

Highlights of GAO-25-107210, a report to congressional requesters.

Why This Matters

The National Oceanic and Atmospheric Administration (NOAA) and the Air Force fly aircraft—known as Hurricane Hunters—into tropical cyclones and winter storms. Equipment on these aircraft collects critical data to help forecast a storm’s track and intensity.

Information from these aerial reconnaissance missions helps with evacuation efforts and storm preparations to protect life and property.

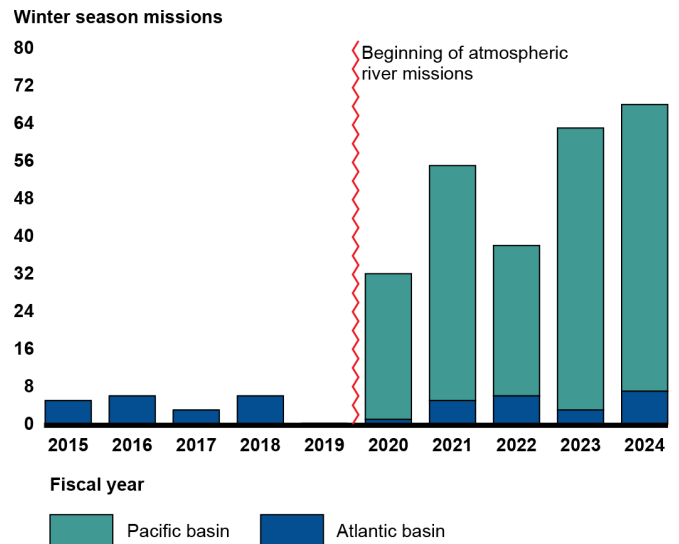
GAO Key Takeaways

Hurricane Hunter operations have increased since 2014, especially winter season missions, because of new responsibilities and greater demand for data. This has strained NOAA’s and the Air Force’s ability to meet their Hurricane Hunter responsibilities.

NOAA and Air Force officials said that limited aircraft availability and staffing shortages have contributed to Hurricane Hunters missing mission requirements—the key tasks of a mission. For example, they said maintenance issues prevented NOAA’s sole high-altitude jet from flying two Hurricane Helene missions in 2024. Since 2014, a growing number of mission requirements have been missed. However, NOAA and the Air Force have not systematically tracked the reasons for this. They also have not comprehensively assessed their Hurricane Hunter workforces to see if changes to staffing levels or workforce structure are needed.

NOAA plans to acquire six aircraft to replace its three aging planes, and the Air Force has identified needed technology upgrades for its aircraft. However, NOAA and Air Force senior leaders do not have a mechanism to regularly communicate with each other about their plans and resources. This has hampered the agencies’ ability to ensure that their decisions about investments in the Hurricane Hunters are aligned.

Winter Season Reconnaissance Missions Have Increased



Source: GAO analysis of the Air Force’s Chief, Aerial Reconnaissance Coordination, All Hurricanes (CARCAH) data. | GAO-25-107210

Note: Atmospheric rivers are regions in the atmosphere that transport water vapor from the tropics to higher latitudes, leading to extreme precipitation and flooding on the U.S. West Coast. This figure includes reconnaissance missions NOAA and the Air Force flew but does not include other types of missions such as research missions focused on atmospheric rivers.

How GAO Did This Study

We analyzed data and documents and interviewed officials from NOAA and the Air Force. We compared agency efforts against our key practices for evidence-based policymaking, among other things.

What GAO Recommends

We are making eight recommendations, including that NOAA and Air Force track data on why mission requirements are missed, assess their Hurricane Hunter workforces, and establish a mechanism for senior leaders to regularly communicate. The agencies agreed with our recommendations.

For more information, contact Cardell D. Johnson at (202) 512-3841 or johnsoncd1@gao.gov.