

Aviation Improvements across the NWS and AWC

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Aviation Weather Center

NOAA/NWS Aviation Weather Center



OUR MISSION STATEMENT

The Aviation Weather Center delivers consistent, timely and accurate weather information for the world airspace system.

We are a team of highly skilled people dedicated to working with customers and partners to enhance safe and efficient flight.

OUR VISION

To be the trusted authority and leading innovator for aviation weather information.

NOAA/NWS Aviation Programs



122
Weather
Forecast
Office's



3
Meteorological
Watch
Offices



21
Center Weather
Service Units



Updates

A Pilot's Guide To Aviation Weather Services

A Pilot's Guide to Aviation Weather Services



October 1, 2020

National Oceanic and Atmospheric Administration (NOAA)



A Pilot's Guide to Aviation Weather Services

4 EN ROUTE PRODUCTS



The products listed in the table below can be used for pre-flight, day of departure or en-route planning.

AIRCRAFT REPORTS (PIREPS)	
 <p>PIREP Plots Realtime PIREP raw data reports</p> <p>Aircraft Report Help</p> <p>Aircraft Report Plot Help</p> <p>Aircraft Report Data Help</p>	<p>An Aircraft Report is a report of actual weather conditions encountered by an aircraft while in flight. There are two types of reports, AIREPS and PIREPS:</p> <p>An AIREP is a routine, often automated report of in-flight weather conditions such as wind and temperature.</p> <p>A PIREP is a pilot report detailing encounters of hazardous weather such as icing or turbulence.</p> <p>Both reports are sent in real-time via radio to a ground station.</p>

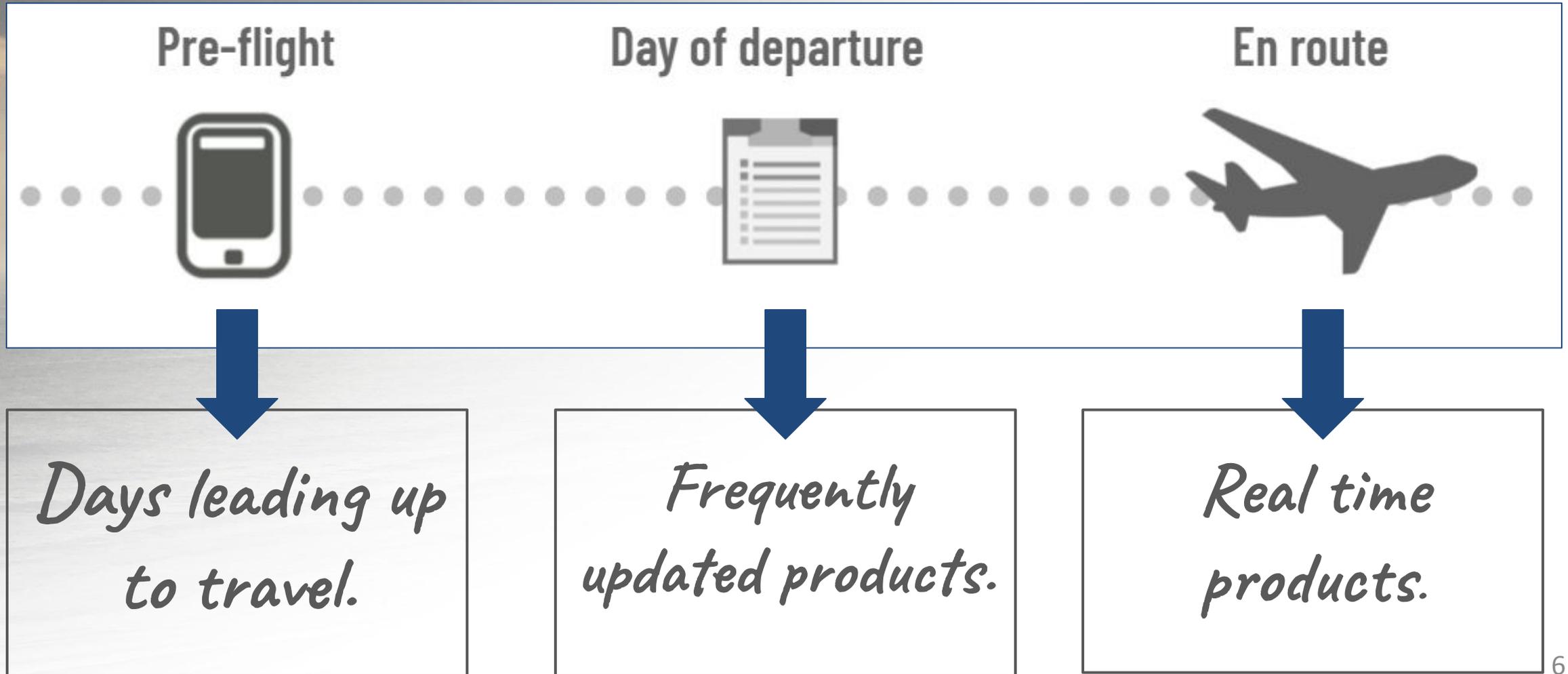
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A Pilot's Guide to Aviation Weather Services

