



Landscape Scale Condition Class Assessment

Integrating Fire Regime and Condition Class Assessment in Fire Management Planning

4/16/2003

Fire Regime
Condition Class

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FRCC in Fire Management Planning

- FRCC in Fire Program Analysis
 - Budget and program evaluation
- Key elements of FRCC-
- How they fit in fire management planning-
- Benefit to program management and decision making-



3 Levels of FRCC scale

- Project Level: Site specific
Field Guide Assessment Tool
- Mid Scale: 30 meter or 90 meter,
Landfire- 30 meter data, 10-100 ac
Local Data- more ground truthing,
10-100 ac; FMU Scale
- Coarse Scale: 1 Km pixel,
1000ac>, uses different methods



Fire Planning Analysis

(Interagency Fire Budget Tool)

- Land Management Plans –
 - Evaluating LMPs and RMPs
- Assess current condition and define the desired future condition.
- Identify the differences between current condition and desired future condition.



Fire Planning Analysis (Interagency Fire Budget Tool)

Fire Management Plans-

- Specify programmatic goals and objectives.
- Specify program approaches or strategies for managing fire.
- Define measures of accomplishment over a relevant time period (performance measures). **Condition Class Assessments will be one of these measures!**



FRCC in Fire Management Planning

- Key Elements –

- Historic/Reference Conditions:

- Current Conditions:

- Condition Class

- Desired Condition:

- Condition we manage for



FRCC in Fire Management Planning

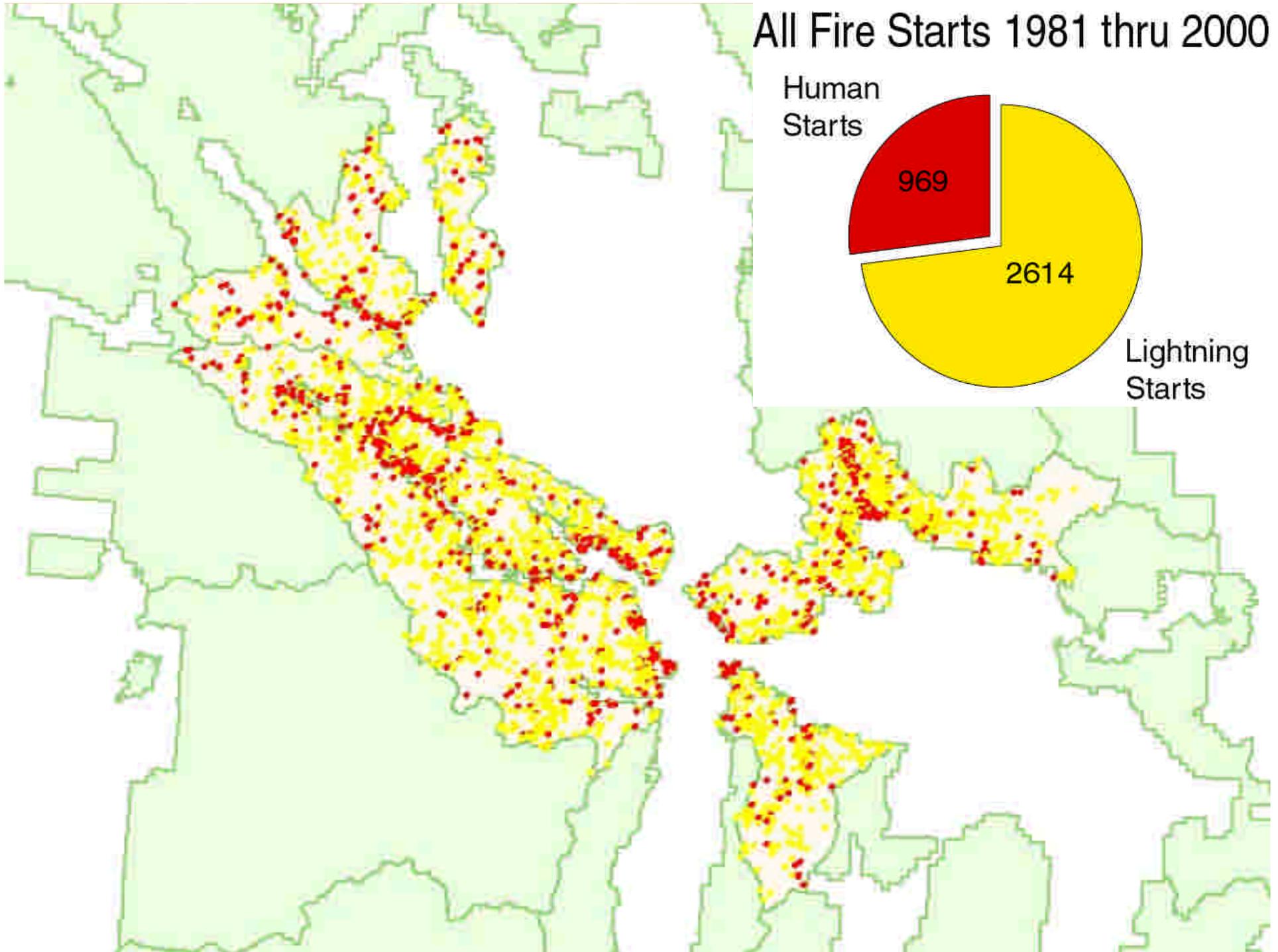
- Where do we document these elements within the FMP?
 - Section III: Wildland Fire Mgmt Strategies
 - Sub Section D: Description of Fire Management Units

