NOAA Aircraft Operations Center

Title: Enhancing Global Weather Prediction: Operational Milestones, Instrumentation and Challenges of the NOAA Atmospheric Rivers Reconnaissance Effort

2026 Atmospheric River Reconnaissance (AR Recon) Workshop

June 29, 2026 to July 3, 2026

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NOAA MARINE & AVIATION OPERATIONS

About Me - Nikki Hathaway
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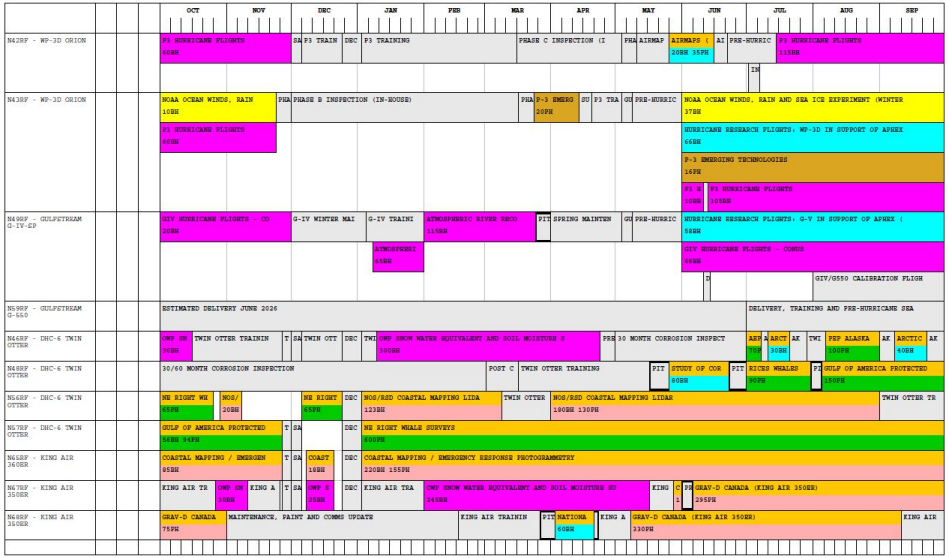
AAP Process and Timelines

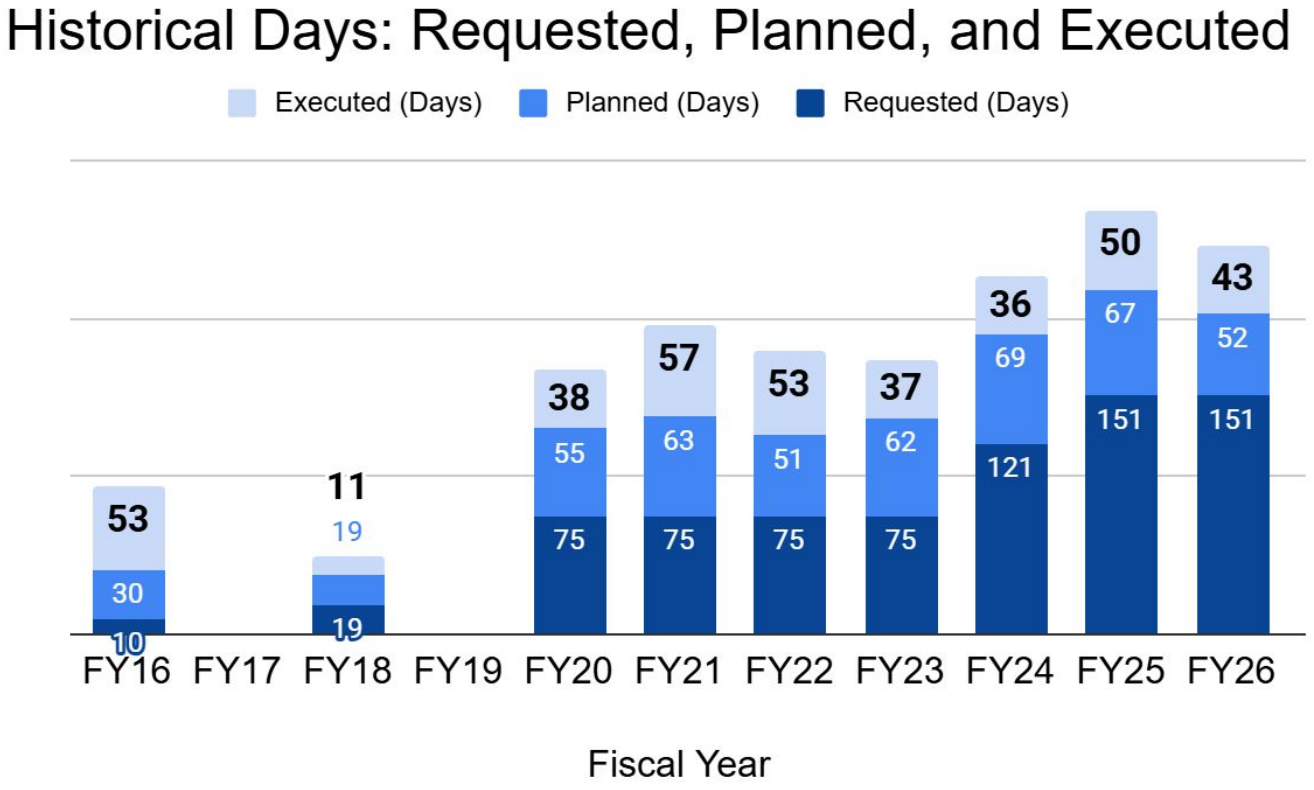
Aircraft Allocation Plan (AAP)

