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Aircraft Operations

NOAA’s fleet of nine manned aircraft is operated, managed and maintained by NOAA’s Office of Marine and Aviation Operations (OMAO) based at OMAO’s Aircraft Operations Center (AOC). Located at Lakeland Linder Regional Airport in Lakeland, Florida, the NOAA Commissioned Officer Corps (NOAA Corps) – one of the nation’s seven Uniformed Services - officers, crew, and scientists from AOC provide capable, mission-ready aircraft and professional crews to the scientific community – see photo below. AOC is committed to the safe, efficient and economical use of NOAA aircraft and has more than four decades of experience developing, coordinating and successfully and safely conducting airborne environmental data gathering missions. OMAO’s aircraft fleet includes the following platforms and the web links provide additional photos, information on each aircraft, and the missions they serve:

- **Lockheed WP-3D Orion (WP-3D) “Hurricane Hunter”** [Tail ID# N42RF]
- **Lockheed WP-3D Orion (WP-3D) “Hurricane Hunter”** [Tail ID# N43RF]
- **Gulfstream IV-SP (G-IV) “Hurricane Hunter”** [Tail ID# N49RF]
- **Gulfstream Turbo (Jet Prop) Commander AC-695A (Jet Prop Commander)** [Tail ID# N45RF]
- **Beechcraft King Air 350CER (King Air 350)** [Tail ID# N68RF]
- **De Havilland DHC-6-300 Twin Otter (Twin Otter)** [Tail ID# N46RF]
- **De Havilland DHC-6-300 Twin Otter (Twin Otter)** [Tail ID# N48RF]
- **De Havilland DHC-6-300 Twin Otter (Twin Otter)** [Tail ID# N56RF]
- **De Havilland DHC-6-300 Twin Otter (Twin Otter)** [Tail ID# N57RF]

In addition to the fleet of nine, manned aircraft, AOC provides oversight and guidance for all of NOAA’s Unmanned Aircraft System (UAS) operations. Please visit [AOC’s UAS Section](#) for additional information.
January Mission Summary

Whether studying severe weather, assessing marine mammal populations, surveying coastal erosion, investigating oil spills, flight checking aeronautical charts, or improving hurricane prediction models, the AOC flight crews, scientists, and partners, operate all across the United States and beyond, including in some of the world's most demanding flight regimes.

The following Mission Summary provides an overview of the status or location(s) and mission(s) for each aircraft for the month. Please note all mission bases, projected flight locations, and mission parameters and requirements may shift based on changing needs and circumstances.

For the latest news from the NOAA skies, please visit the Aircraft Operations Center on Facebook and Twitter.

WP-3D “Hurricane Hunter” [Tail ID# N42RF]

Who: Officers and crew of OMAO/NOAA Corps along with scientists from NOAA’s National Environmental Satellite, Data, and Information Service’s Center for Satellite Application and Research
What: Ocean Winds and Rain Experiment
When: January 24 - February 22
Where: Based out of Shannon, Ireland, conducting flights over Ireland and the Northeastern Atlantic Ocean.
Why: The flights will monitor and observe ocean surface vector winds, which are crucial pieces of information needed to understand and predict the short-term and long-term processes that drive our planet's environment. As the largest source of momentum for the ocean surface, winds affect the full range of ocean movement, from individual surface waves to complete current systems. Winds along the ocean surface regulate interaction between the atmosphere and the ocean via modulation of air-sea exchanges of heat, moisture, gases, and particulates. With the ocean covering almost three quarters of Earth's surface, this interaction has significant influence on global and regional climate.
WP-3D “Hurricane Hunter” [Tail ID# N43RF]

Instrumentation and outfitting will continue at AOC until mission-ready on June 1, 2019.

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G-IV “Hurricane Hunter” [Tail ID# N49RF]

Who: Officers and crew of OMAO/NOAA Corps along with scientists from [NOAA’s National Ocean Service, National Geodetic Survey Grav-D Program].

What: Gravity for the Redefinition of the American Vertical Datum (GRAV-D)

When: January 4 - March 27

Where: Based in Hawaii, American Samoa, and Guam. The aircraft will conduct flights over U.S. Pacific Island territories.

Why: Grid pattern flight lines will be flown at 20,000 feet over the Northwest United States while collecting Global Positioning System and inertial data to update the U.S. vertical datum. A vertical datum is a base measurement point (or set of points) from which all elevations are determined.

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Jet Prop Commander [Tail ID# N45RF]

Who: Officers and crew of OMAO/NOAA Corps along with scientists from [NOAA’s National Weather Service (NWS), National Operational Hydrologic Remote Sensing Center]

What: Water Resource Surveys (Snow Survey)

When: Present - May 11

Where: Surveys will be conducted over Minnesota, North Dakota, South Dakota, Montana, Maine, New Hampshire, and Vermont.
Why: The aircraft will conduct Low level (500 feet) surveys to collect Snow Water Equivalent data for NWS River Forecast Centers. This data is used by NWS Weather Forecast Offices and NWS River Forecast Centers when issuing river and flood forecasts, water supply forecasts, and spring flood outlooks.

King Air 350 [Tail ID# N68RF]

Who: Officers and crew of OMAO/NOAA Corps along with scientists from NOAA’s National Ocean Service, National Geodetic Survey’s Coastal Mapping Program
What: Coastal mapping flights
When: Present - March 15
Where: TBD based on weather and tide stages.
Why: These flights provide critical baseline data to help accurately map the U.S. shoreline. The data is important for national security, maritime shipping, and navigation.

Twin Otter [Tail ID# N46RF]

Aircraft is inducted into scheduled maintenance in Calgary, Alberta. Due out February 15.

Twin Otter [Tail ID# N48RF]

Who: Officers and crew of OMAO/NOAA Corps along with scientists from NOAA’s National Weather Service (NWS), National Operational Hydrologic Remote Sensing Center
What: Water Resource Surveys (Snow Survey)
When: Present - February 21
Where: Surveys will be conducted over Minnesota, North Dakota, South Dakota, Montana, Maine, New Hampshire, and Vermont.
Why: The aircraft will conduct Low level (500 feet) surveys to collect Snow Water Equivalent data for NWS River Forecast Centers. This data is used by NWS Weather Forecast Offices and NWS River Forecast Centers when issuing river and flood forecasts, water supply forecasts, and spring flood outlooks.

Twin Otter [Tail ID# N56RF]

Who: Officers and crew of OMAO/NOAA Corps along with scientists from NOAA’s National Marine Fisheries Service (NMFS), Northeast Fisheries Science Center (NEFSC).
What: Northeast Atlantic Right Whales
When: Present - January 16
Where: Based out of Cape Cod, MA
Why: The objectives of this project are to provide real time sighting information to commercial shipping interests in an effort to reduce ship collisions, to better understand the distribution and abundance, and to collect photographic images. With as few as 400 remaining, surveillance flights to track their migration patterns are important for conservation and recovery efforts.

Twin Otter [Tail ID# N57RF]

Who: Officers and crew of OMAO/NOAA Corps along with scientists from NOAA’s National Marine Fisheries Service (NMFS), Northeast Fisheries Science Center (NEFSC).
What: Southeast Atlantic Right Whales
When: Present - March 31
Where: Based out of St. Simons, GA
Why: The objectives of this project are to provide real time sighting information to commercial shipping interests in an effort to reduce ship collisions, to better understand the distribution and abundance, and to collect photographic images. With as few as 400 remaining, surveillance flights to track their migration patterns are important for conservation and recovery efforts.