



NOAA Aviation Weather Center

briefing for

Alaska Aviation Users Workshop

Joshua W. Scheck¹ and Dan Vietor²

¹ NOAA Aviation Weather Center

² Cooperative Institute for Research in the Atmosphere

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Mission, Vision & Values



AWC Mission

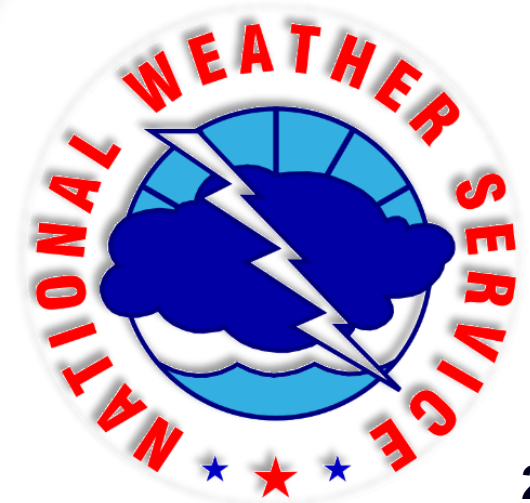
The Aviation Weather Center's highly skilled people deliver global operational aviation weather products and services essential to safe and efficient flight, and economic well-being.

AWC Vision

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

Core Values

Personal Accountability
Scientific Integrity
Innovation
Honesty
Trust



49 U.S.C. § 44720, Sec. (a) Meteorological services



“The Administrator of the Federal Aviation Administration shall make recommendations to the Secretary of Commerce on providing meteorological services necessary for the safe and efficient movement of aircraft in air commerce. In providing the services, the Secretary shall cooperate with the Administrator and give complete consideration to those recommendations.”



Program Linkages to Authorities, Mandates and MOUs



49 U.S. Code § 44720 - Meteorological services

- FAA makes recommendations to DOC on providing meteorological services necessary for the safe and efficient movement of aircraft in air commerce

Annex 3 to the Convention on International Civil Aviation

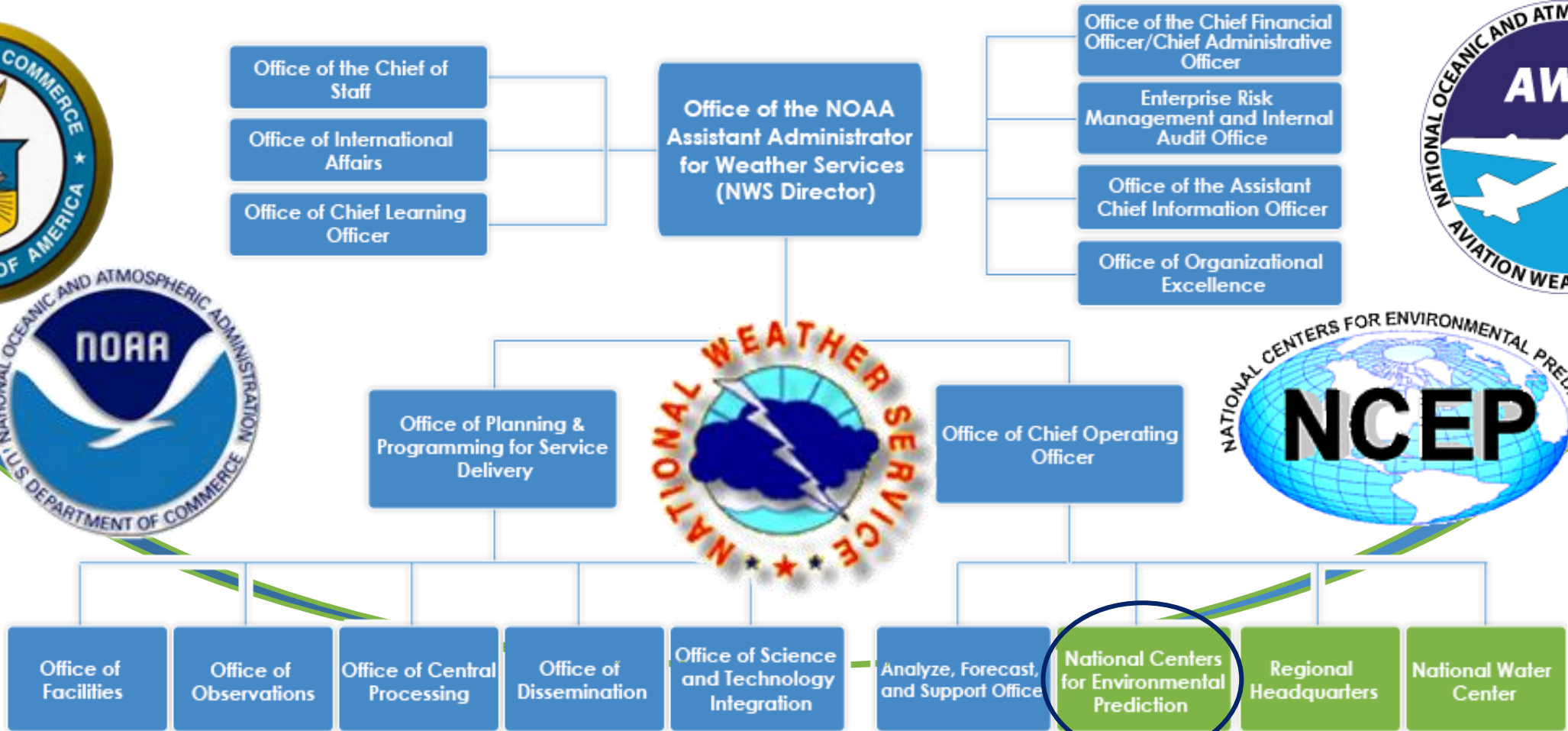
Interagency Agreements (IA)