FMU Descriptors

- Physical, biotic characteristics – (veg, soil, wildlife, cultural resources, etc)
- Strategic measurable objectives
- Management considerations/criteria – (air quality, T&E, WUI , etc)
- **Historic role of fire – (frequency regularity, severity, seasonality, patch size)**



All Fire Starts 1981 thru 2000



FMU Descriptors

- Wildland fire mgmt situation
 - Historical Wx
 - Fire season
 - Fuel characteristics
 - Fire regime alteration and Condition class
 - Control problems
 - Any other elements of the fire environment – values to be protected, etc.





Historic Conditions

Fire Return Interval –
(frequency/regularity)

- Severity – (ex. >80% replacement of dominant vegetation)
- Disturbance Patch Size Range – (ex. 5-500 ac)

This information is interpreted for assignment into one of five standard fire regimes*

Historic Fire Regime

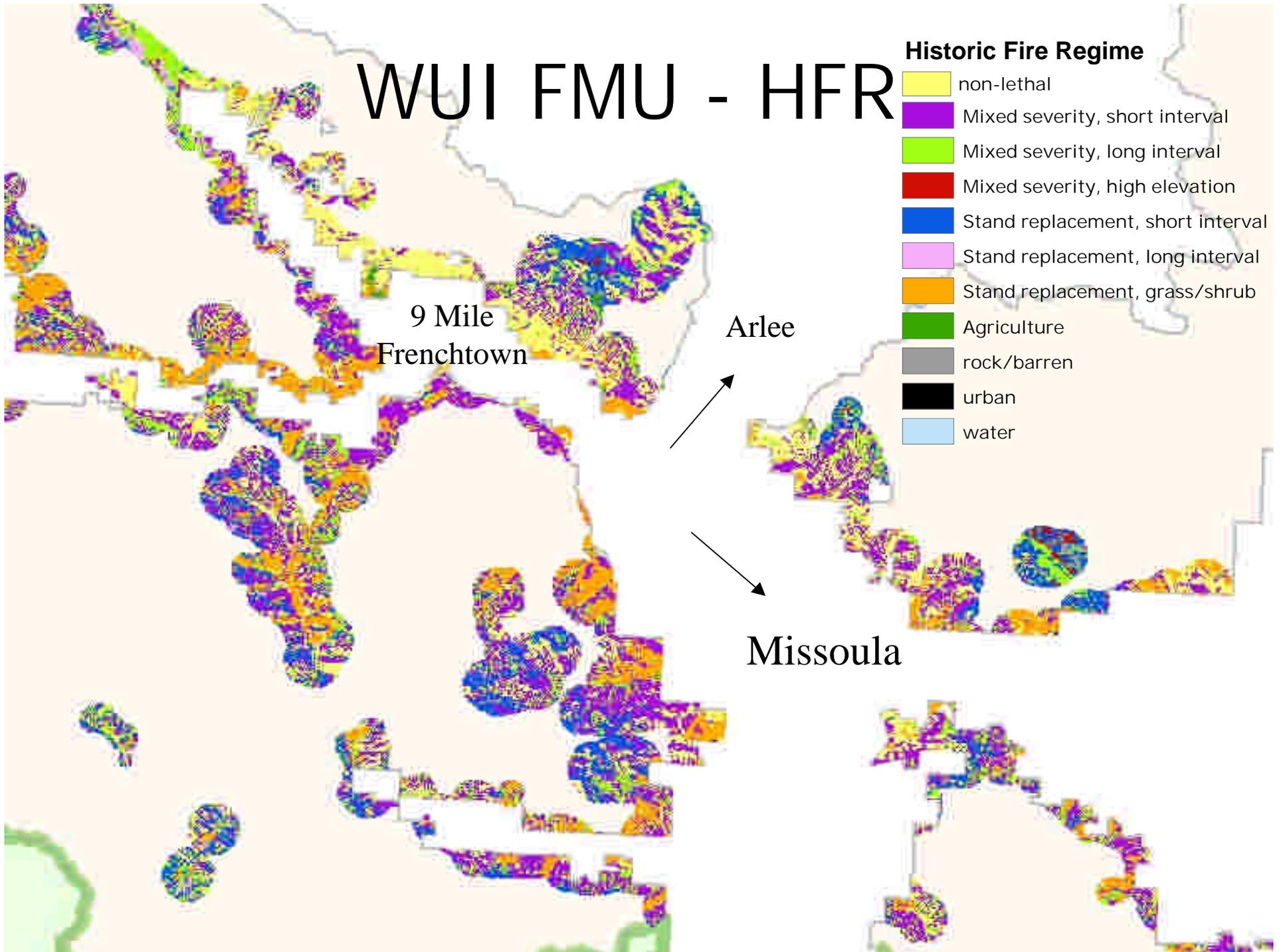
- Simply put:
 - Fire frequency and fire severity prior to settlement by Euro-Americans.



WUI FMU - HFR

Historic Fire Regime

- non-lethal
- Mixed severity, short interval
- Mixed severity, long interval
- Mixed severity, high elevation
- Stand replacement, short interval
- Stand replacement, long interval
- Stand replacement, grass/shrub
- Agriculture
- rock/barren
- urban
- water



Current Conditions

- Presence of Exotic Species
(Extent and dominance)
- Absence of historic native species
e.g: Loss of whitebark pine,
American chestnut, etc.
- Climate- changes that would shift
fire regime and ecosystem structure
and species composition



Current Conditions

- Current Fire Regime – (same elements as historic except focus is last 20 to 50 years)
- Current distribution of seral stages by plant community across the landscape
 - (% of landscape and patch sizes of various seral stages)





Condition Class

- Condition Class Guide provides:
 - Assistance in quantifying the degree of departure of the current condition from the historic condition
 - Uses the elements we have discussed for historic and current conditions



