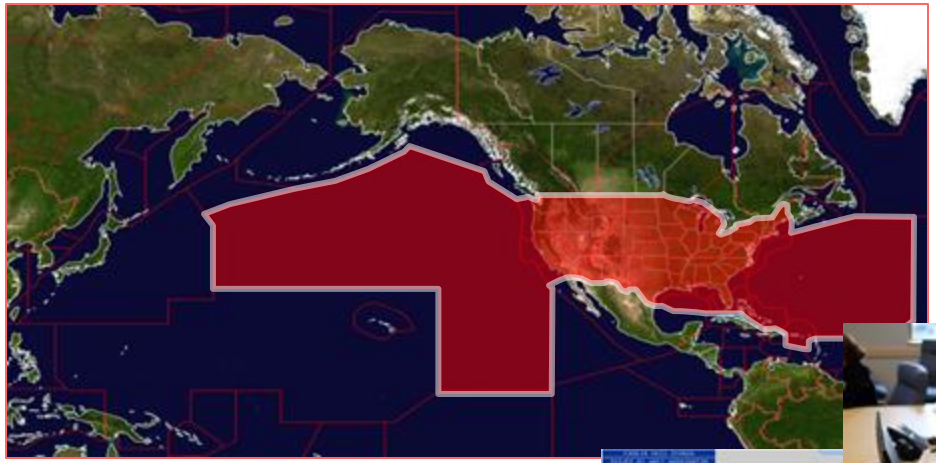
NWS Aviation Weather Center

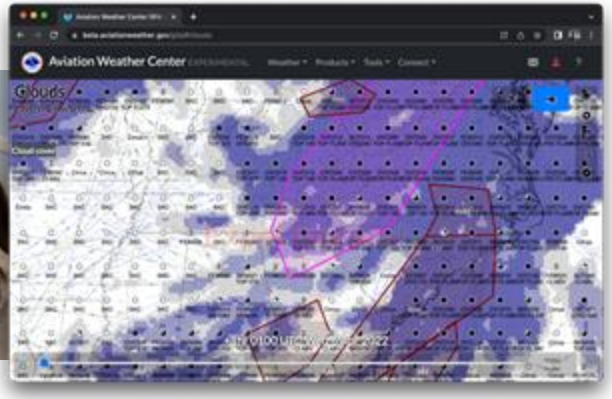
Jennifer Stroozas
Warning Coordination Meteorologist
Kansas City, MO

Informing flight with weather wisdom

Aviation Weather Center



One of the nine NWS national centers



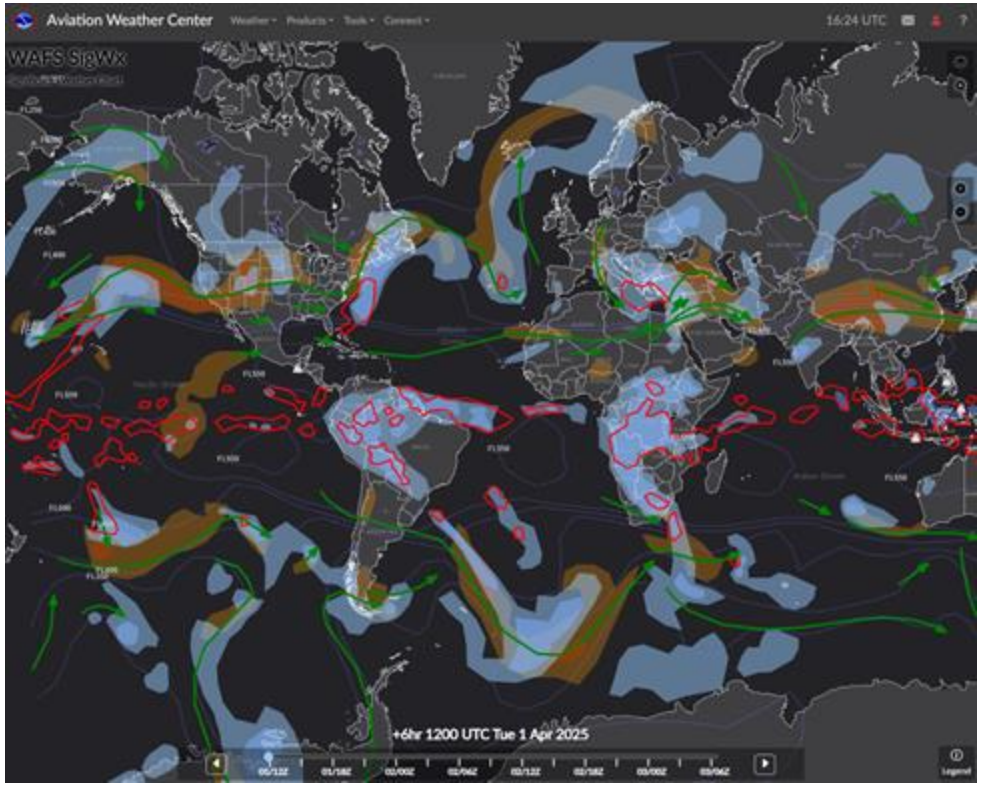
Domestic and international aviation forecasts and warnings