<p>CONVECTIVE OUTLOOK</p>  <p>Info on SPC Products</p>	<p>The NWS Storm Prediction Center (SPC) provides forecasts and watches for severe thunderstorms and tornadoes over the contiguous United States.</p>
<p>NATIONAL DIGITAL FORECAST DATABASE</p>  <p>Info on the NDFD</p>	<p>The National Digital Forecast Database (NDFD) is a suite of gridded forecasts of sensible weather elements.</p>
<p>TROPICAL WX OUTLOOK</p>  <p>Info on the NHC</p>	<p>The NWS National Hurricane Center (NHC) provides forecasts, watches, and warnings for tropical storms and hurricanes.</p>
<p>SURFACE PROG CHARTS</p>  <p>Info on the Surface Prog Chart</p>	<p>Prog Charts are forecasts for surface conditions. The Weather Prediction Center (WPC) provides an analysis updated every 3 hours plus 12 and 24 hour forecasts updated 4 times per day and a 36 and 48 hour forecast updated twice per day. WPC also issues medium range forecasts every day from 3-7 days. These forecasts are valid for the contiguous United States.</p>
<p>WINDS/TEMPS ALOFT</p>  <p>Info on Winds/Temp Aloft Page</p>	<p>The Winds/Temps page provides 2D graphics of winds and temperatures at a multitude of altitudes from the current time until multiple days in the future.</p>

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Pilot's Guide Continued...



Pilot's Guide Continued...



- *Aviation Weather Tools*
- *Decision Support*
 - *Social Media*
- *Alaska/Hawaii Products*
- *International Products*
- *Appendix*

Online and available now at [weather.gov/aviation](https://www.weather.gov/aviation)

Weather Ready Nation- Aviation



*Readying your
community for extreme*

- weather*
- water*
- climate*

Weather Ready Nation- FLYERS

FLYing

Education,

Resources, and

Safety.



Be Aware, Fly Prepared!

FLYERS-Virtual Hazard Workshops

Nov 2020



Aviation Winter Weather Hazards

- *WFO/CWSU/AWC Operations*
- *Hazards:*
 - *Icing/Turbulence/Ceiling and Visibility/Precipitation*

April 2021



Convective Weather Flight Planning

- *Thunderstorm Overview and Products*
- *Flight Planning Case Study*
- *NTSB Presentation: Thunderstorms*

More information on FLYERS

Contact

wrn.flyers@noaa.gov

weather.gov/wrn/aviation

Future Projects

- Cool Season Workshop
 - November 17
 - VFR into IMC
- Social Media Campaigns
- Develop new aviation related pamphlets/brochures/videos

Weather.gov/aviation

Current

- Identified for upgrade through previous project groups
- New Look
- Reorganize structure
- Assess usefulness of existing links
- Add additional information
- Make it the one-stop-shop for all things aviation weather

NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

NWS Aviation Weather Services

[Weather.gov > Aviation](#)

Aviation
National Program

- [A Pilot's Guide to Aviation Weather Services](#)
- [Categorical Amendment Criteria \(CAC\)](#)
- [Center Weather Service Units \(CWSU\)](#)
- [Technical Resource Pages](#)
- [The Front Aviation Weather Safety Newsletter](#)
- [Aircraft Owners and Pilots Association \(AOPA\)](#)
- [Alaska Aviation Weather Unit \(AAWU\)](#)
- [AOPA Air Safety Foundation](#)
- [Aviation Weather Center \(AWC\)](#)
- [Aviation Digital Data Service \(ADDS\)](#)
- [Distance Learning Aviation Course \(DLAC\)](#)
- [National Weather Association Aviation Committee](#)

National Aviation Brochure
The NWS national aviation brochure outlines and details aviation services provided across the country.