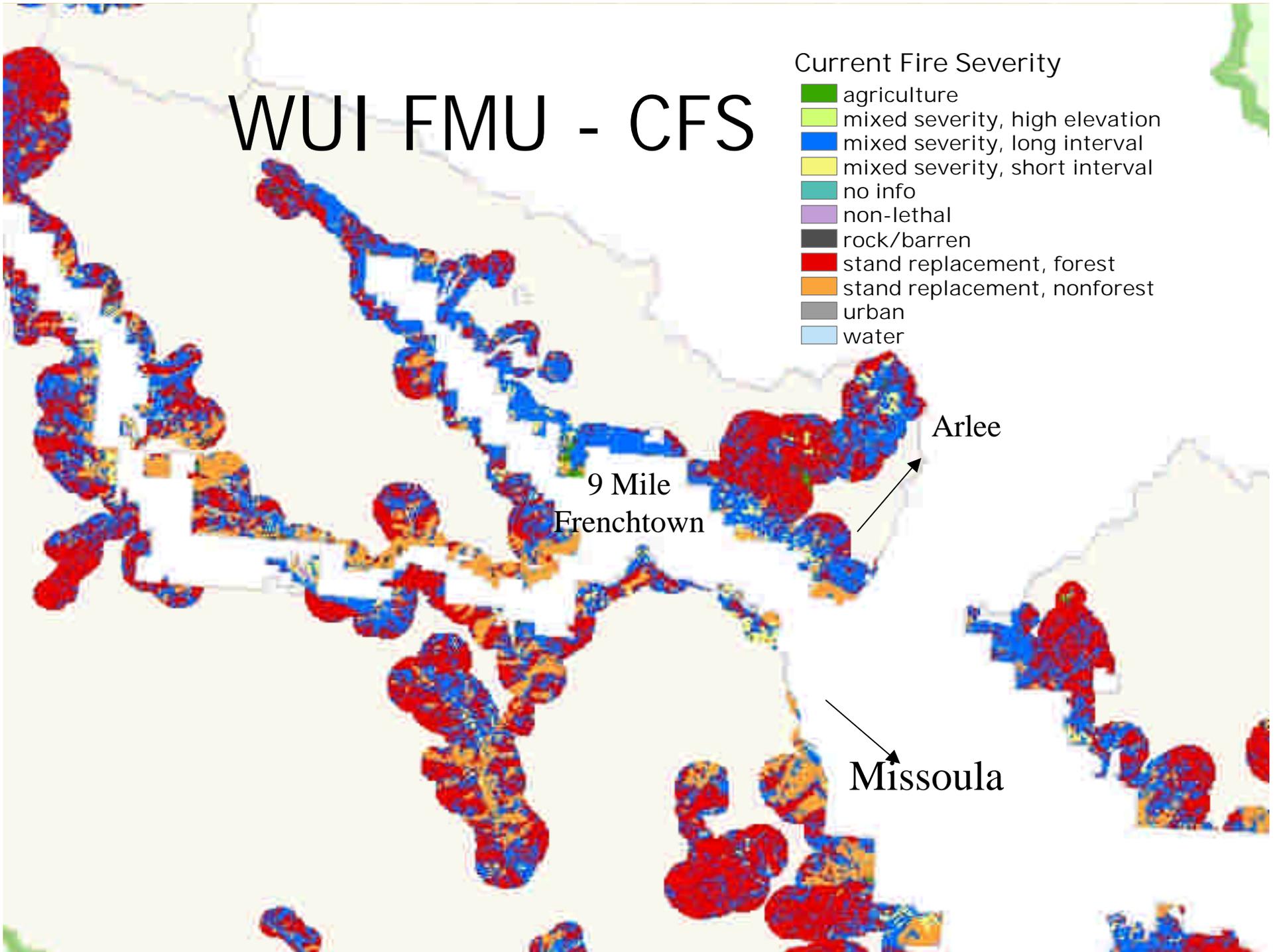
Current Fire Severity (attribute of current condition class and historic fire regime)

- Current fire severity (CFS) is an estimate of the relative fire severity if a fire were to burn a site under its current state of vegetation.
- In other words, how much of the over story would be removed if a fire were to burn today?

WUI FMU - CFS

Current Fire Severity

- agriculture
- mixed severity, high elevation
- mixed severity, long interval
- mixed severity, short interval
- no info
- non-lethal
- rock/barren
- stand replacement, forest
- stand replacement, nonforest
- urban
- water





Fire Regime Condition Class

Fire-regime condition class (FRCC) is an approximation of ecosystem departure resulting from a change in fire regimes.