- Projects requests are collected from the PIs via a program called APASS
- Projects are vetted through line office representatives that sit on the Aircraft Working Group (AWG)
- Base-funded projects (NOAA-funded) receive flight hour funding from OMAO
- Program-funded projects receive funding from individual line offices
- AWG creates an AAP that is presented and approved by the Fleet Council

FY26 AAP



How ARR Comes to be on NOAA G-IV? Project Days



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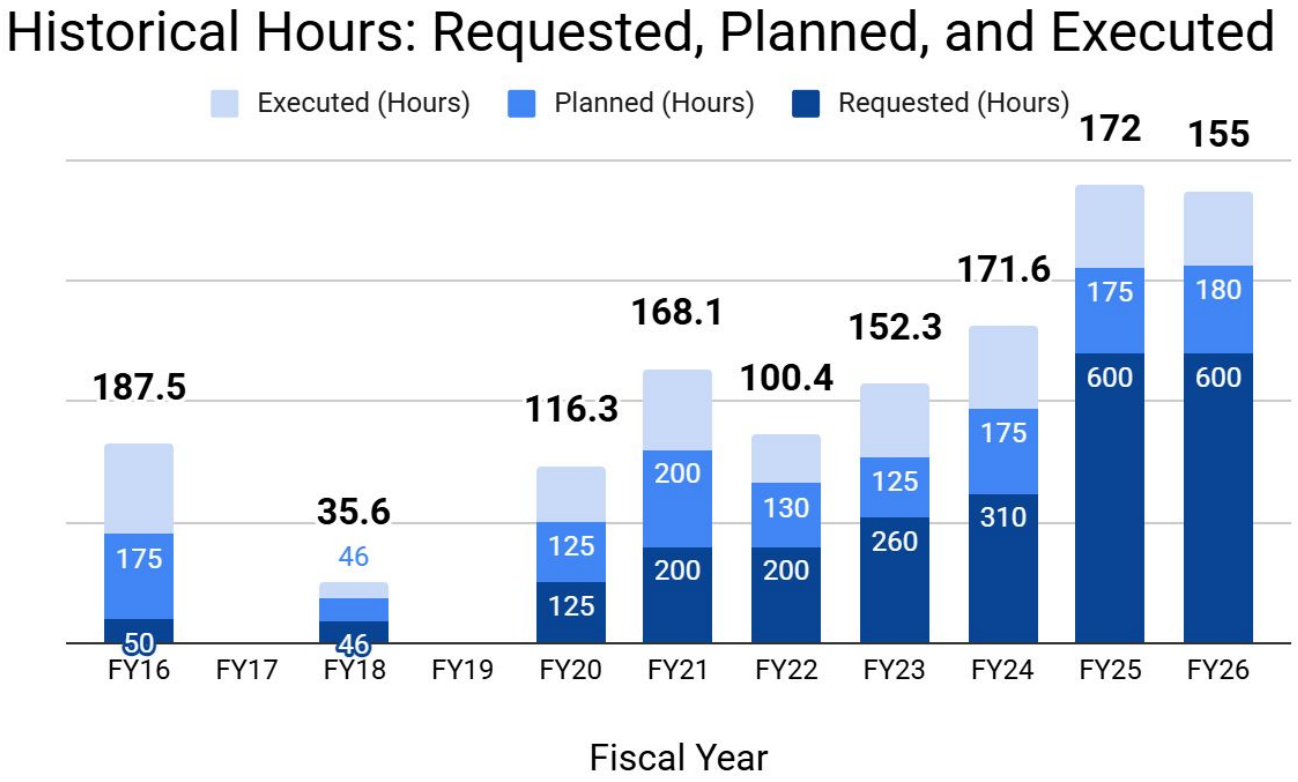
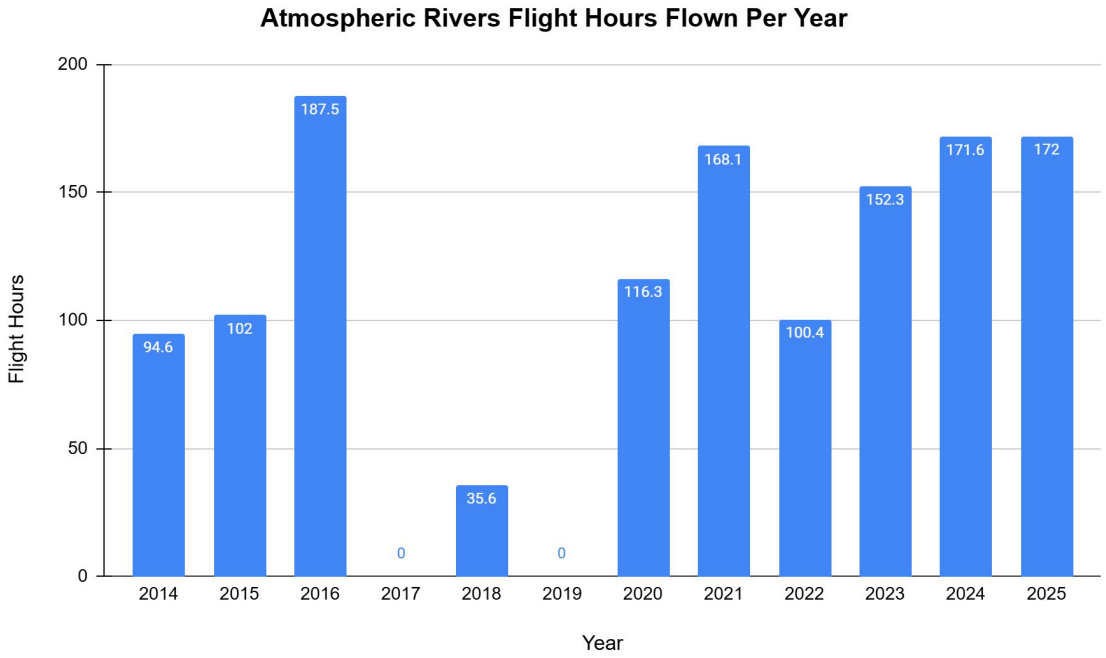


Historical AR Support on the G-IV

First mission flights in support of Atmospheric Rivers research and reconnaissance was in 2014. Since then, NOAA has flown **1,300.4 hours** on the NOAA Gulfstream IV.