- NWS/FAA IA for Decision Support Services for Air Traffic Management
- World Area Forecast System (WAFS) Internet File System (WIFS) IA
- Aviation Weather Research Program (AWRP)

Weather Ready Nation (WRN) goals

- 1: Improve weather decision services for events that threaten lives and livelihoods
- 4: Improve sector-relevant information in support of economic productivity
- 6: Sustain a highly-skilled, professional workforce equipped with the training, tools, and infrastructure to meet our mission

Organization



HQ Offices

Field Office

NOAA/NWS Aviation Program



3



MWO



2



VAAC



21



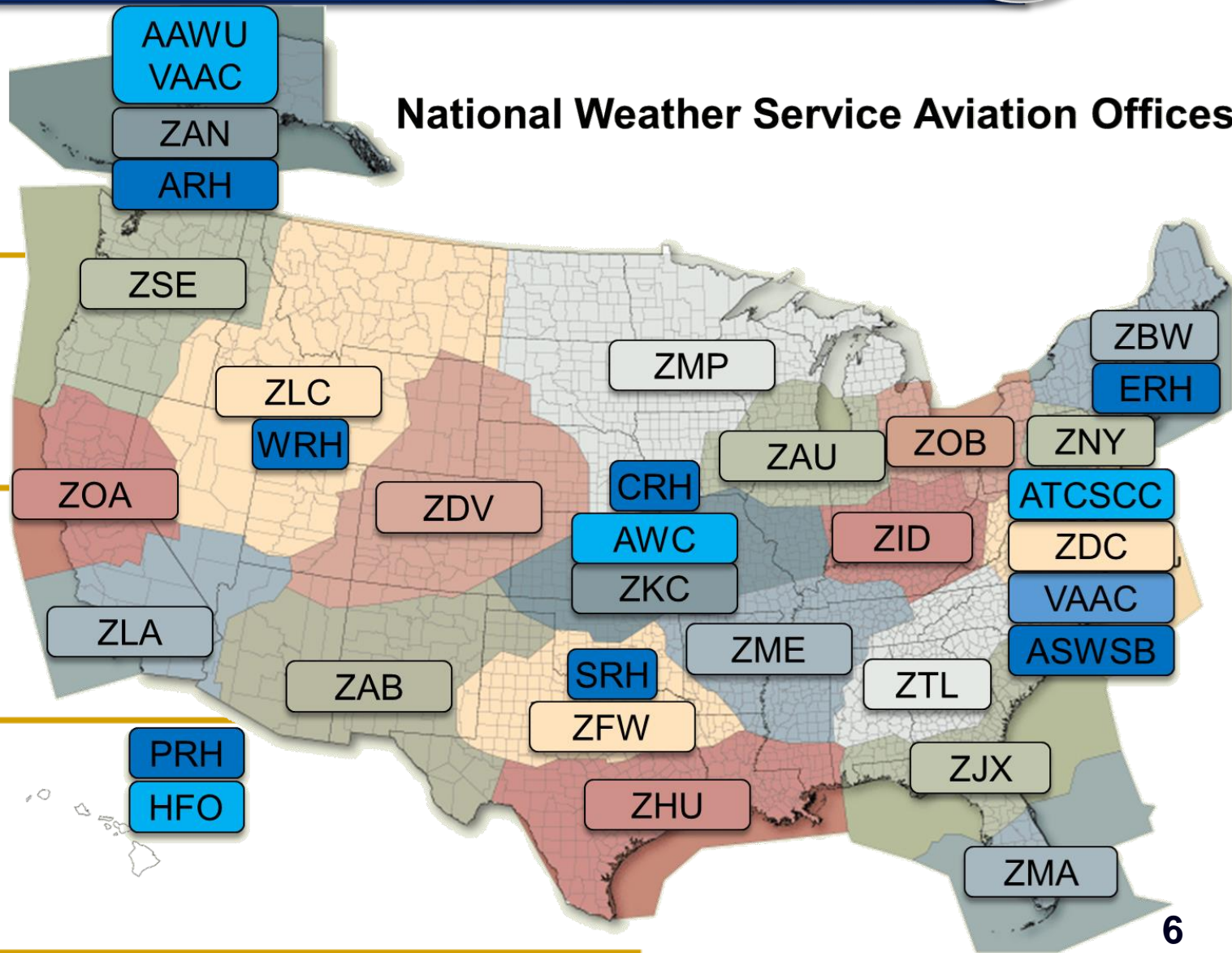
CWSU



122



WFO



AWC National Footprint



557th Weather Wing
COOP Site - *Offutt AFB, Omaha*

15th Operational
Weather Squadron
Backup Site - *Scott AFB, St. Louis*

Integrated Dissemination Program
Web Presence - *Boulder, CO (future)*

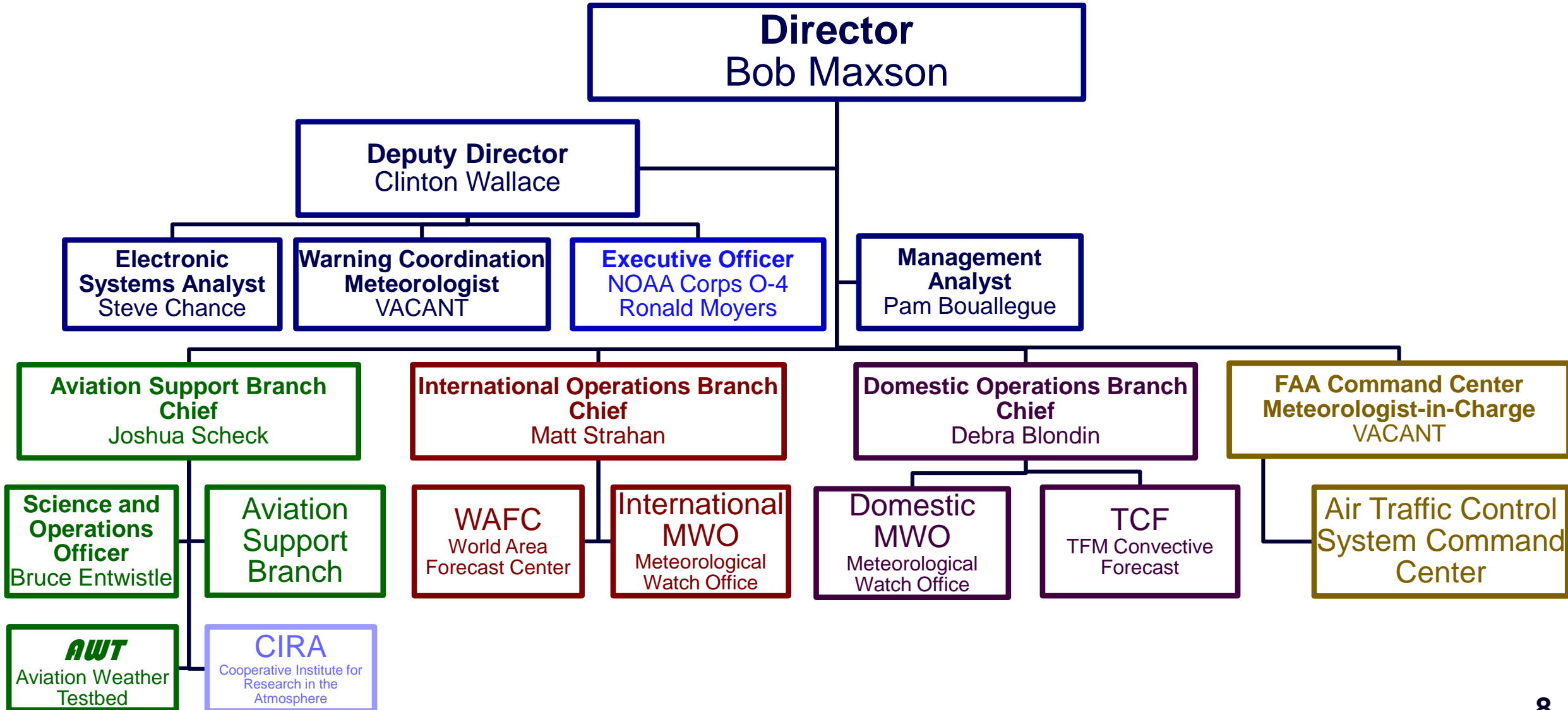
Integrated Dissemination Program
Web Presence - *College Park, MD*



Aviation Weather Center
World Area Forecast Center - Washington
Kansas City, MO

National Aviation Meteorologists
FAA Air Traffic Control System Command Center
Warrenton, VA

AWC Management & Organization



AWC People



Office of the Director:	6
International Operations Branch:	14
Domestic Operations Branch:	26
National Aviation Meteorologists	6
Aviation Support Branch	<u>9</u>
Total Federal Employees:	61

NOAA Corps:	1
CIRA Associates	12
Contractors:	<u>1</u>
Total Employees:	75

Key Stakeholders



Federal Aviation Administration (FAA)



National Transportation Safety Board (NTSB)



National Business Aviation Association (NBAA)



Commercial Airlines



General Aviation Community



Aircraft Owner and Pilot Association (AOPA)

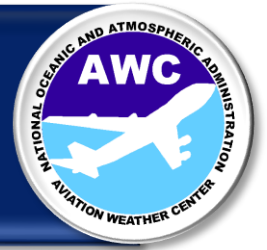


International Meteorological Service Providers



International Civil Aviation Organization (ICAO)

Meteorological Watch Office (MWO)