AirVenture Oshkosh
The crew of NOAA WP-3D Orion N42RF "Kermit" at the 2019 EAA Airventure Airshow in Oshkosh, WI

Weather Forecast Office (WFO)
One of our primary missions is to provide accurate and timely weather forecasts for the aviation community. We provide a variety of aviation weather products, including terminal forecasts, enroute forecasts, and advisory forecasts. We also provide a variety of aviation weather services, including weather briefings, weather watches, and weather alerts.

Graphical Forecasts for Aviation
The graphical forecasts for aviation (GFA) web page is a valuable resource for pilots and flight attendants. It provides a clear and concise overview of the weather conditions along a flight path, including temperature, wind, clouds, and visibility. The GFA also includes a variety of other information, such as the location of the flight path, the time of day, and the type of aircraft.

AVIATION WEATHER SERVICES
"Accurate and timely weather information from special forecasting"

USA.gov
US Dept of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
Aviation

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  **Aviation Weather Services**
National Oceanic and Atmospheric Administration

The NOAA/NWS Aviation Program  NATIONAL WEATHER SERVICE
<https://www.weather.gov/aviation>

122 Weather Forecast Offices | 1 World Area Forecast Center (WAFC) | 21 Center Weather Service Units

3 Meteorological Watch Offices (HFO, AAWU, AWC) | 2 Technical Advisory Centers

Weather is an important part of aviation. At any given time, there can be over 5,000 planes in the sky across the U.S. to carry passengers and cargo to their destinations. Aside from a flight delay due to storms, other hazards that can affect a flight include aircraft icing, turbulence, and volcanic ash. Weather information helps pilots and airlines plan flights to efficiently use airspace and resources by taking favorable conditions and avoiding potentially hazardous weather.

Click on the buttons below to learn more about the ways that the National Weather Service supports the aviation community.

NWS in Aviation | Hazards in Aviation | Aviation Partners | Supporting Offices

All of the NWS employees who support aviation operations are dedicated to providing high-quality weather information and services to enhance safe and efficient flight across the national airspace system 24 hours a day. Learn more about how the National Weather Service supports the aviation community, select a button below or choose an option from the drop down menu across the top of the page.

NWS Aviation Outreach | Aviation Technical Resources | Aviation Careers

Proposed Update

- *New slick look*
- *Scrolling slides with important information*
- *Introduction to NWS aviation programs*
- *Reorganized information for easy searching*
- *More information*
 - *Added supporting offices*
 - *Aviation careers*
 - *Technical resources*
 - *New infographics section*
 - *much more!*

Weather.gov/aviation

NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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NWS Aviation Weather Services

Weather.gov > Aviation

Aviation National Program

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National Aviation Brochure
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Weather Forecast Office (WFO)
One of the most important components of the National Weather Service is the Weather Forecast Office (WFO). The WFO is responsible for providing the public with the most accurate and timely weather forecasts possible. The WFO also provides aviation weather forecasts and advisories to pilots and airlines.

Graphical Forecasts for Aviation
The Graphical Forecasts for Aviation (GFA) are a key tool for pilots and airlines. They provide a visual representation of the weather forecast, including temperature, wind, clouds, and visibility. The GFA is available in both print and digital formats.

Aviation Weather Center (AWC)
The Aviation Weather Center (AWC) is the central hub for aviation weather information. It provides a wide range of services, including weather forecasts, advisories, and data. The AWC also provides training and support for pilots and airlines.

AirVenture Oshkosh
The crew of NOAA WP-3D Orion N42RF "Kermit" at the 2019 EAA Airventure Airshow in Oshkosh, WI.