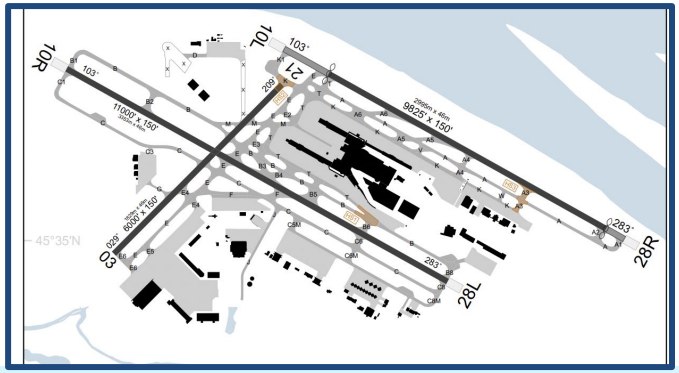


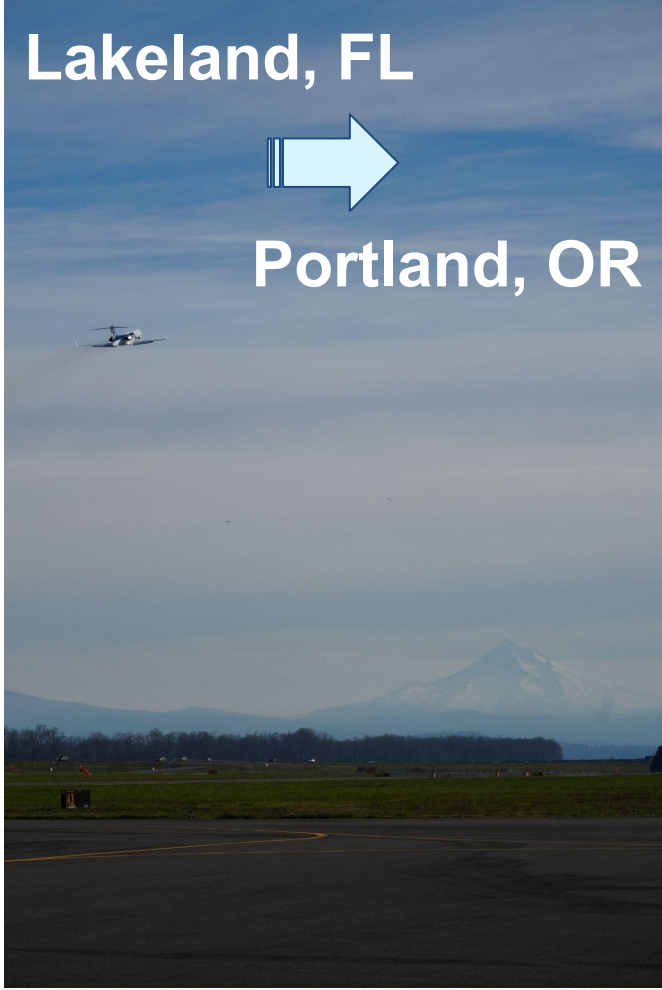
ARR 2026 NOAA G-IV

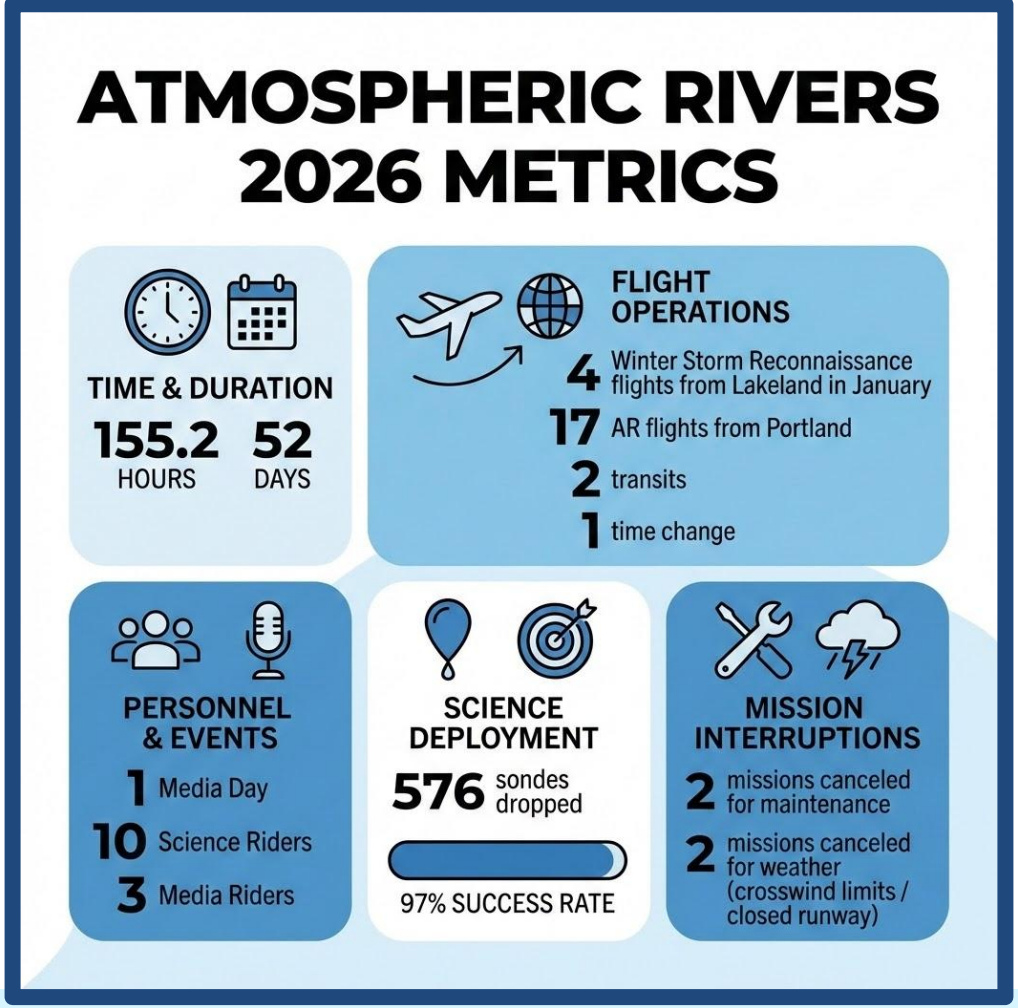
Where we started… December 2025

Shift to “Ready” status in December

- 72 hours notice: January 8-January 31 - Standby from Lakeland
- Training impacts/scheduling
- Crew scheduling

