
**Preparedness:
Fire Department Perceptions
of Wildland-Urban Interface,
Forest Health and Fire
Ecology in Connecticut**

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The Issues



**Wildfire as a
Natural
Ecological
Process**



**Housing and
Industry
(Growth and
Density)**



**Fire Ecology and
Forest Health**



**Connecticut Fire
Departments
Facing New
Challenges**



**Are We
Prepared?**

Current Perceptions

Are Connecticut fire departments aware of the classification and growing threat of wildland-urban interface/intermix, fire ecology, and forest health as they relate to preparedness within their jurisdiction?



The Study

- **Data**
 - USFA National Fire Department Registry
 - Homeland Infrastructure Foundation-Level Data
 - Radeloff et al., 2023 WUI Classifications
- **Sample Size**
 - n = 111, random selection
 - 132 surveys returned, 125 fully completed
- **25 Questions via Qualtrics Platform**
 - Demographics
 - Wildland-Urban Interface/Intermix
 - Forest Health
 - Fire Ecology
 - Preparedness Perceptions



U.S. Fire
Administration

National Fire Academy



Findings

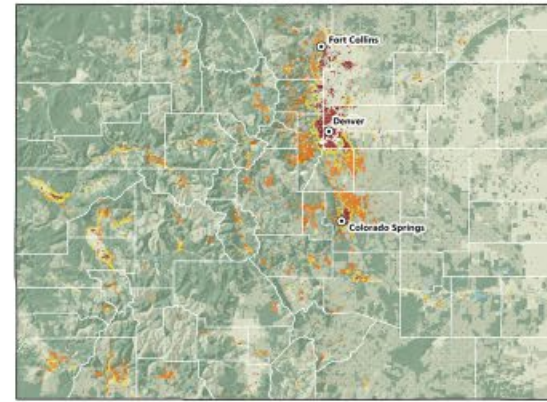
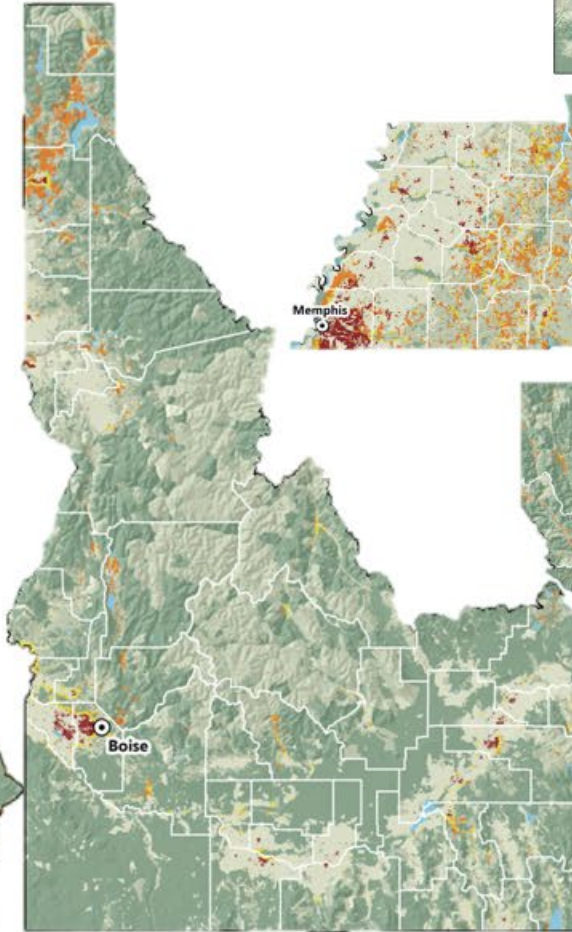


Wildland-Urban Interface/Intermix in the U.S.

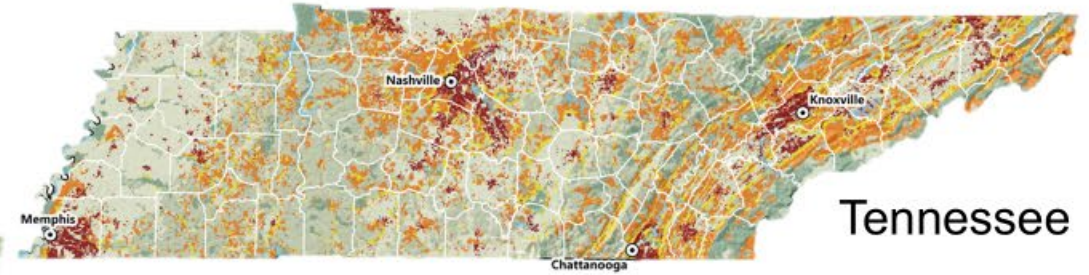
California



Idaho



Colorado



Tennessee



Montana

Wildland-Urban Interface (WUI)

