

FAA NAS Weather

CIWS/CoSPA Decommissioning

Presented to:
By:
Date:

CIWS/CoSPA and ATOM Feed Users
FAA Weather Program Office
August 2026



Federal Aviation
Administration



Purpose

- **Provide high level overview of NAS Weather Processor (NWP) aka NextGen Weather Processor and Common Support Services – Weather (CSS-Wx)**
- **Discuss timeline for updated support and decommissioning of the CIWS/CoSPA Operational Prototype**
- **Discuss what CIWS/CoSPA capabilities are being transitioned**

NWP and CSS-Wx Overview

**NextGen Weather Processor =>
NAS Weather Processor (NWP)**

Common Support Services – Weather (CSS-Wx)



- Improve weather information management and user access; provide new interface standards and formats
- Increase NAS efficiency and safety by improving weather product generation, translation, and display for aviation weather users
- Reduces FAA cost by replacing legacy Wx systems (e.g., WARP, CIWS, CoSPA)



NWP Capabilities

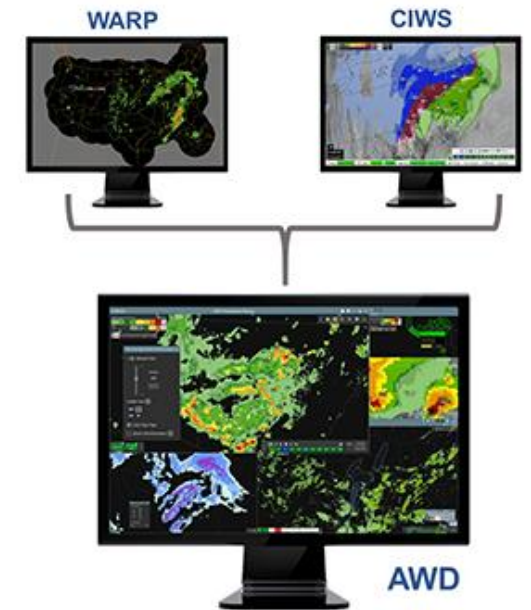
- **Produces advanced aviation specific weather products, e.g.,**
 - Real-time weather radar information (e.g., for ERAM)
 - 0 to 8 hour aviation weather products
 - Convective Weather Avoidance Fields
- **Provides Aviation Weather Display (AWD) of NextGen weather information for ATC users**
- **Translates weather information into weather avoidance areas for integration into decision support tools (e.g., TFMS)**

CSS-Wx Capabilities

- **Single provider of weather data products within the NAS, using standards-based weather dissemination**
- **Makes weather products available from NOAA, NWP and other data sources for integration to air traffic systems**
- **Provides weather products via a set of common Web Services for weather, using international data access and data format standards**

Aviation Weather Display (AWD)

- **AWD replaces WARP Briefing Terminal (BT), CIWS/CoSPA Situational Display (SD), and the CIWS/CoSPA website**
 - Integrated Terminal Weather System (ITWS) remains a stand-alone system for terminal airspace
- **AWD provides advanced aviation-specific weather products generated by NWP, NOAA and other sources**
 - AWDs are deployed in ARTCCs, CERAPs, select TRACONs, select ATCTs, the ATCSCC, and the FAA Technical Center
 - Authorized users, both internal and external to the FAA, can access the AWD on the internet via the AWD website (NWP External Web Server)
- **Dedicated AWD workstation(s) will be available at most sites before the NWP External Web Server is available**
- **Coexists temporarily with WARP BT, CIWS SD and/or CIWS Web before removal of legacy equipment**



MIT Lincoln Laboratory

Operational Prototype Decommissioning

As the FAA completes the deployment of NWP, CSS-Wx, and AWDs, the FAA has established the following timeline for updated support and decommissioning the CIWS/CoSPA Operational Prototype:



- **Operations Support**

- CIWS support will transition from **24x7 monitoring** to **best-effort support (Monday–Friday, 8:00 AM–5:00 PM)** effective **October 1, 2026**

- **ATOM Data Feed** (users integrating weather data into their own applications)

- CIWS digital data distributed to FAA-approved clients via the **ATOM** feed will be decommissioned **October 1, 2026**

- **CIWS/CoSPA Situation Displays** (dedicated weather “Situation Display” workstations located at FAA facilities)

- Dedicated CIWS **Situation Displays (SDs)** will be decommissioned between 01-Oct and 31-Dec, 2026, as AWDs become operational.