**United States operates three MWOs
(1) AWC - (2) AAWU – (3) Honolulu WFO**

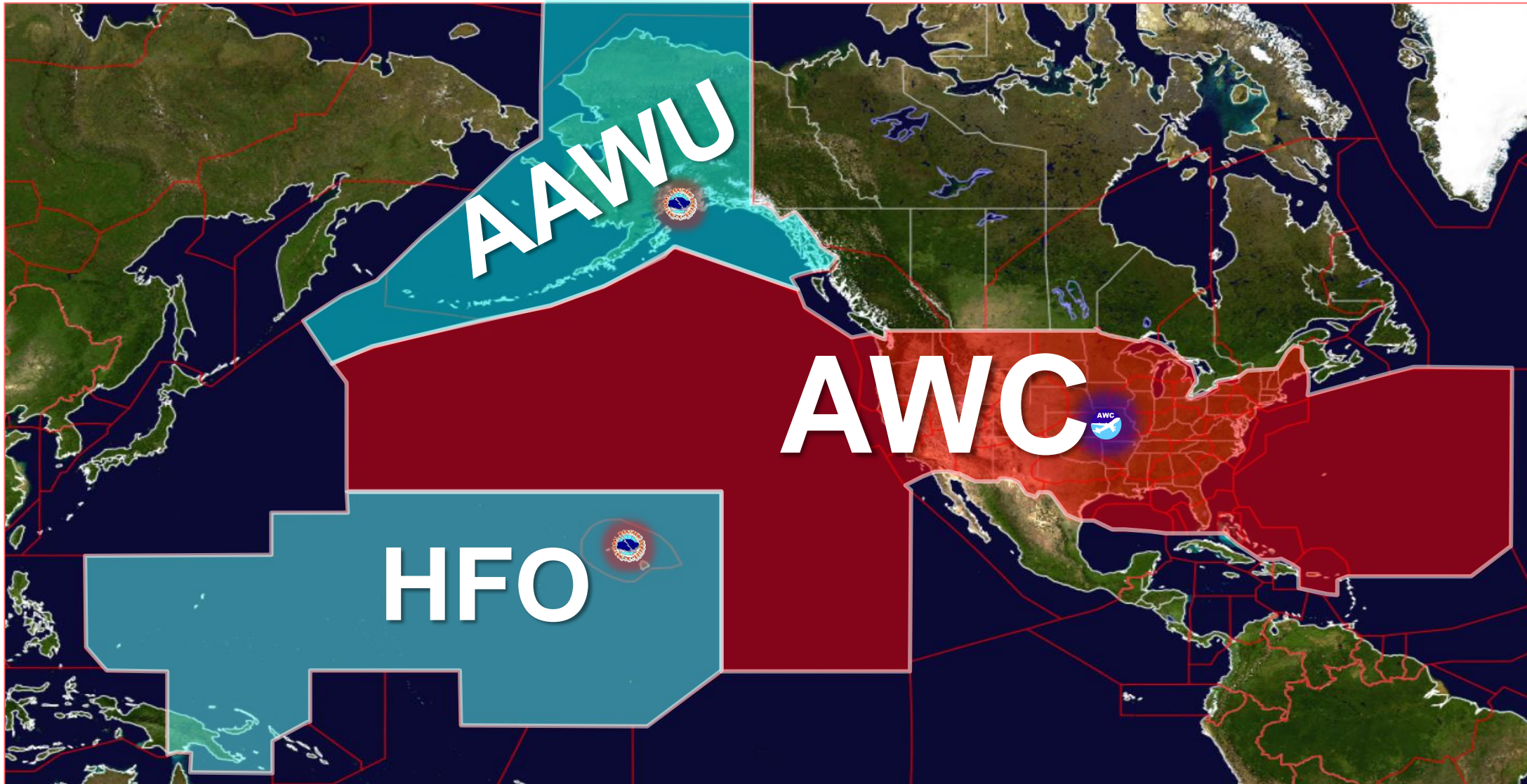
**Significant Meteorological Information
(SIGMET) bulletins**

**Warn in-flight aviators
of potentially
hazardous weather**

**Only aviation weather
warnings**

- Provided directly to air crews, dispatchers and controllers
- Both pre-flight and in-flight

Area of Responsibility for Aviation Warnings (SIGMETs)