- Interface
- Intermix

Non-WUI Vegetated

- No housing
- Very low housing density



Non-Vegetated or Agriculture

- Low and very low housing density
- Medium and high housing density
- Water




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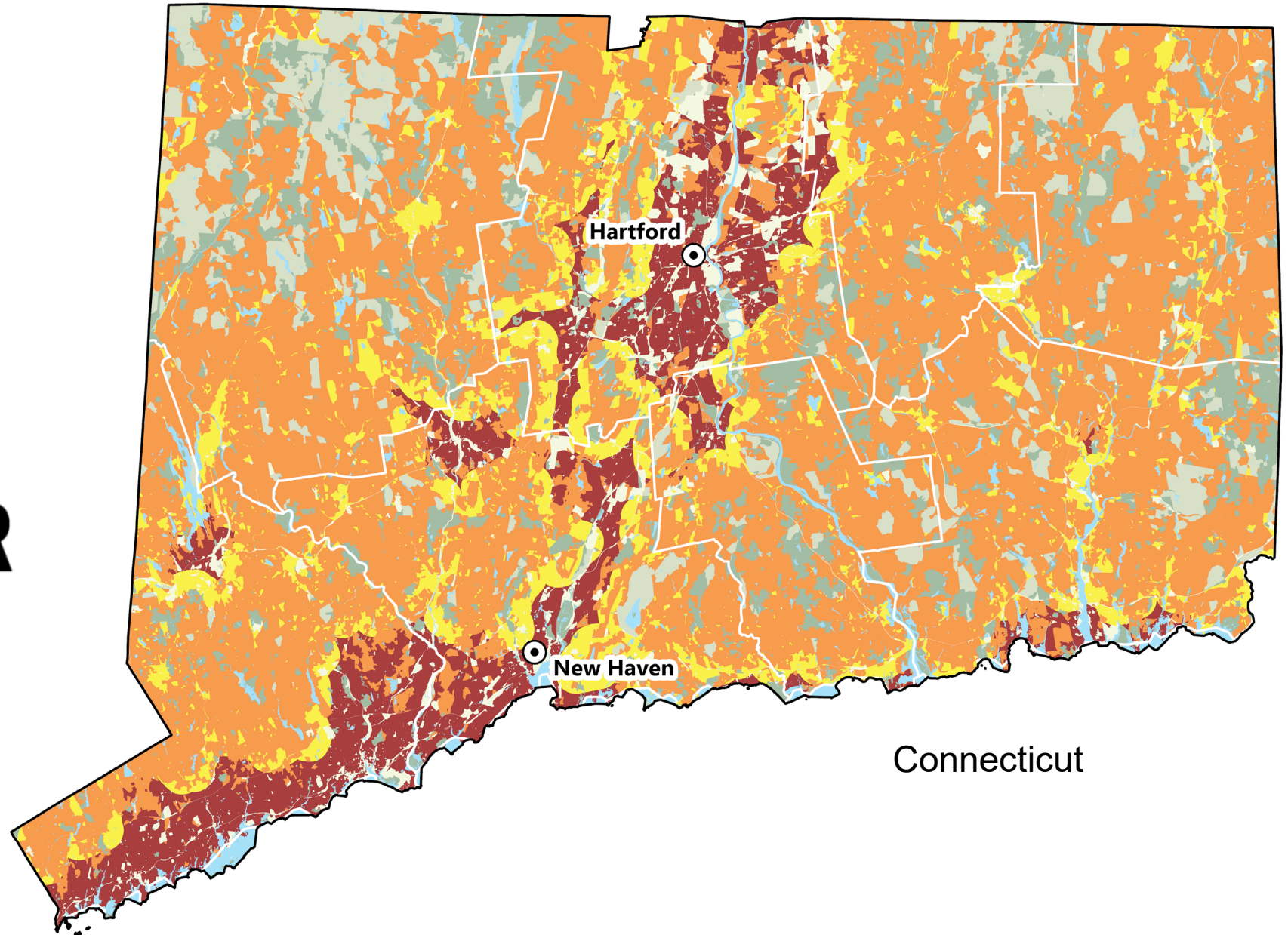
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Connecticut WUI GIS Viewer



CLEAR



Radeloff, Mockrin, M.H., et al. 2023. *The 1990-2020 wildland-urban interface of the conterminous United States – geospatial data* (4th edition). Forest Service Research Data Archive.