- Species composition,
- spatial patterns,
- fuels,
- likely fire behavior,
- and subsequent fire effects have changed due to fire exclusion and vegetation manipulation.



Fire Regime Condition Class

- The greater the departure, the greater the probability that the status of some ecosystem component will degrade if a fire occurs.
- Fire effects in CC 2 and 3 are typically outside the historical range of variability.

Condition Class Categories

1. Low-Departure:
Fire Regimes are within or near their historical range and the risk of losing key ecosystem components is low



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Fire Regime
Condition Class

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Condition Class Categories

2. Moderate Departure:

- At least one fire interval has been missed,
- Altered structure or composition exists,
- Or exotic species have altered native species composition.
- There is a moderate risk of losing key ecological components should a fire occur.



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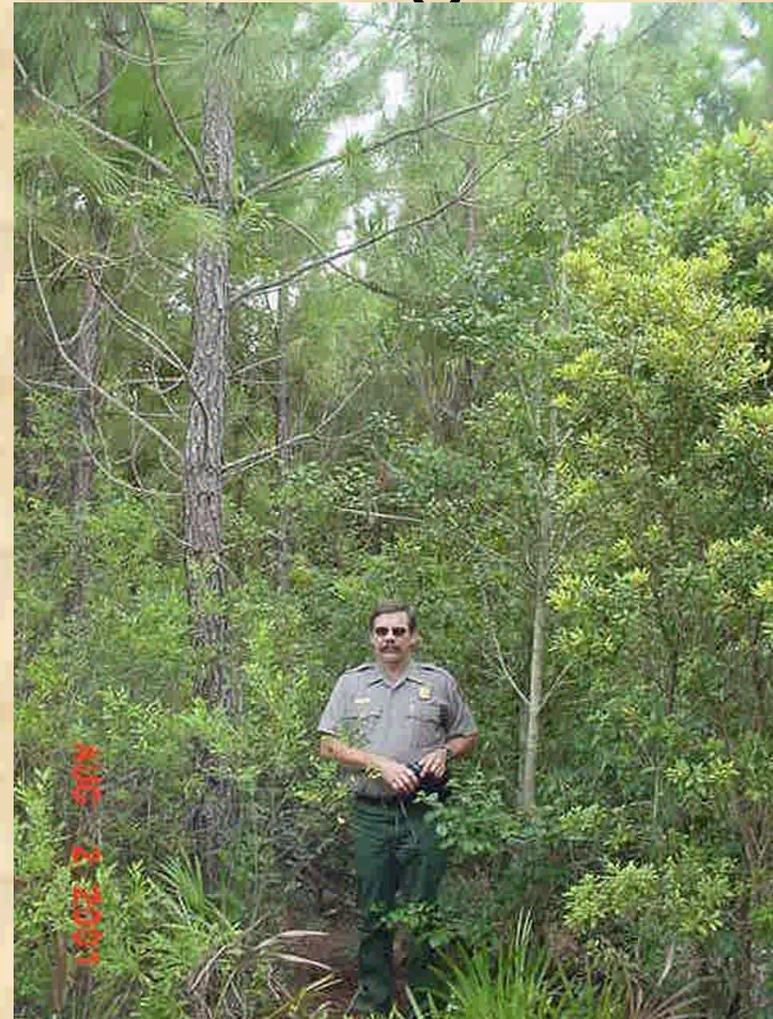
Fire Regime
Condition Class

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Condition Class Categories

3. High Departure:

- Several fire intervals have been missed,
- Altered structure or composition exists,
- Or exotic species have substantially altered native species composition.
- There is high risk of losing key ecosystem components should a fire occur