SIGMETs



Convection

**Severe
Turbulence**

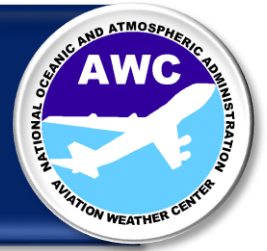
Severe Icing

**Widespread
Duststorm &
Sandstorms**

**Volcanic
Ash Cloud**

**Tropical
Cyclones**

World Area Forecast Centers



WAFC Washington

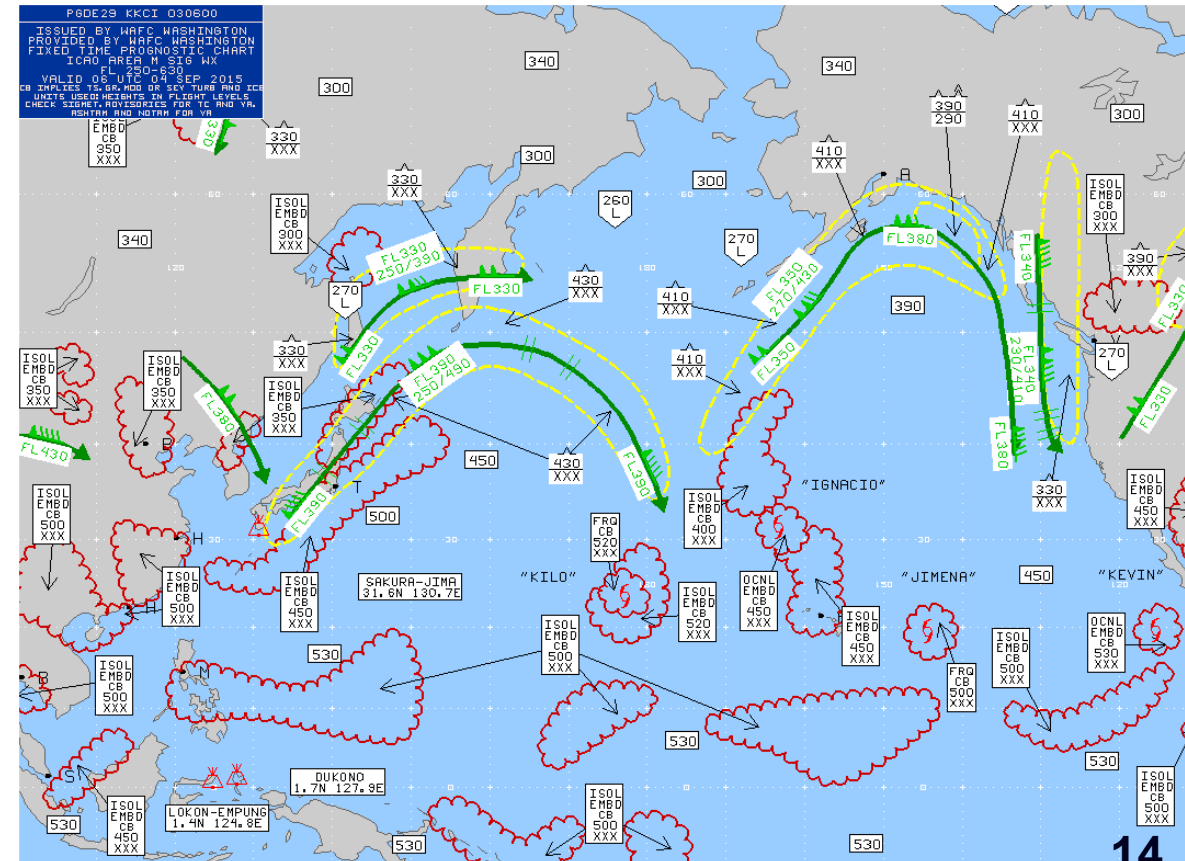


Formulated by the International Civil Aviation Organization (ICAO) and WMO

One of Two International WAFCs

Products & Services

- Global Significant Weather Charts
 - Flight planning & dispatch
- WAFC Internet File System (WIFS)
- WAFC Global Grids
- Wind and Temperature Charts



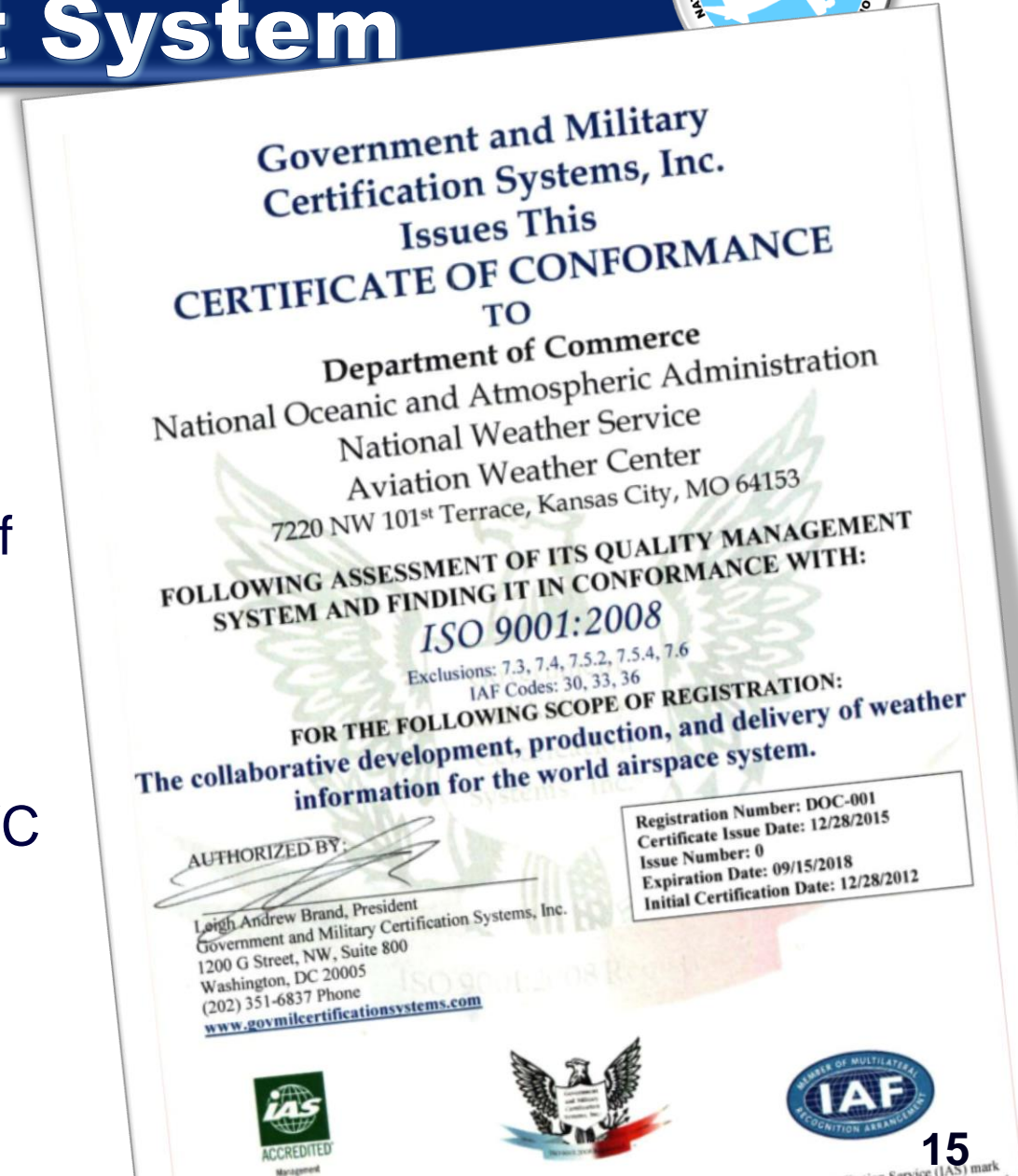
ISO 9001:2008 Quality Management System



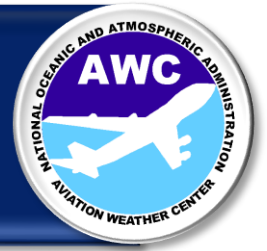
Quality Management System - Ensures that AWC can continually improve its product production and customer services processes to meet our customers' needs.

International Standards Organization - A system of internal and external auditing has certified AWC's QMS under the ISO:9001 standard since 2012.

International Civil Aviation Organization - The AWC is currently the only United States government weather forecasting center that meets ICAO requirements to adhere to the ISO:9001 standard.