AviationWeather.gov

Aviation Weather Enterprise

27 January 2025

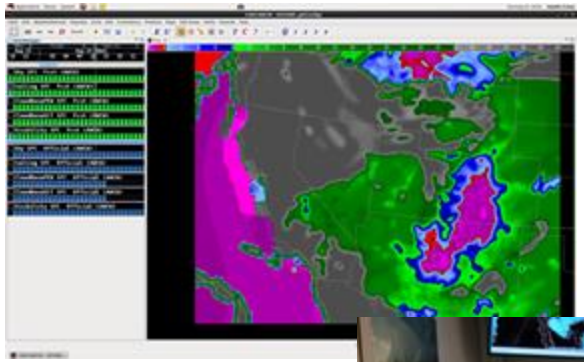
- TAC (text) AIRMET retirement
  - G AIRMETS only
  - “Snaps” in time
  - Higher fidelity
- Tropical Area Forecast (FA) retirement
  - Areal text forecast
  - GFA available
- Auto SigWx in collaboration with UKMET

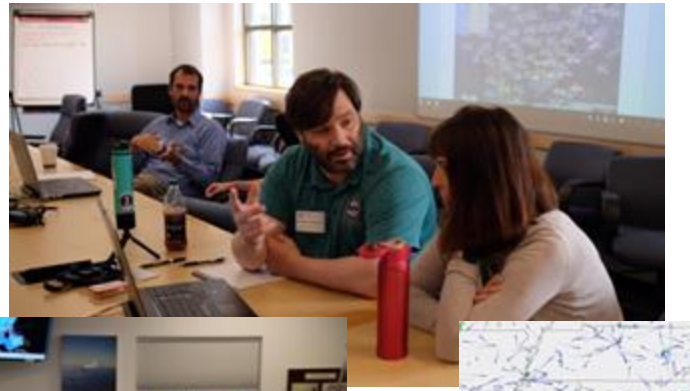


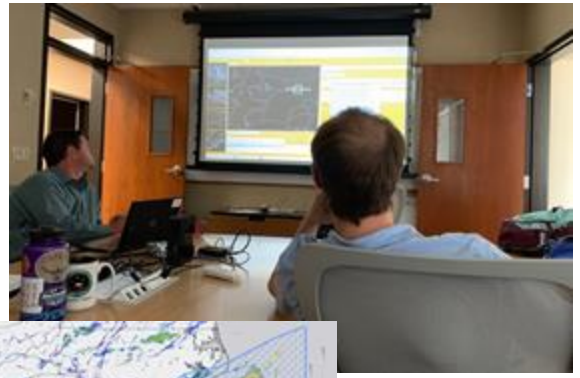
New NAOC Desk

- National Aviation Operations Center (NAOC)
  - Starts April 20
  - Focus on orchestrating operations
  - International SIGMETs
  - Spot forecasts
  - Messaging / expanding decision support services
- Desks by hazard remain
  - G AIRMETs and SIGMETs per hazard (cig&vis, icing, turb)
  - Convective SIGMET
  - Traffic Flow Management Convective Forecast (TCF) March-October
- Lots of training ongoing!

Aviation Weather Testbed







Research to Operations

Research & Development

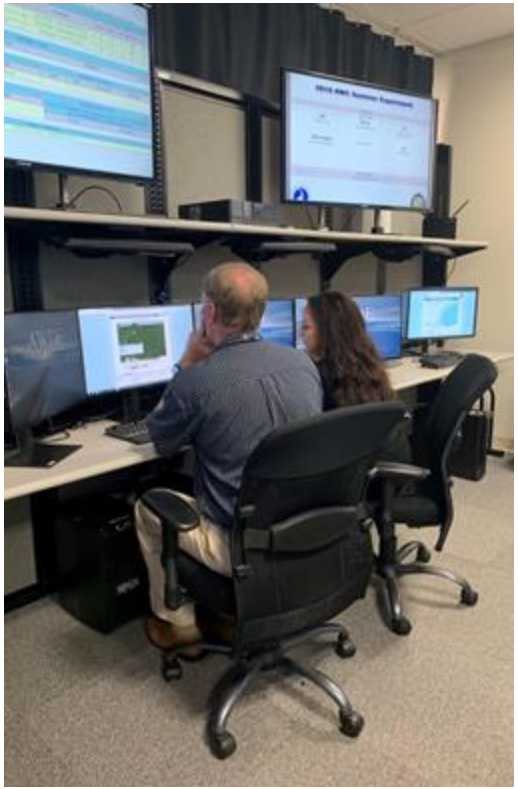
Vision: *"A destination facility as the enterprise leader in realizing the best science, technology, and training for operational aviation meteorology."*

Evaluation

Operational Implementation

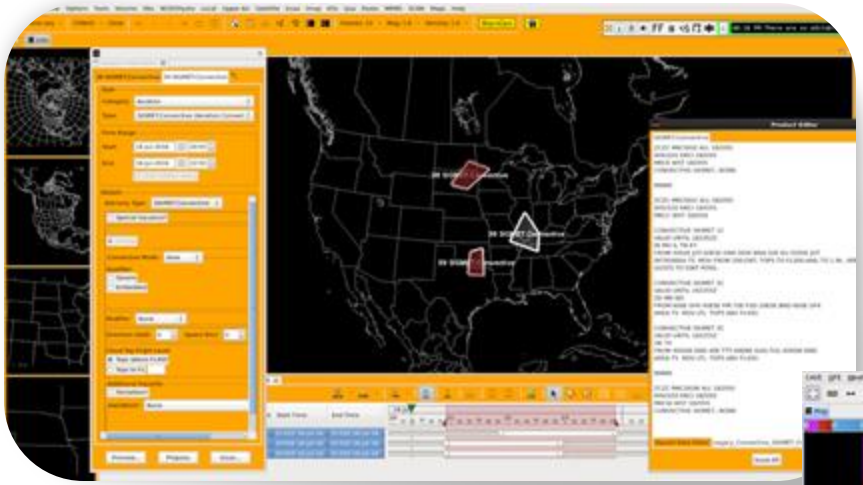
A continuous collaborative effort to develop, maintain, and integrate new products into operations.

