

Cloud-Based Access & Processing of Meteorological Data



PRESENTERS

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From AWIPS to the Cloud: HIVE & CIRRUS

 **169**

On-Prem Installations
Across the U.S.

 **122**

Weather Forecast
Offices (WFOs)

 **13**

River Forecast
Centers (RFCs)

AWIPS is the on-premises backbone of U.S. weather forecasting — HIVE & CIRRUS will move this entire footprint to the cloud.



CIRRUS

Cloud Infrastructure for Real-time Retrieval and Upstream Services — the backend data pipeline and processing engine. Managed by Booz Allen Hamilton. Kicked off March 2026 with sprint-based delivery.



HIVE

Hazard Information Visualization Environment — the cloud-native replacement for the AWIPS forecaster workstation. Managed by Accenture. Phase 1 POC underway; FOC targeted February 2028.



AWS provides the cloud foundation (NWS Enterprise Cloud), infrastructure, and professional services enabling this transition — including the AWS Landing Zone, compute, storage, and data services powering both HIVE and CIRRUS.

Systems Transformation in NWS

To Enable NWS Transformation, we are:

Cloud Migration

Transitioning all workloads and data to the cloud

Forecast Systems

Re-engineering forecast generation systems (AWIPS) to HIVE and CIRRUS

New Network

Deploying a modernized, high-speed NWS network

Alerts Enterprise

Modernizing NOAA Weather Radio and alerts enterprise

Dissemination

Revamping Weather.gov and NWS dissemination apps

NWS Future Systems 101

HIVE

Virtual Environment

Cloud-based successor to Legacy AWIPS. Designed to be comprehensive and mobile, serving as the central application environment supporting operational needs and future capabilities.

ETA: Early FY28

CIRRUS

Data Repository

Authoritative cloud-based repository for all NWS Enterprise Data. Consolidates storage and distribution, establishing rigorous data governance to ensure data is AI/ML-ready.

ETA: Early FY28

NEC

Enterprise Cloud

The foundation cloud environment serving the NWS. Provides secure, scalable "landing zones" for application deployment. Both HIVE and CIRRUS will operate within the NEC.

ETA: Starting Now

NWS Future Systems 101

Network

Virtual Environment

Modernized, Software-Defined Wide-Area Networks (SD-WAN) which enable secure connectivity using a wider array of communications technologies, improving resilience and flexibility.

ETA: Early FY28

NWR

Critical Alerting

New IP backbone and development of a next-generation broadcast system to ensure reliable, resilient, accessible, and high-quality weather, water, and climate information.

ETA: Starting FY27

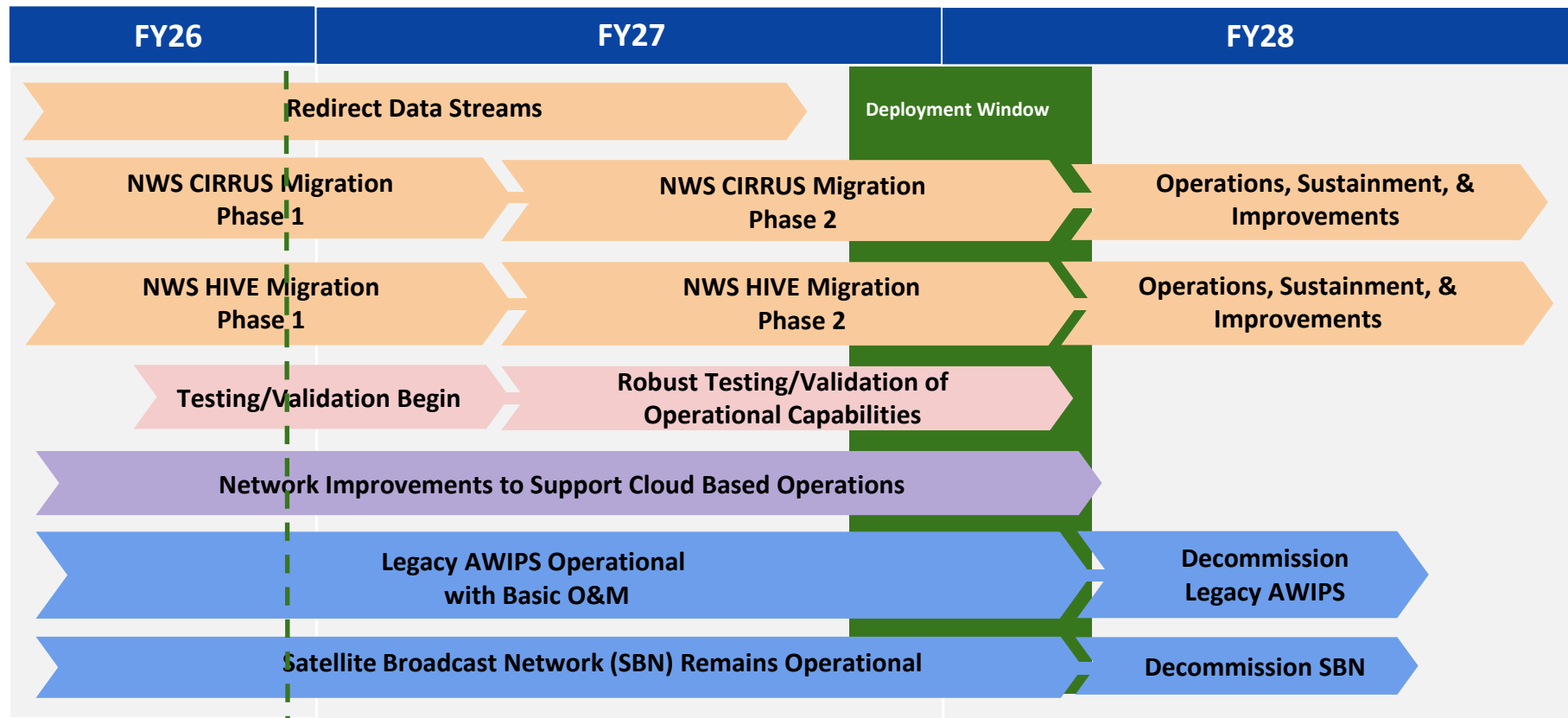
Dissemination

[Weather.gov](https://www.weather.gov), API, Applications

Upgraded digital services to better serve the American public, gov't and enterprise users. First up, the next generation of Weather.gov and NWS Application Programming Interface (API)

ETA: Starting Now

NWS HIVE/CIRRUS Migration Timeline



We are here

Questions?

Dev Jodhun | George Jungbluth

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