International Aviation Operations



Warnings



SIGMETs

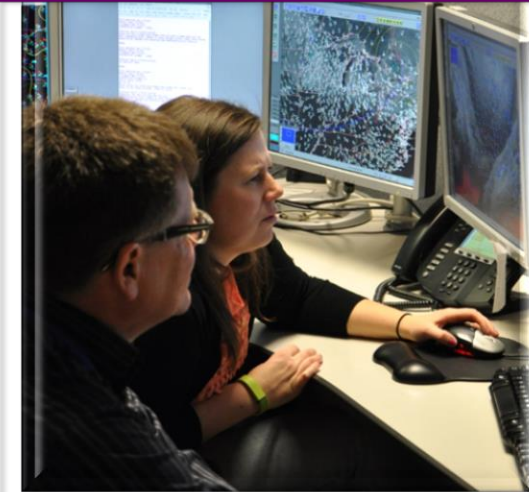
- Atlantic
- Pacific

Forecasts



- Global Graphics
- Area Forecasts

Collaboration

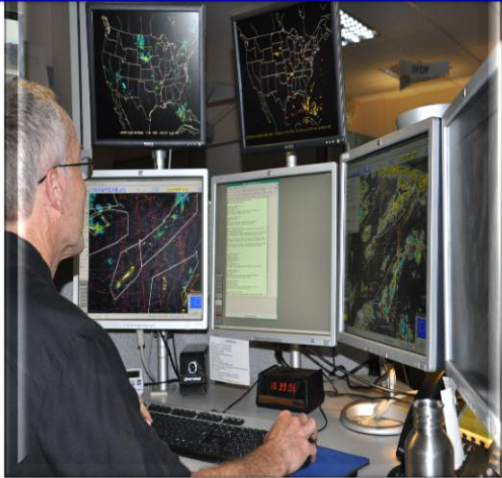


Global Met. Services

Domestic Aviation Operations



Warnings



SIGMETs

Advisories



AIRMET
TFM
Convective
Forecast

Forecasts



- **Graphics**
- **Area**
Forecasts

Collaboration



- **CWSUs**
- **Airlines**
- **FAA**

National Aviation Meteorologists (NAM)

FAA Air Traffic Control System Command Center (ATCSCC)



Improve safety, efficiency, and decision making for the National Air Space

Fully integrated and coordinated weather decision support

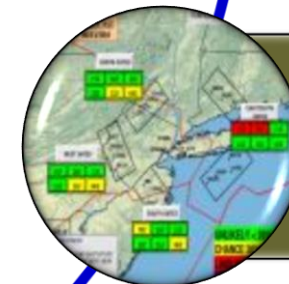
Balance air traffic demand with the capacity



Decision support @ ATCSCC



Support Collaborative Decision Making



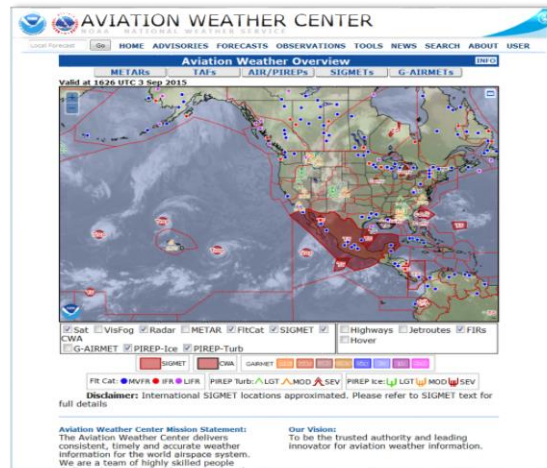
Focus on greatest NAS weather impacts



Aviation Support Branch



Products & Services



- **Web Services**
- **WAFS Internet Files Service**
- **Aviation Weather Guidance**
- **Shift Fill-In**

Information Systems



- **IT Architecture**
- **IT Security**
- **Production Systems**

Science and Technology



- **Aviation Weather Testbed**
- **Aviation Weather Research Program**
- **GOES-R**
- **Clouds and Visibility Research**