FAA Aviation Weather Demonstration and Evaluation Group (AWDE)

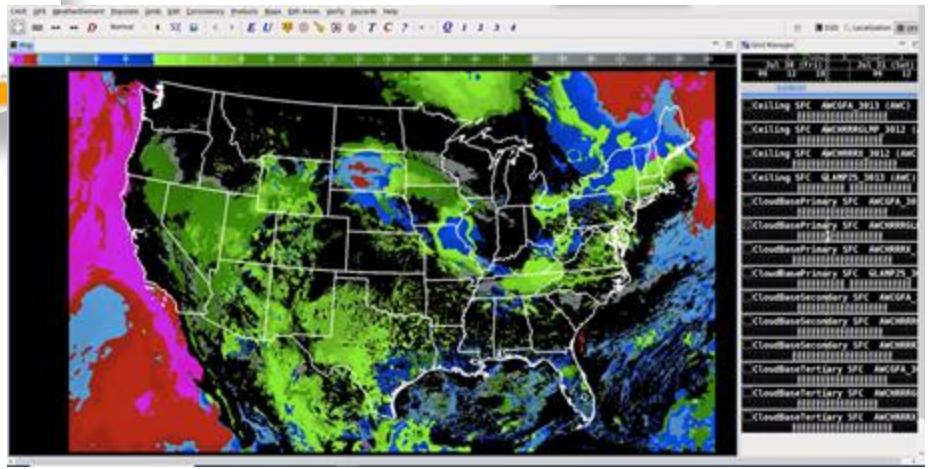


- Lab at the FAA William J. Hughes Technical Center in New Jersey that specializes in Human Factors
- Social science partners in workflow and end-user experience evaluations

Forecast Workflow Evaluation



AWIPS Hazard Services for aviation development and testing



Field testing grids with Weather Forecast Offices

User Evaluation

Example: User evaluation of web upgrades

- Working with FAA's AWDE Services
  - Neutral human factors experts
- Participants:
  - Pilots
  - Dispatchers
  - NWS meteorologists

Risk reduction: human factors assessment of what works, what doesn't, and how decisions are made.

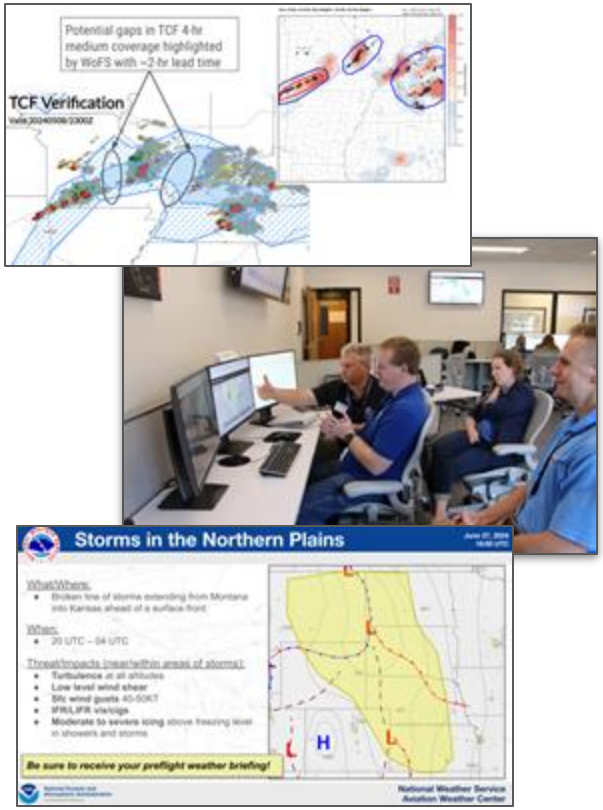
Annual Summer Experiment

Goal: *To evaluate experimental and prototype products and services to support aviation planning in the National Airspace System (NAS).*