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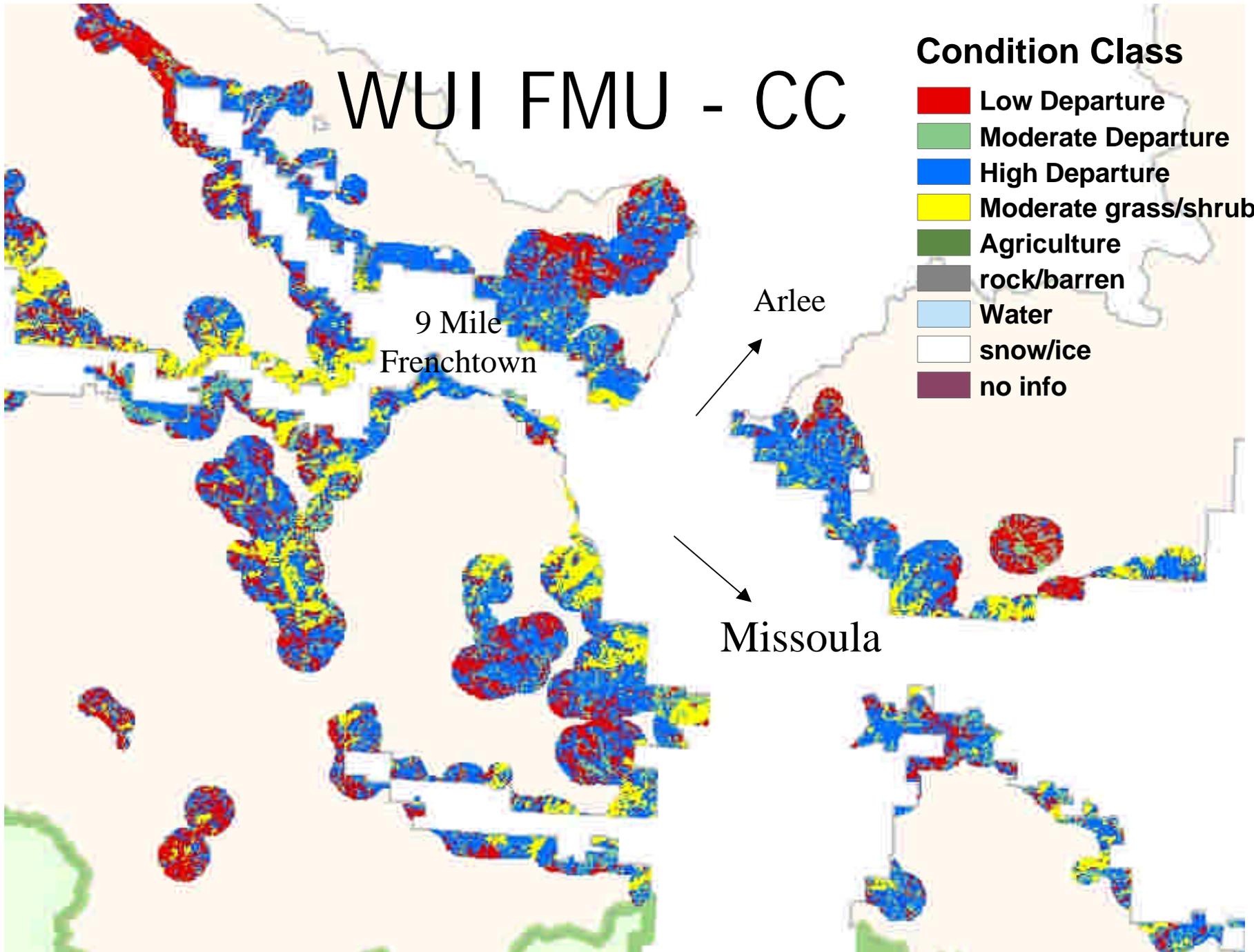
Fire Regime
Condition Class

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WUI FMU - CC

Condition Class

- Low Departure
- Moderate Departure
- High Departure
- Moderate grass/shrub
- Agriculture
- rock/barren
- Water
- snow/ice
- no info



Conclusion

- FRCC helps us answer more than the fire regime condition class question...
- It's valuable in assessing the magnitude of our workload; it helps set priorities for scarce resources.



Conclusion

- Fire analysis for good decision making and collaborative solutions.



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Fire Regime
Condition Class

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