Global Leader in Science & Technology

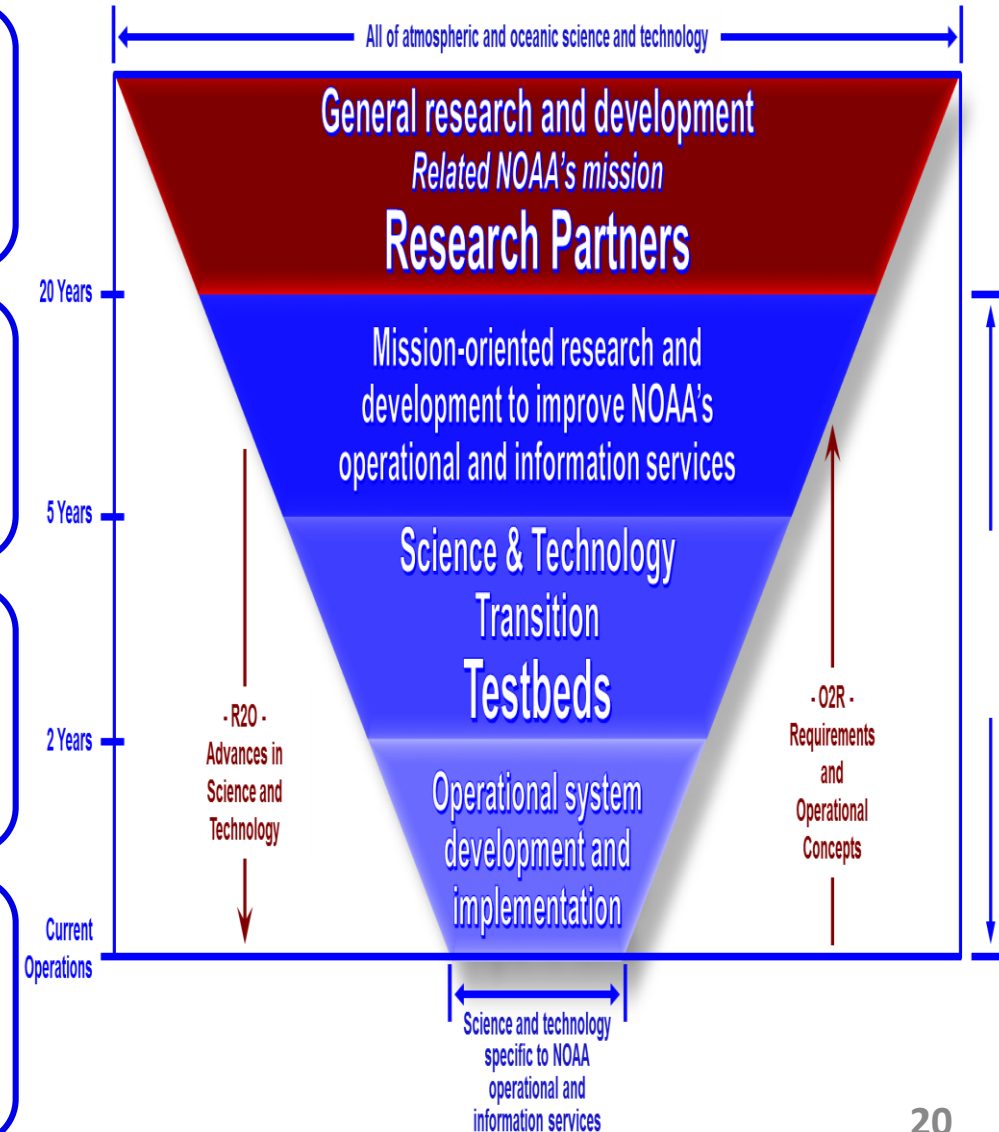


Global leadership in aviation research-to-operations (R2O), operations-to-research (O2R), and forecasting

Innovative, collaborative science and applied research to support effective decision making

Innovative science and information technology advancements for continuous improvement of NOAA operations, products, and services

Collaboration with other testbeds, laboratories, and the FAA Aviation Weather Research Program (AWRP)



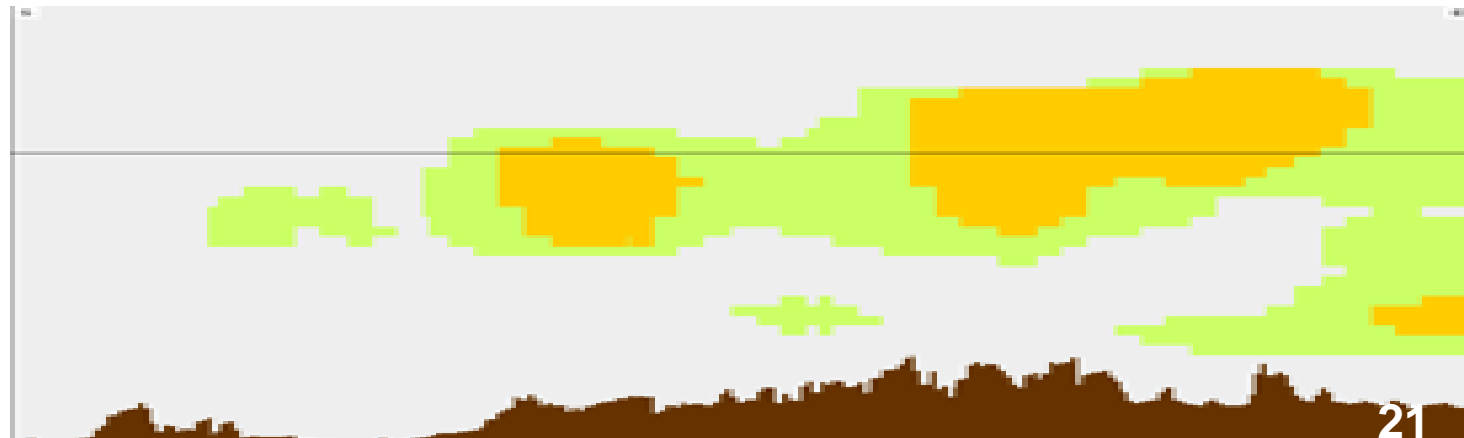
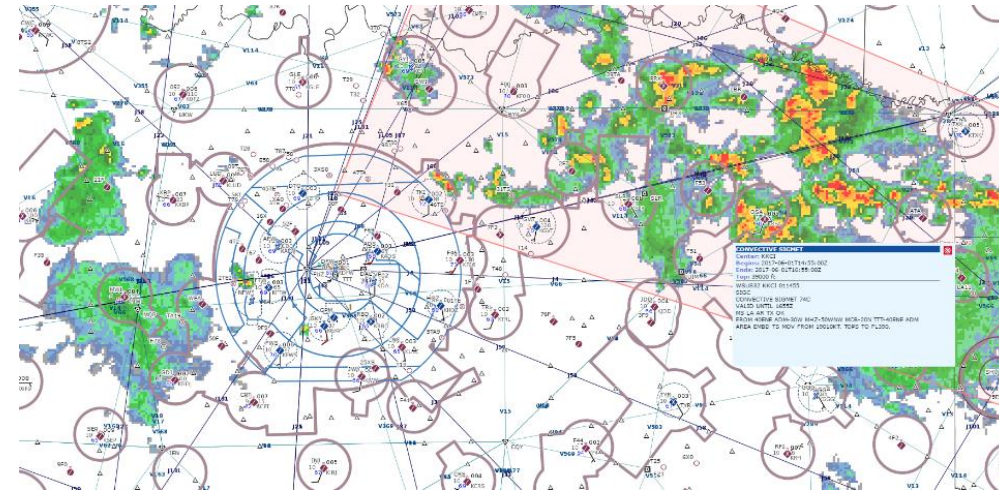
World-wide Aviation Safety