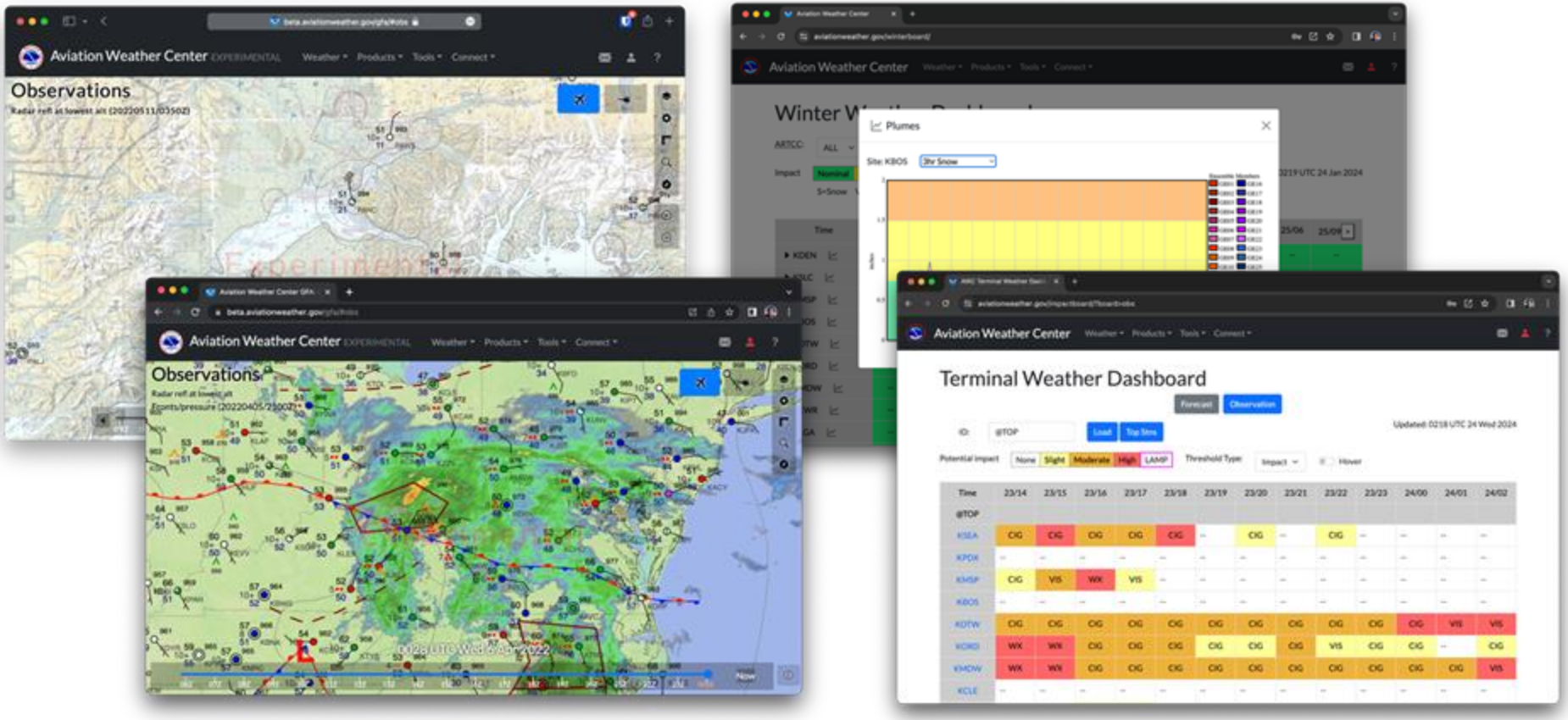
- Integral part of our Research-to-Operations (R2O) process
- Stakeholder engagement and collaboration
- Build relationships between multiple entities in the aviation weather enterprise

Recent Projects

- AviationWeather.gov continuous improvement
- Weather model evaluations
- Aviation Weather Research Program (AWRP) development with FAA
- Explore new products for GA pilots



2014-2023
RIP 16 Oct 2023


Aviation Weather Center EXPERIMENTAL
Weather
Products
Tools
Connect
Observations
Radar refl at lowest alt (20220511/0350Z)
Aviation Weather Center
Winter
Plumes
Site: KBOS
3hr Snow
Aviation Weather Center EXPERIMENTAL
Observations
Radar refl at lowest alt
Fronts/pressure (20220405/2300Z)
Aviation Weather Center
Terminal Weather Dashboard
Forecast
Observation
ID:
@TOP
Load
Top Sins
Updated: 0218 UTC 24 Wed 2024
Potential Impact
None
Slight
Moderate
High
LAMP
Threshold Type:
Impact
Hover
Time
23/14
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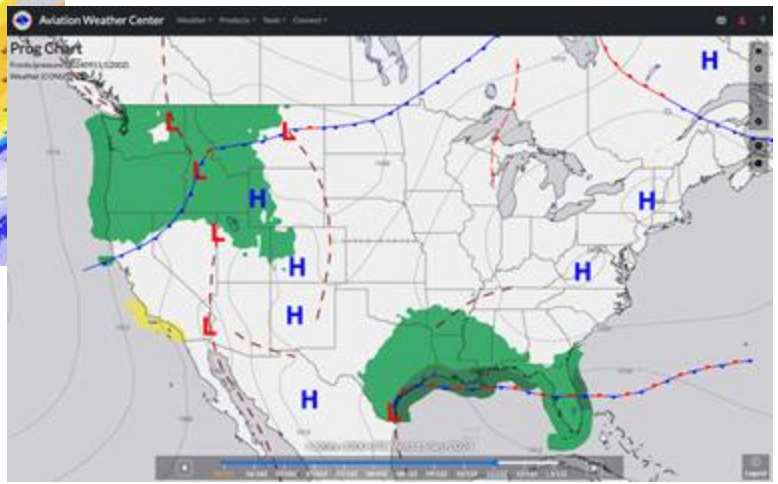
24/02
@TOP
KSEA
KPDX
KMSP
KBOS
KDTW
KORD
KMDW
KCLE
CIG
VIS
WX