- **CIWS/CoSPA Prototype Website** (deployed at supporting FAA facilities and Airline Operations Centers)

- MIT LL will continue supporting the CIWS/CoSPA prototype website through **early Summer 2027**

Stakeholders requiring access to NWP data via CSS-Wx should contact the FAA for onboarding information: Dan.Dennis@FAA.gov

CIWS/CoSPA Capabilities Transitioned to CSS-Wx/NWP

Capability	CIWS/CoSPA Capabilities	CSS-Wx/NWP Capabilities
Product Generation	Generates suite of 0-2 and 2-8 hour predictive products for various aviation weather phenomena	NWP - Generates suite of 0-2 and 2-8 hour predictive products for various aviation weather challenges - Generates more products than CIWS/CoSPA at a faster update rate, coverage area and accuracy (Next few slides cover the products)
Dissemination	CIWS Data Distribution Service (CDDS) provides 0-2 hour predictive products to users - Previously provided 0-2 hour predictive products to TFMS ATOM Feed - CIWS digital data distributed to FAA - approved clients Decommissioning 1 October 2026	CSS-Wx - Distributes NWP 0-2 and 2-8 hour predictive products to users via SWIM - Including TFMS for the 0-2 Hour - Individual predictive products are unbundled
Display	CIWS SD for display of weather products in select en route and terminal facilities Decommissioning starting 1 October, completing by Fall 2026	NWP AWD - AWD for display of weather products in en route and terminal facilities - Access to additional aviation weather products
Web-Based Data Access	CIWS/CoSPA Website providing access to CIWS products for registered aviation weather stakeholders inside and outside the FAA Decommissioning Early summer 2027	NWP EWS AWD External Web Server (EWS) provides access to NWP products for registered aviation weather stakeholders inside and outside the FAA

CIWS/CoSPA vs. NWP Product Improvements (1 of 2)

Product & Overlay	CIWS/CoSPA	NWP
Composite Reflectivity (CompRefl) Mosaic	--	25 sec update – currently only 150 sec update available since no consumer requests 4 fixed layers: 0-70, 0-24, 24-70, 33-70 kft msl
0-2 hr Forecast	5 min update - 5 min frames Forecast techniques: • Radar heuristic & extrapolation	5 min update - 5 min frames Forecast techniques: • 0-1 hr: Radar heuristic & extrapolation • 1-2 hr: Blended radar heuristic, extrapolation & HRRR model
2-8 hr Forecast	15 min update – 15 min frames Forecast techniques: • Blended radar extrapolation & HRRR model	5 min update – 15 min frames Forecast techniques: • Blended radar extrapolation & HRRR model
Forecast Contours & Forecast Verification Contours	1-8 hrs @ 1 hr intervals	0-1 hr @ 10 min intervals 2-8 hrs @ 1 hr intervals
Convective Weather Avoidance Polygons (CWAP) & CWAP Verification Contours	--	Altitudes: 24, 33, 35, 37, 40+ kft 0-1 hr @ 10 min intervals 90 min 2-8 hr @ 1 hr intervals
Forecast Accuracy Scores	Long-Range Scores • 69 US • 8 Canadian	Terminal & Long-Range Scores • 82 US • 10 Canadian
Growth & Decay Trends	150 sec clock strobe Compute trends at end-of-volume for each radar: • Time-align the prior Precip volume to current Precip volume • Difference the two volumes Mosaic trends associated with mosaiced Precip	25 sec clock strobe Compute trends on new “sliding volume” after each tilt, for each radar: • Time-align the prior “like” Precip volume to current Precip volume • Difference the two volumes Mosaic growth trends associated with mosaic Precip Mosaic decay trends associated with mosaic Precip