World leading operational aviation weather web service that enhances the national economy by enabling safe and efficient flight

- **Tremendous reliance on ADDS from broad spectrum of domestic, military and international aviation decision makers**

AOPA, NTSB, FAA, USAF, Navy, Airlines, Air Medical Services, General Aviation, ForeFlight, WAFS Vendors, TWC, NBAA, Leidos Flight Services, Flight Schools, CWSU



ADDS Summary



ADDS and AviationWeather.gov branding used interchangeably

Developed in the late 1990s and Operationally implemented in 2003, ADDS has expanded substantially in both offerings and usage to be one of the top 3 most visited sites within the DOC

Includes complex set of critical products and data services only available on ADDS that deep core partners rely on for aviation safety and decision making

Half the ADDS dissemination are digital data requests (Raw, XML, CSV) delivered reliably, dynamically, and with very low latency required for aviation

A Complex Set of Operational Products & Data Services



Original 2003 ADDS Products/Services

Aviation Warnings and Advisories <ul style="list-style-type: none"> • SIGMETs, AIRMETs, CWSU Center Weather Advisories 	WFO Terminal Area Forecasts (TAF)	World Area Forecast System (WAFS) Internet File System (WIFS)*R	Graphical Forecast for Aviation (GFA) tool	Traffic Flow Management (TFM) Collaborative Forecast (TCF)*R
Aviation Forecasts <ul style="list-style-type: none"> • Convection, Icing, Turbulence, Winds/Temp, Significant Weather Charts, Aviation Forecast Disc 	Graphical Turbulence Guidance (GTG)	International Flight Folder Documentation Program (IFFDP)*R	Helicopter Emergency Medical Services (HEMS) tool	Traffic Flow Management (TFM) Portal
Aviation Observations <ul style="list-style-type: none"> • Pilot/Aircraft Reports, METARs, Satellite, Radar 	Current and Forecast Icing Products (CIP/FIP)	WAFS Global Grids	Pilot Report Submission*R	Extended Convective Forecast Product (ECFP)
Flight Path Tool (FPT)	Text Data Server (raw, XML, CSV)	Standard Briefing tool	Winter Weather Dashboard	Impacts TAF Board

*R
Restricted Service

One of the Best Government Services



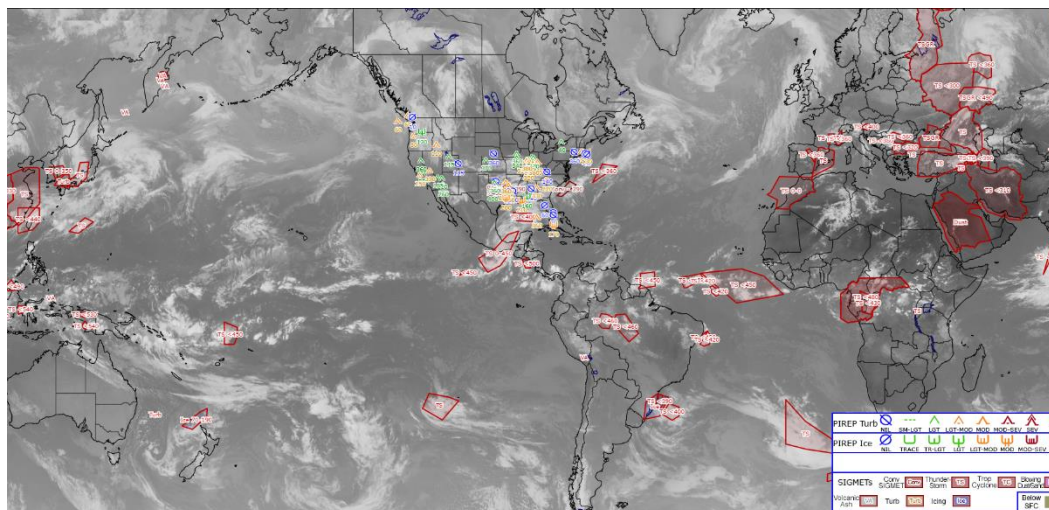
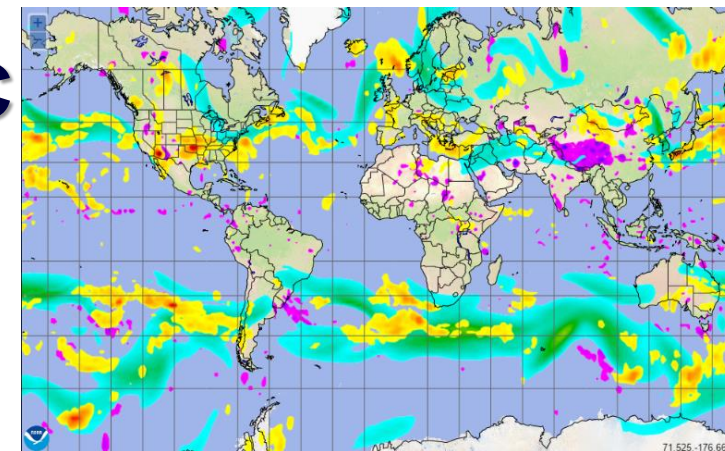
ADDs is continually praised by users who claim it is one of the best government services they experience

- **Consistently the 3rd most visited site within DOC**

1) forecast.weather.gov 2) weather.gov 3) AviationWeather.gov

- **Significant growth year after year**

- 60-70 Million hits daily
a doubling in the past two years
- ½ TB data transferred daily
- ½ ADDs Traffic is raw digital data



Questions?