Extended Range

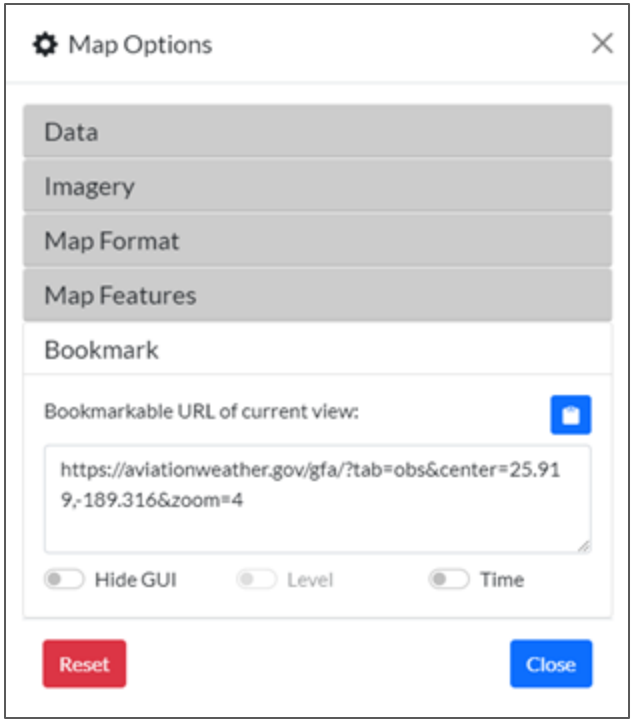
New!

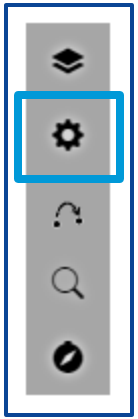
What fields, levels, time ranges are useful?



