NATIONAL WILDFIRE COORDINATING GROUP

FENC Memorandum 26-001

February 10, 2026

TO: Members of the Fire Behavior, Fire Danger, Fire Weather, and Fire Environment Continuing Education Subcommittees

FROM: Nick Nauslar, Chair, Fire Environment Committee (FENC) NAUSLAR.NICHOLAS.JOHN.1516319123 Digitally signed by NAUSLAR.NICHOLAS.JOHN.1516319123 Date: 2026.02.10 15:56:18 -07'00'

SUBJECT: FEMS Calibration of NFDRS Parameters

Purpose: This memorandum describes calibration process and requirements for any of the National Fire Danger Rating System (NFDRS) version 4 sub models in the Fire Environment Mapping System (FEMS).

Issue/Action: All units looking to calibrate any of the sub-models within FEMS will be required to follow the process outlined below. This applies to the live fuel moisture, drought, fuel model, and NFDRS catalogs. Currently, only users with FEMS administrator privileges will be able to make adjustments to catalogs.

- Must be agreed upon at the interagency level and have the need for calibration documented.
    - Must have an implementation plan in place.
- Must involve a scientific organization such as a university or affiliate, state or federal research station, etc…that can brief report or analysis to demonstrate the need for change, provide a testing environment, and indicate feedback loops.
- Must define the scalability of the calibration and fit the scope of fire danger applicability.
- Needs reviewed documentation that can be publicly available of the methods used for calibration.
- Provide all documentation and the implementation plan to a FEMS administrator to verify all steps have been taken after which the FEMS admin will apply changes to catalogs.

Background and Coordination: Historically, weather inputs and fire danger have been managed at the local level with individuals managing all aspects of the fire danger system. As NFDRS has evolved and become a fully automated system it allows for fire danger outputs within FEMS to be calculated and stored for the entire period of record for a station and available to all users through multiple viewing and download options FEMS Website. Now when station catalogs are adjusted it impacts the entire period of record along with all future fire danger calculations. The need for repeatable analysis and versioning of datasets requires a change management process for station catalogs and the calibrations applied to any of the sub (e.g., live, dead, or drought) models or the system as a whole. Since there are operational interagency consequences of fire danger data changes in FEMS, even calibration needs to follow an established research to operations process.

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Distribution:

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