



NATIONAL WILDFIRE COORDINATING GROUP

NWCG Briefing Paper

March 18, 2025

TO: Aitor Bidaburu, Chair, NWCG Executive Board
FROM: Nick Nauslar, Chair, Fire Environment Committee (FENC)
SUBJECT: Notification of Weather Information Management System (WIMS) end of life and transition to the Fire Environment Mapping System (FEMS).

Purpose: This briefing paper is intended for informational purposes, highlighting systems referenced in NWCG publications and training materials. The Weather Information Management System (WIMS) will reach end of life in September 2025. WIMS is the authoritative database for the National Fire Danger Rating System (NFDRS). The Fire Environment Mapping System (FEMS) will begin displaying NFDRS outputs by June 2025 and will replace WIMS as the authoritative database for NFDRS starting September 2025.

Issue/Desired Outcome: In June FEMS plans to release NFDRS outputs in the mapping interface with tables, graphs, trend charts, and download/API options. FEMS will then go into an operations and maintenance phase until funding is approved to continue development; however, there is uncertainty about available IT funding to continue FEMS development beyond June. The authoritative database for NFDRS will shift from WIMS to FEMS September 2025. The FEMS web portal at www.wildfire.gov/application/fems will be updated to provide resources to the field throughout this transition.

- June 2025: NFDRSv4 output viewing and download capabilities will be available in FEMS for most Remote Automatic Weather Stations (RAWS) and Automated Surface Observing System (ASOS) stations.
- June – September 2025: Users will need to familiarize themselves with FEMS and begin the transition away from WIMS.
- September 15, 2025: Users will need to be fully transitioned to using FEMS for NFDRS outputs as WIMS will no longer be available to access. WIMS data archiving will begin.
- September 30, 2025: WIMS will go end of life and not available for any access and the WXML data feed will end.
- October 1, 2025: FEMS will be the operational and authoritative NFDRSv4 database.

FEMS may not meet a key capability that was available in WIMS, which is the ingestion of weather observations and calculation of NFDRS outputs for the Alternate Gateway Networks. However, the Business Leads will continue to get this capability prepped for when development continues in order to meet its need as soon as possible. Also, as a mitigation, 569 National Weather Service ASOS weather stations will calculate NFDRS to supplement the RAWS network and provide coverage in lieu of Alternate Gateway Networks.

WIMS capabilities not being transitioned to FEMS are user managed Special Interest Groups (SIGs), user managed model parameters, station specific Adjective and Staffing Level calculations, and the decision support module. All these have either been re-evaluated for scientific and data integrity or broad interagency use which led to changes in the capability, or they require further NWCG interagency discussion on operational standards. As a mitigation for SIGs, users will be able to download averaged NFDRS outputs from multiple stations from the download page.

FEMS will provide several improvements and new capabilities for NFDRS. These include:

- Scientific and data integrity have been the focus of development with data standards applied for all weather inputs, appropriate NFDRS parameter management for a national scale application, and alignment of the FEMS calculator with FireFamily Plus March 2024 Build.
- Regional sub-model calibration capability is being developed and tested following scientific and data integrity principles so that calibration processes can be documented, and training can be provided for them.
- All weather station metadata (e.g., Name, Latitude, Longitude) are provided to FEMS from the source observation and authoritative metadata system so changes are only occurring in one place which is the authoritative system.
- FEMS contains a Quality Assured/Quality Controlled (QA/QC) gap-filled historical weather dataset for 1972 RAWs with NFDRS calculations that can be downloaded as weather data or NFDRS data for analysis purposes.

Agency-specific recommendations for the field:

- Ensure that FireFamily Plus 5.0 March 2024 Build is downloaded and used. This is the only version that will provide similar NFDRS outputs to FEMS.
- Update FireFamily Plus databases with only FEMS Weather data station downloads. A job aid will be available to assist in setting correct station parameters and options in FireFamily Plus.
 - Review and update fire business thresholds associated with NFDRS outputs.
 - Continue to update pocket cards based on pre-established timelines.
- Update any products that utilized the WIMS WXML to the FEMS Get Data link.
- Develop a plan to provide necessary calculations of adjective rating, staffing levels, or decision support module outputs outside of WIMS. If assistance is required, then contact your appropriate FEMS Business Lead.

References to FEMS and WIMS throughout NWCG training and publications documents will be updated to reflect this change through our standard update processes.

Background: The Oracle licenses that are part of the WIMS architecture will expire on October 1, and it is not functionally feasible to migrate WIMS from Oracle to an approved platform. The transition has been planned for multiple years as FEMS has been in planning and development since 2018, but recent events have compressed the transition timeline. There is uncertainty about the IT funding available to continue FEMS development.

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