Products to day 4 and beyond

Bookmark

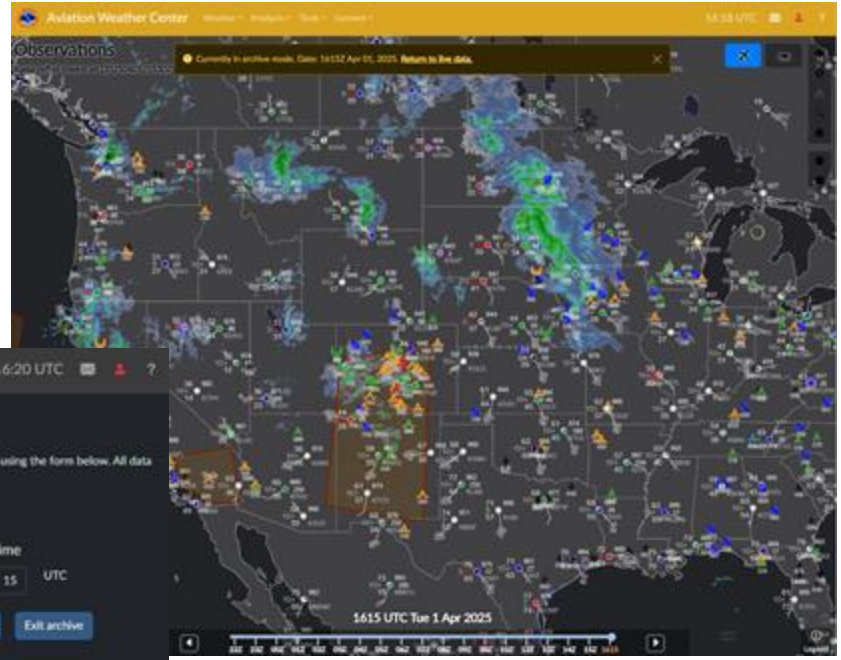


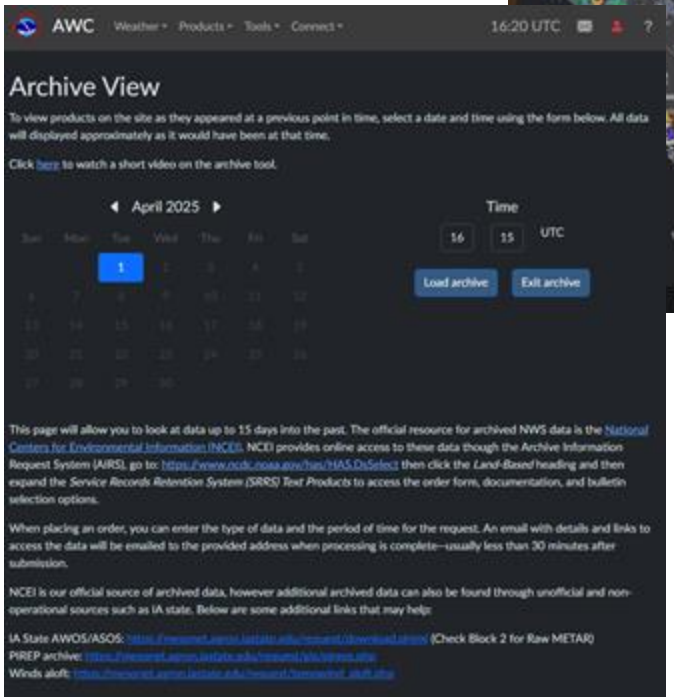


Save URL to re-open the page exactly as it appears on your screen

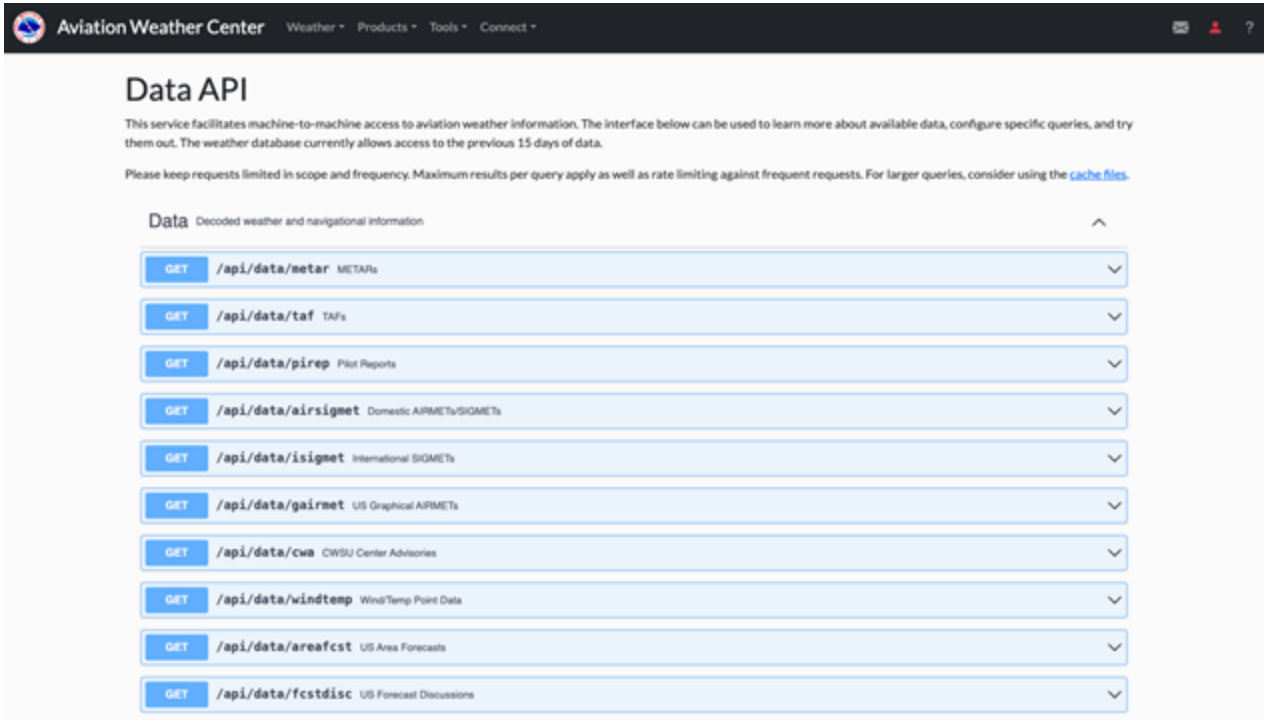
Archive Mode

- Data back to 2 weeks
- Easy to navigate





Data Access

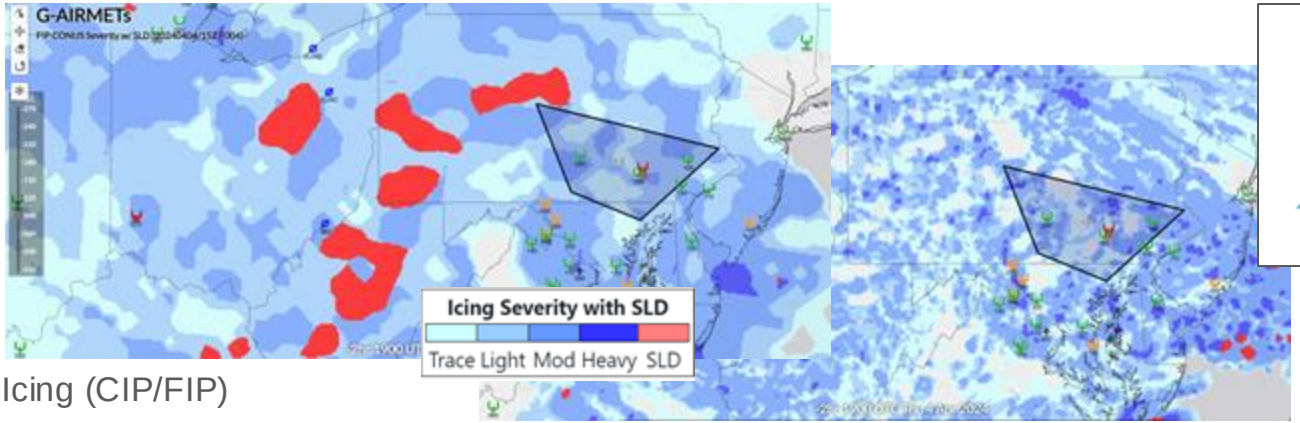

Aviation Weather Center
Weather
Products
Tools
Connect
Data API
This service facilitates machine-to-machine access to aviation weather information. The interface below can be used to learn more about available data, configure specific queries, and try them out. The weather database currently allows access to the previous 15 days of data.
Please keep requests limited in scope and frequency. Maximum results per query apply as well as rate limiting against frequent requests. For larger queries, consider using the cache files.
Data Decoded weather and navigational information
GET /api/data/metar METARs
GET /api/data/taf TAFs
GET /api/data/pirep Pilot Reports
GET /api/data/airsigmet Domestic AIRMETs/SIGMETs
GET /api/data/isigmet International SIGMETs
GET /api/data/gairmet US Graphical AIRMETs
GET /api/data/cwa CWSU Center Advisories
GET /api/data/windtemp Wind/Temp Point Data
GET /api/data/areafcst US Area Forecasts
GET /api/data/fcstdisc US Forecast Discussions

