

NextGen Weather

Weather causes more than two-thirds of air traffic delays. While staying safe, NextGen Weather reduces weather impact, resulting in more efficient and predictable operations.

NextGen Weather is a collaboration of the FAA, NASA and the National Ocean and Atmospheric Administration (NOAA). It harnesses massive computing power, advances in numerical weather forecasting and modernized information management services.

NextGen Weather uses satellite and digital technologies to provide tailored, real-time aviation weather products. This helps controllers and operators develop reliable flight plans, make better decisions and improve on-time performance.

Common Support Services–Weather (CSS-Wx)

- Facilitates consistent weather information
- Increases NAS weather access
- Reduces interface development costs
- Reduces infrastructure/bandwidth costs

CSS-Wx is the single provider of weather data, products and imagery within the National Airspace System (NAS), using standards-based weather dissemination via System Wide Information Management. CSS-Wx makes available enhanced weather products for integration into air traffic decision support tools, improving the quality of traffic



management decisions and reducing controller workload during severe weather.

The CSS-Wx system makes weather data accessible through a set of common support services and broadly adopted data access and format standards from the International Standards Organization and the Open Geospatial Consortium. The services provide a mature basis for communicating time-dependent, geo-referenced weather information.

NextGen Weather Processor (NWP)

- Provides enhanced weather products
- Translates weather picture into reliable airspace constraints
- Enables safe, timely, efficient operation of the NAS



- Consolidates FAA weather programs

The fully automated NWP identifies terminal and en route safety hazards and provides translated weather information needed to predict route blockage and airspace capacity constraints up to eight hours in advance.

NWP combines weather radar, environmental satellite, lightning, meteorological observations (from surface stations and aircraft) and NOAA numerical forecast model output to generate improved products for all FAA users, while maintaining today's stellar terminal aviation safety products.

Aviation Weather Display (AWD)

- Establishes new stand-alone weather display architecture
- Designed as Geographic Information System with layers of information
- Consolidates legacy weather display capabilities
- Icing and turbulence products integrated with radar mosaics
- Supports long range and terminal radar approach control (TRACON) views
- Includes dedicated and web browser versions
- Provides display for new NextGen Weather capabilities



Corridor Integrated Weather System (CIWS) depict different information – even when nominally displaying the same product. While some weather products are effectively integrated with operational decision support tools, users still require a stand-alone, dedicated weather display.

Part of the NWP, the AWD consolidates today's WARP, ITWS and CIWS displays. The AWD provides consistent weather information “at a glance” for en route and terminal users and includes weather products from both NWP and NOAA.

Decision makers in the NAS require a clear, consistent presentation of weather information to ensure efficient and safe air traffic operations. In the current environment, multiple weather displays from the Weather and Radar Processor (WARP), the Integrated Terminal Weather System (ITWS) and the