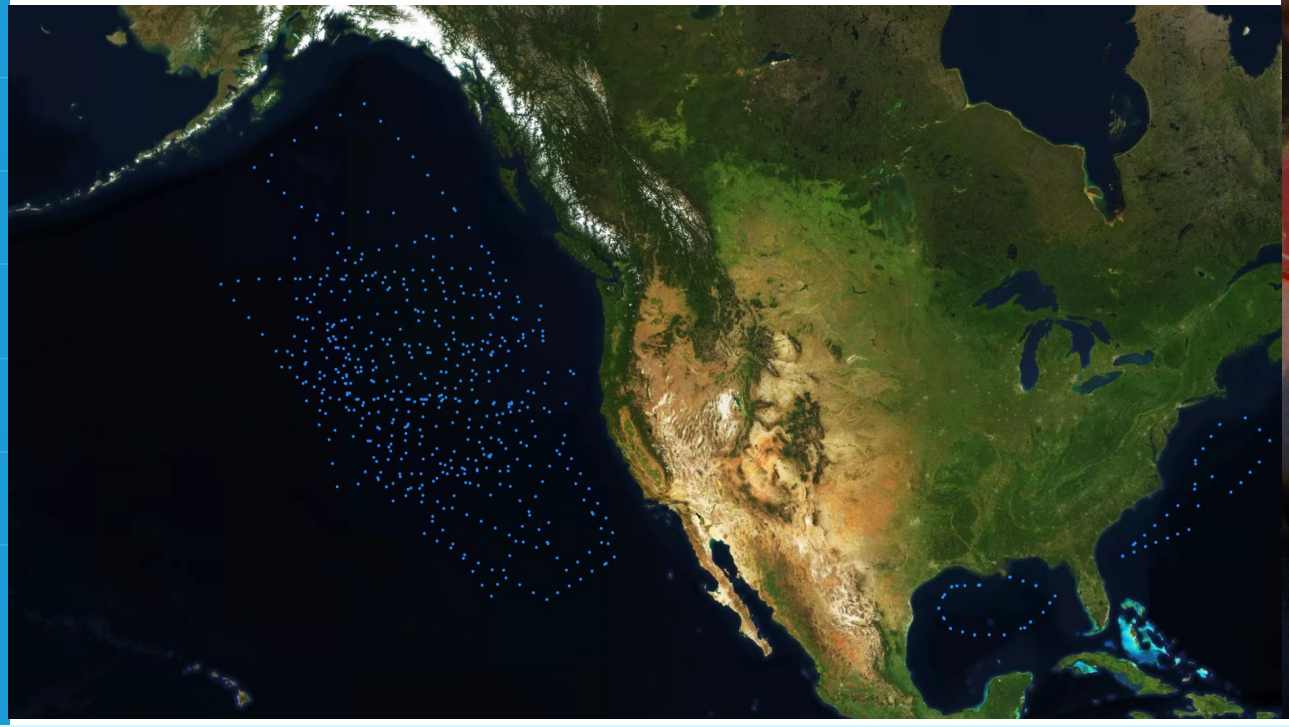


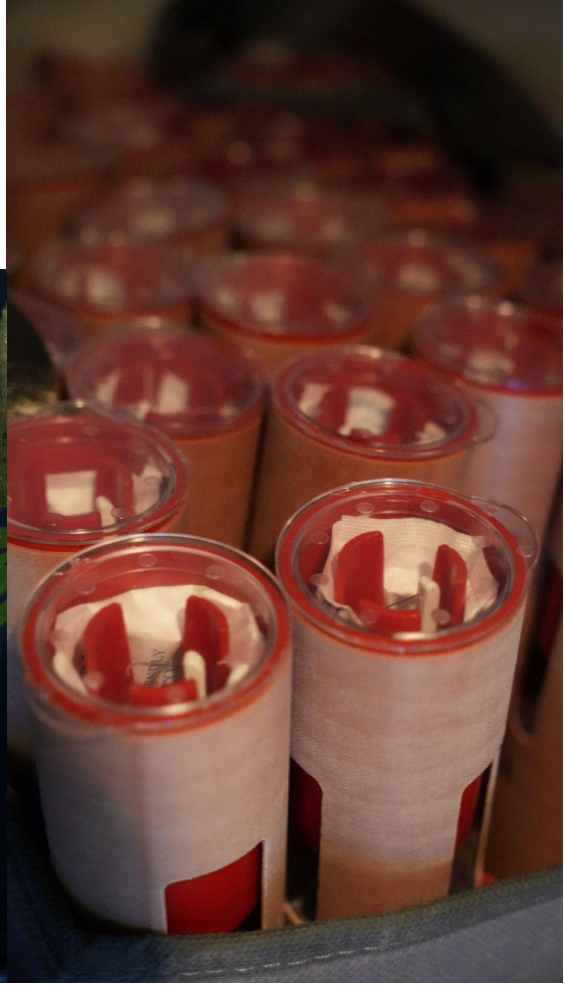



ATMOSPHERIC RIVERS
2026 METRICS
TIME & DURATION
155.2 HOURS
52 DAYS
FLIGHT OPERATIONS
4 Winter Storm Reconnaissance flights from Lakeland in January
17 AR flights from Portland
2 transits
1 time change
PERSONNEL & EVENTS
1 Media Day
10 Science Riders
3 Media Riders
SCIENCE DEPLOYMENT
576 sondes dropped
97% SUCCESS RATE
MISSION INTERRUPTIONS
2 missions canceled for maintenance
2 missions canceled for weather (crosswind limits / closed runway)

AVAPS 3 Transition

AR 2026 Drops





Windborne - Letter of Agreement (ARR 2025 - 2026)

- January 25, 2026 Incident - Avoidance necessary on flight path
  - Balloon within 13 nm
- Within LOA:
  - Windborne

- avoidance region 40 nm on either side of the published flight path
- direct its fleet of GSBs to ascend above FL470 or below FL370 in the avoidance region
- GSBs will be allowed to enter the avoidance region once NOAA49 is 150 nm past any GSB wishing to make a maneuver into the avoidance region
- Reachable in case of emergencies
  - AOC
- Publish Flight Plans