Tutorials and Other Videos Available

youtube.com/@nwsawc207

Model Evolution

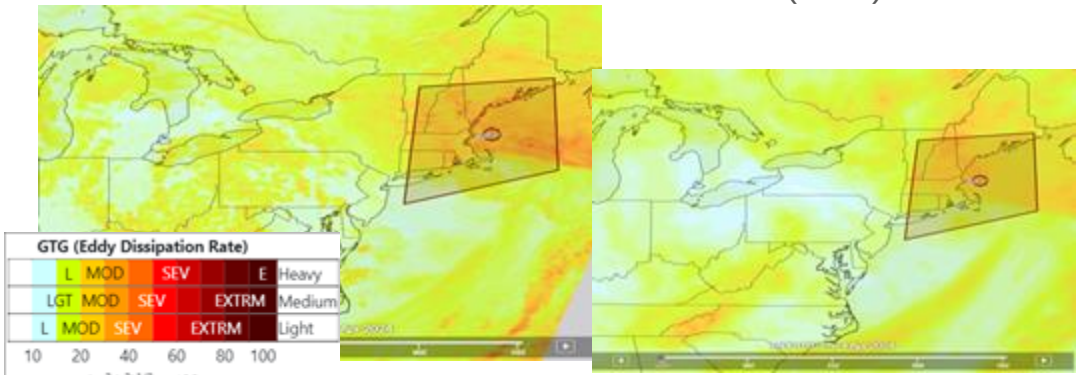
Currently being evaluated



Icing (CIP/FIP)

Turbulence (GTG)

Weather model upgrade: RRFS

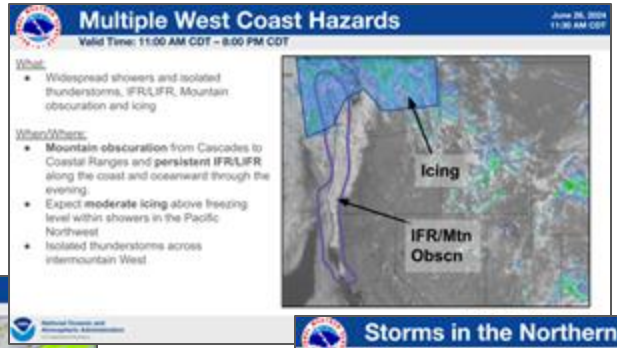


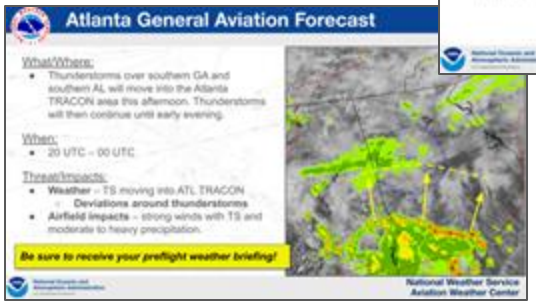
Key Aviation Messages

Currently being evaluated

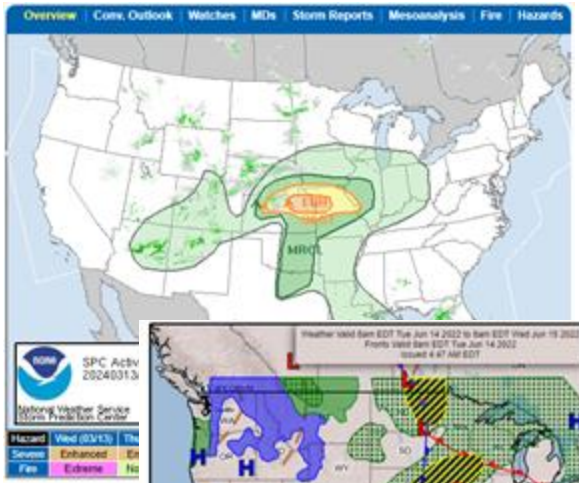
Highlights an area with expected significant impacts to general aviation