CIWS/CoSPA vs. NWP Product Improvements (2 of 2)

Product & Overlay	CIWS/CoSPA	NWP
Storm Info Tags	Storm Info Tag elements: • Echo tops (e.g., 340 = 34,000 ft msl)	Storm Info Tag Elements: • Echo tops (e.g., 340 = 34,000 ft msl) • Lightning (LGHT) • Hail tags (HAIL) • Storm cell circulation (CIRC)
Lightning	25 sec update Aggregated Lighting (past 6 minutes) MITLL vendor	30 sec update Aggregated Lighting (past 6 minutes) FAA vendor
Tornado	--	5 sec update NEXRAD Tornado Vortex Signature (TVS) detections
Fronts	--	0-2 hrs Forecast @ 5 min intervals Based on time-aligned NWS frontal analysis
Traffic Flow Impact (TFI)	0-8 hrs @ 1 hr Flow Constrained Areas in 5 ARTCCs ZJX, ZNY, ZOB, ZDC, ZBW	Forecast Confidence (TFI) 0-8 hrs @ 1hr (0-12 hrs in 2027) Flow Constrained Areas in 5 ARTCCs ZJX, ZNY, ZOB, ZDC, ZBW
Terminal Winds Grids & Wind Profiles	--	5 min update 45 terminal locations

CIWS/CoSPA Products to NWP Display Mapping

CIW/CoSPA	NWP/EWS
Accuracy (Forecast Accuracy Scores)	FCST ACCY (Forecast Accuracy Scores)
Echo Tops Forecast	ECHO TOPS (Echo Tops)
Echo Tops Tags	ET-Tags SCI (Echo Top Tags - Storm Cell Info)
Fcst Contours (Forecast Contours) Precip Winter Precip Echo Tops	FCST CNTRS (Forecast Contours) Precipitation (includes Winter) Echo Tops
G&D Trends (Storm Growth and Decay Trends)	G&D Trends (Storm Growth and Decay Trends)
Lightning (Lightning Detection)	LTNG (Lightning Detection)
Precip (-2 hrs, 0 – 8 hrs)	Precip (Precipitation -2, 0-8 hrs) (includes Winter Precip)
Prior Forecast	
Satellite (Satellite Mosaic)	SAT (Satellite Mosaic)
Storm Motion (Storm Motion Vectors)	STORM MOTN (Storm Motion Vectors)
TCF (Traffic Flow Management Convective Forecast)	TCF (Traffic Flow Management Convective Forecast)
Traffic Flow Impact	*Traffic Flow Impact (Forecast Confidence product)
Verification (Forecast Verification Contours)	VERIF (Forecast Verification Contours)
Winter Precip (-2 hrs, 0-8 hrs)	Included with Precip product