Breakthroughs



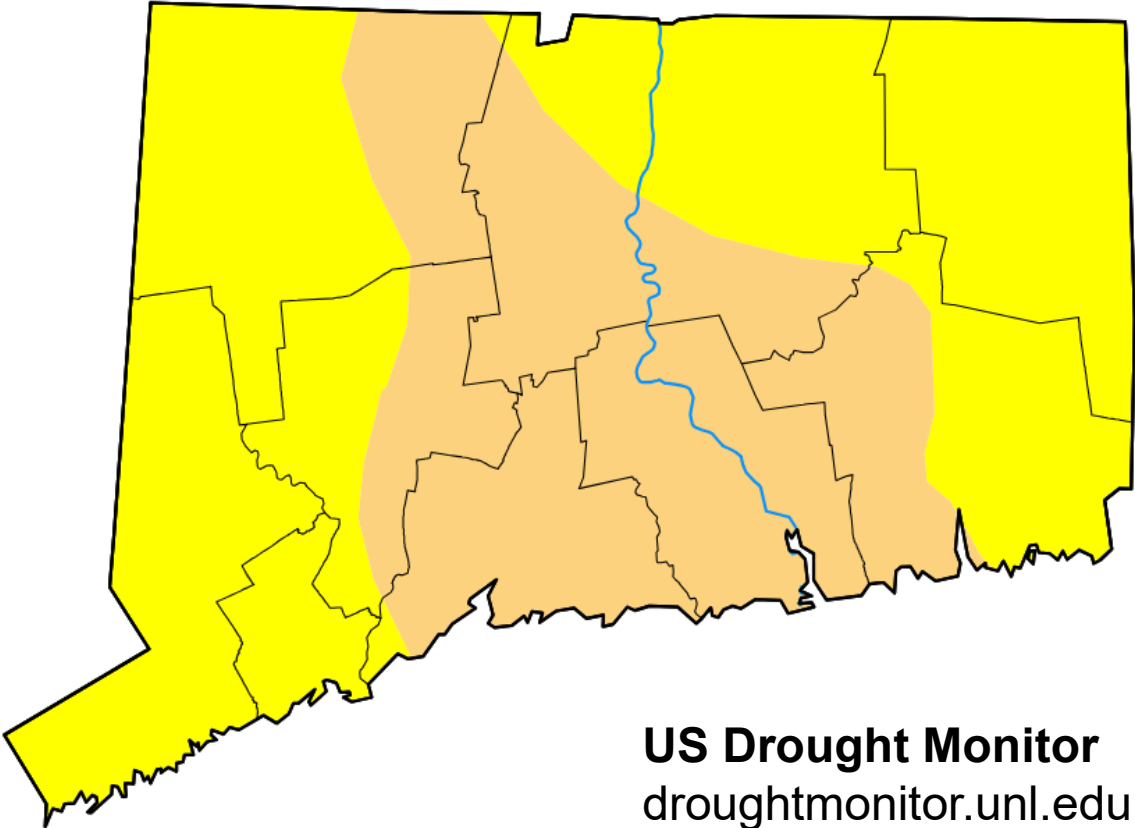
- Forest Health Changing
- Fuel Availability and Distribution Increasing
- Attention to Risk Identification/Mitigation in Interface/Intermix
- Fire Frequency, Extended Duration Operational Periods Increasing
- Training, Policies and Guidelines for Interface/Intermix
- Community Engagement for Risk Reduction

Recommendations For Action



- Adopt a formal definition of wildland-urban interface/intermix that is used across Connecticut
- Develop policies and procedures based on risk of fire occurrence
 - Departments without interface/intermix must prepare for mutual aid/extended operational periods
- Conduct training specific to wildland-urban interface/intermix
- Develop relationships between fire departments and natural resource/agricultural experts
- Tailor and implement community engagement through risk management and mitigation programs
- Prepare now for impending significant changes to fire frequency and intensity in the wildland-urban interface/intermix

Are We Ready?



US Drought Monitor
droughtmonitor.unl.edu

Map released: Thurs. March 5, 2026

Data valid: March 3, 2026 at 7 a.m. EST

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data