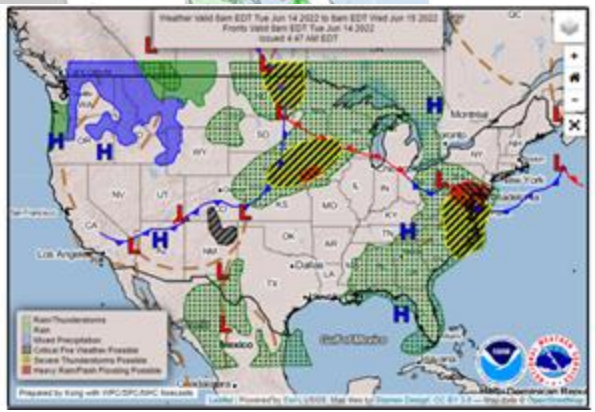
- Easy to interpret
- Calls to action

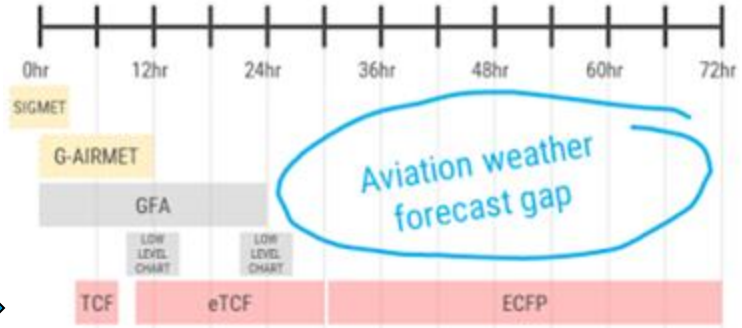


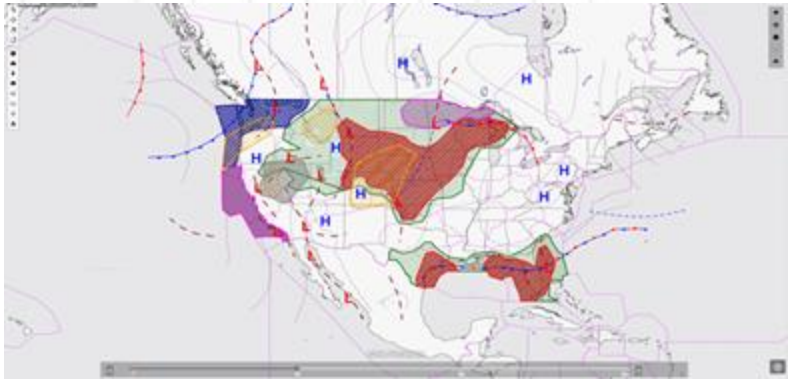


Outlook Graphics



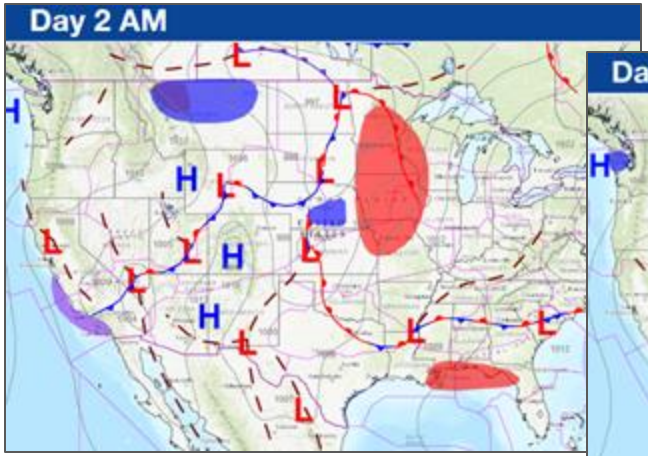


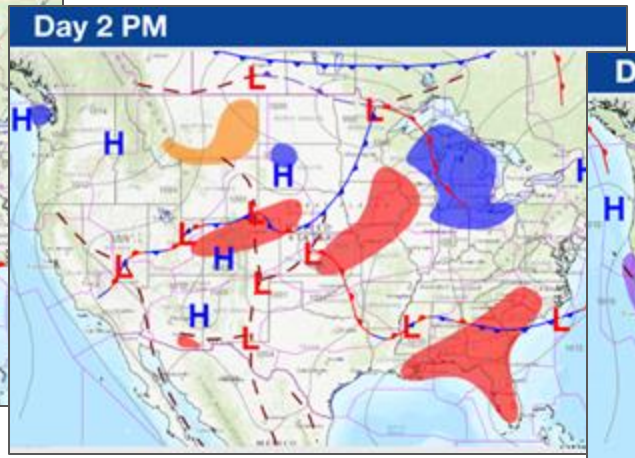


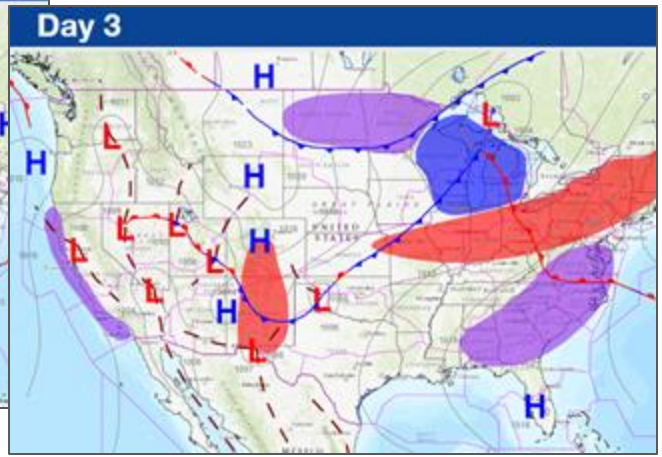


Outlook Graphics

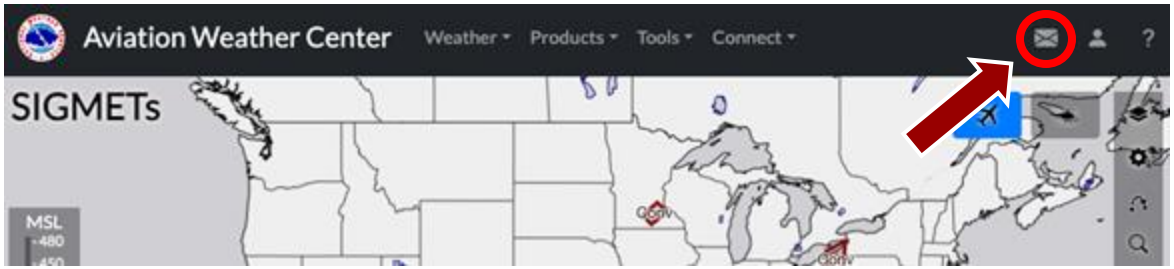
Currently being evaluated







https://AviationWeather.gov/



Reach out through the web site!

Questions?

jennifer.stroozas@noaa.gov
AviationWeather.gov

Informing flight with weather wisdom