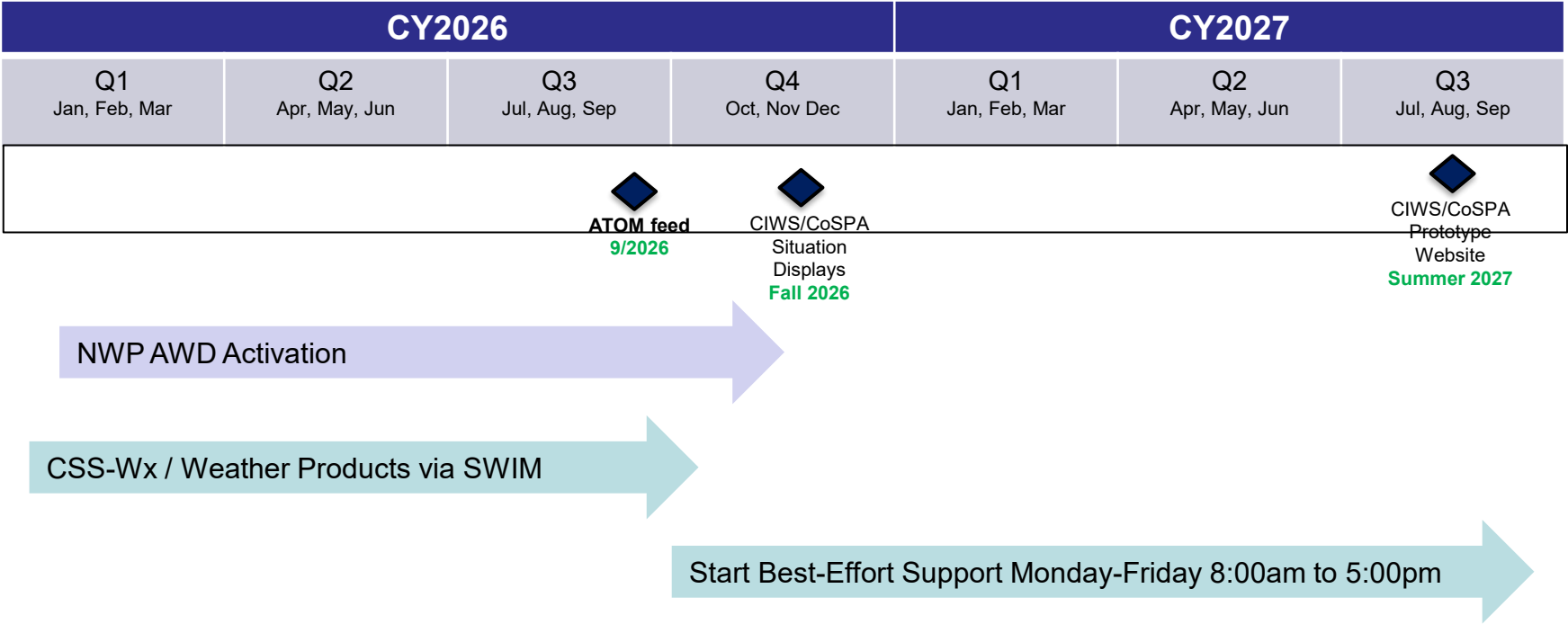
Additional Products available on NWP AWD / EWS

Not available on CIWS/CoSPA

Additional NWP AWD/EWS Products & Overlays	CIWS/CoSPA
AIRMET's Airmen's Meteorological Information	N/A
Base Reflectivity	N/A
Composite Reflectivity Mosaic	N/A
ICING CNTRS (Icing Contours)	N/A
Icing	N/A
Observations & TAFs (OBS TAFS)	N/A
PIREP's Pilot Reports	N/A
SIGMET's Significant Meteorological Information Domestic and International	N/A
Storm Cell Information	N/A
Storm Leading Edges & Projections	N/A
TURB CNTRS (Turbulence Contours)	N/A
Turbulence and Turbulence Forecast	N/A
Watches - Severe Thunderstorm & Tornado Watches (WATCH)	N/A
Volcanic Ash Advisories (VAA)	N/A

Decommissioning Timeline

Last updated: 8/31/26



Potential use of CIWS/CoSPA Web instead of CIWS SDs (if needed)



Summary

- **NWP AWD and EWS will provide access to advanced aviation weather information moving forward after CIWS/CoSPA are decommissioned**
 - Access to more products than CIWS / CoSPA at a faster update rate, wider coverage area and higher accuracy
- **Data produced by NWP is available for direct consumption via CSS-Wx/SWIM**
 - Larger data set than CIWS ATOM feed and CDDS

*Stakeholders requiring access to NWP data should contact the FAA for onboarding information:
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