawford offers an interesting and helpful overview of the recent research on Antarctica in this [Substack post](#).
7. **Rate of Arctic Ice Melt Slowing:** New [research](#) published in the journal of the American Geophysical Union finds that the melt rate over the past 20 years has been at least twice as slow as the longer-term rate, reporting:

“When we compare the current slowdown to similar pauses in model simulations, we see that it could plausibly continue for another five to 10 years, although the same slowdown makes a faster-than-average sea ice decline more likely in the coming years.”

This *Washington Post* [article](#) provides background information.

- 8. Growing Tourism Puts Antarctic at Risk:** This [article](#) on the website Phys Org describes new research pointing to the environmental harms caused by an increase in the number of tourists and researchers in and around Antarctica from 20,000 per year to 120,000 per year in the past two decades. Here is the [journal article](#), which noted:

"The increasing human presence in Antarctica raises concerns about pollutants from [fossil fuel combustion](#), including those from ships, aircraft, vehicles and supporting infrastructure..."

- 9. How Climate Change Drives More Severe Hurricanes:** This [article](#) in the *New York Times* describes how a warming climate and warmer ocean waters increase the likelihood of rapid intensification of storms such as Hurricane Erin that was "one of the top five most quickly intensifying hurricanes on record."

- 10. Increase in Category 5 Hurricanes:** This [article](#) in the *Washington Post* describes the long- term increase in the number of Category 5 hurricanes in the Atlantic Ocean, noting that the increase in more severe storms is linked to rising ocean water temperatures.

"Over the longer term, there have been only 33 seasons with Category 5s since 1924, or about one-third of all years. Before the last 10 years — when there have been 11 Category 5 hurricanes — it took 27 years for the prior 11 of that level and 34 years for the 11 before that."

The article includes a helpful table showing all Category 5 storms in the Atlantic since 1924.

FEMA Crisis

Several news reports describe a crisis at the Federal Emergency Management Agency (FEMA).

- 11. FEMA Staff See Potential Disaster:** This Reuters [article](#) describes how 191 current and former FEMA staff wrote to the FEMA Review council and to Congress with the concern that the lack of experience among FEMA leaders risks a Katrina level disaster. The [declaration](#):

"...asks Congress to make FEMA an independent cabinet-level agency free from interference from DHS and to protect FEMA employees from politically

motivated firings "to prevent not only another national catastrophe like Hurricane Katrina, but the effective dissolution of FEMA itself."

12. Dissenting FEMA Staff Placed on Leave: This *Associated Press* [article](#) reports that some FEMA staff signing the letter of dissent were placed on leave and some fired.

13. GAO Report Finds Risks in FEMA Staff Cuts: A [new report](#) from the government Accountability Office (GAO) finds that concurrent disasters stressed FEMA staff capacity and that:

"Recent workforce reductions may exacerbate existing workforce challenges and impact federal agencies' capacity to respond to future high-impact disasters."

This [article](#) in the *New York Times* provides background information.

14. Bills Propose to Reinstate FEMA and NOAA Staff: Bills introduced by Rep. Neguse and Casar would reinstate FEMA and NOAA employees. [HR 5002](#) applies to NOAA staff and [HR 4992](#) applies to FEMA.

15. FEMA Management Bill Reported from Committee: The Committee on Transportation and Infrastructure considered a [manager's amendment](#) and marked up and voted to report an amended version of HR 4669, a bipartisan bill to reform FEMA on September 3. Here is the Committee [press release](#). CFRP commented on the bill in this [letter](#). The markup version of the bill responded to some of the CFRP comments.

National Policy

16. Homeland Security Bars Funding Helping Immigrants: This [article](#) in the *Washington Post* describes new policy at the Department of Homeland Security barring states and volunteer groups that receive government funds from helping undocumented immigrants:

"Several disaster assistance groups, FEMA employees and emergency management experts said the new requirements in the department's fiscal 2025 aid contracts would make it harder for nonprofits to help the most vulnerable people in the aftermath of a disaster."

17. Pollution in Floodwaters: This [article](#) in *The New York Times* describes the human health hazards of pollutant in floodwaters, pointing to sewage as a primary contaminant and the first 24 hours after a storm as the period with highest levels of pollution.

“Floodwaters are “a toxic brew of pesticides, toxins, petroleum, anything and everything that you can imagine,” said Dr. Robert Glatter, an emergency physician at Lenox Hill Hospital in New York City. Hundreds of types of bacteria and viruses can contaminate the waters, he added, making them dangerous to play in or simply walk through.”

18. Debris Removal Causes Environmental Damage: This [article](#) in Vox describes how debris removal and cleanup after Hurricane Helene, much of it conducted by FEMA, the Army Corps of Engineers, and contractors, harmed wetlands and endangered and threatened species, noting:

“...the contractors ultimately did more harm to the environment than the storm itself, the experts said. The many scientists and environmental experts I spoke to say the main problem is the compensation system for companies involved in disaster recovery: Contractors are typically paid by the volume of debris they remove...creating an incentive for them to take more debris than is necessary.”

19. Nature Based Solutions for Coastal Resilience Around the Country: This [feature article](#) from the *Associated Press* provides an overview of diverse, nature based approaches to building coastal resilience in different coastal regions.

State and Local

20. California Offers Lessons for Coastal Resilience: This new [memo](#) from Urban Ocean Lab describes work across the state of California to build coastal resilience to a changing climate and points to three key strategies:

- Institutionalize and fund coastal resilience;
- Align state priorities with regional, local, and civic partners; and
- Equip local governments with climate data and tools.

Here is the [full text](#) of the memo.

21. California's Humboldt Bay Governments Seek Regional Sea Level Rise Solutions: This [article](#) from California Sea Grant describes new research by Cal Poly Humboldt proposing expanded cooperation among governments around California's Humboldt Bay. Here is the [research paper](#). The research paper notes:

“Humboldt Bay is experiencing one of the fastest rates of SLR on the West Coast and exists in a complex regulatory environment with over 20 government entities, three Tribes, and numerous community members and groups connected to the issue.”

22. Charleston Schools in Flood Zones: This [article](#) from the *Charleston Post and Courier* reports that about one third of Charleston's schools are in a flood zone. The article points out that bus routes are subject to flooding delaying travel to schools, that children walking in flood waters are exposed to bacteria and other pollutants in flood waters, and that sea level rise of over a foot by 2050 will increase flood risks to schools.

23. Charleston Seawall Logjam Broken? This [article](#) from the *Charleston Post and Courier* reports that the city is moving forward with its share of funding for planning with the Army Corps of Engineers for a seawall around the most vulnerable part of Charleston. The entire project is estimated to cost \$1.3 billion and be completed in the mid-2030s. Local funding for the construction phase of the project is still to be determined.