- Coordinate with CARCAH
- Utilize low bandwidth windborne site in flight
  - CARCAH
- Prebrief with AOC FDs over any GSBs impacting flight plan prior to take off
- Check for any impact to GIV flight changes with GSBs
- Contact Windborne while GIV in flight if necessary

Media engagement

Hurricane Hunters take on atmospheric rivers to improve West Coast forecasts

The Hurricane Hunters spend three months flying over Pacific storms to fill critical data gaps as atmospheric rivers pummel the West Coast.

NOAA Hurricane Hunters fly from PDX to study atmospheric rivers over the Pacific

by Bobby Corser - Digital Meteorologist | Thu, March 5, 2026 at 12:05 PM
Updated Thu, March 5, 2026 at 10:27 PM

NOAA's Gulfstream IV "Gonzo" is based at Portland International Airport while they fly atmospheric river missions over the Pacific Ocean - Bobby Corser KATU photo

TOPICS: NOAA HURRICANE HUNTERS ATMOSPHERIC RIVERS PORTLAND PACIFIC OCEAN DROPSONDES FLOOD RISK WEATHER RESEARCH

PORTLAND, Ore. (KATU) — If you're at Portland International Airport and see a blue-and-white jet, it's likely NOAA's Hurricane Hunters.

Questions?