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US Dept of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
Aviation

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Current



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The NOAA/NWS Aviation Program

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COMING SOON

Updated

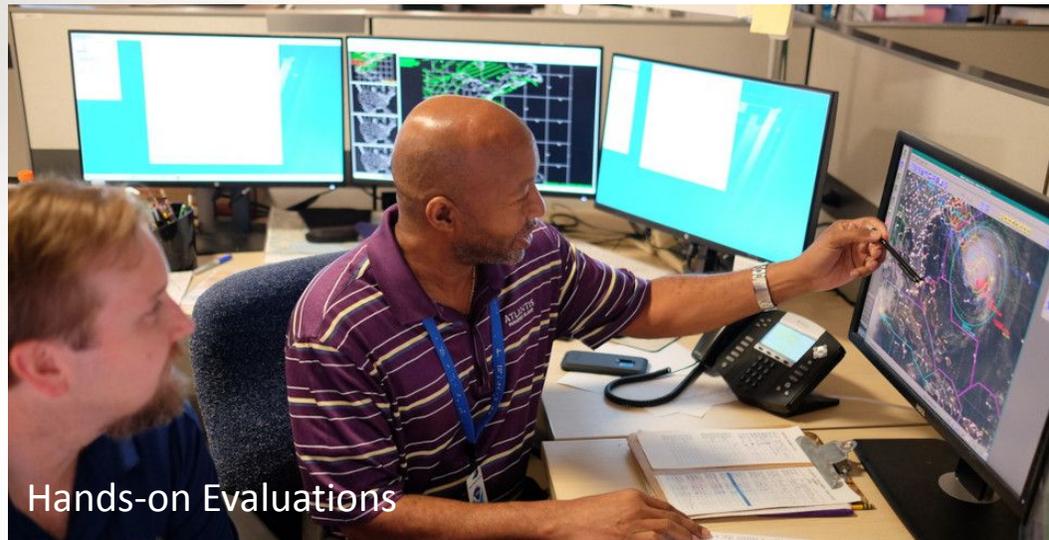
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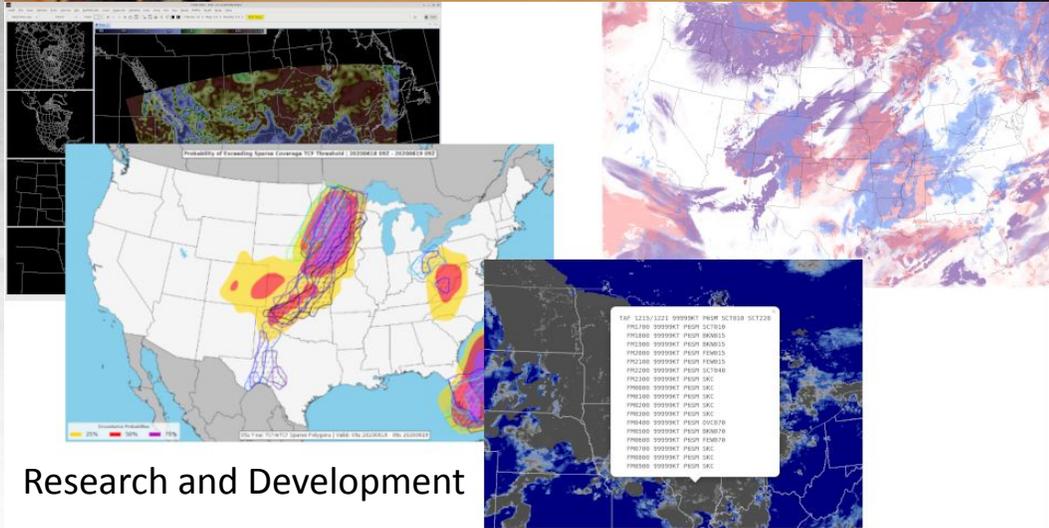
Aviation Weather Testbed



Scientific and Technological Innovation



Hands-on Evaluations



Research and Development



Collaborative Research to Operations

Thank you! Questions?

Amanda.Martin@noaa.gov



<https://www.aviationweather.gov/>



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