

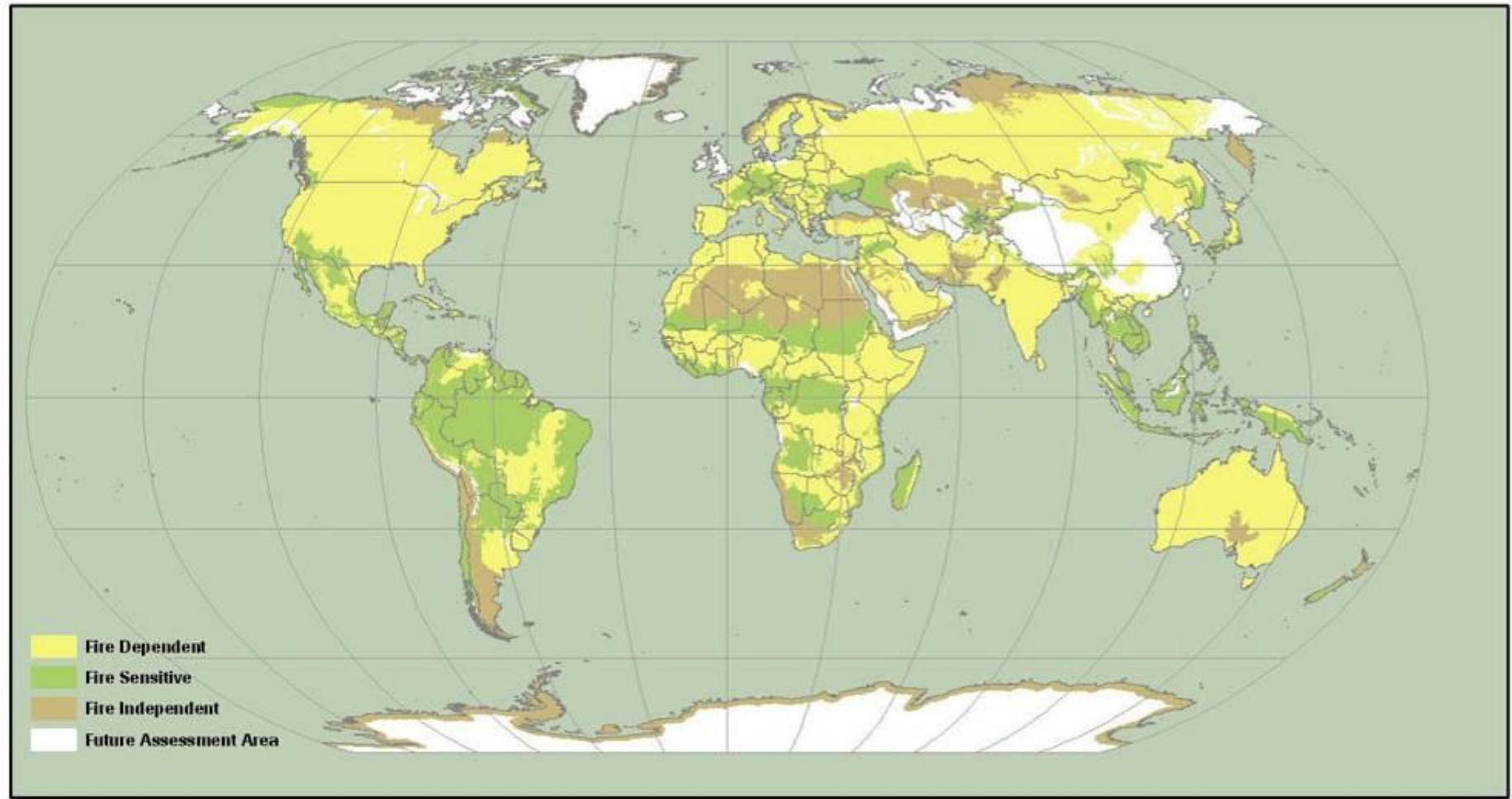
Fire and Biodiversity Conservation in the U.S.A.: Assessing Current Conditions and Predicting Future Trends

International Bushfire Research Conference

Kori Blankenship, Darren Johnson, Colleen Ryan, Jim Smith and Randy Swaty

to preserve the plants, animals and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive

global fire regimes





altered fire regimes



threaten biodiversity



Rapid Assessment

consistent & comprehensive maps &

data describing vegetation &

fire regimes across the U.S.

What is the state of fire regimes in
the conterminous US?

Are the scale of restoration efforts commensurate
with the scale of the problem?

overview

Data

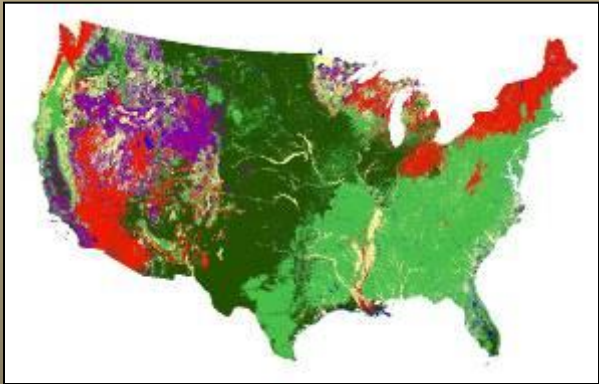
Methods

Current Conditions

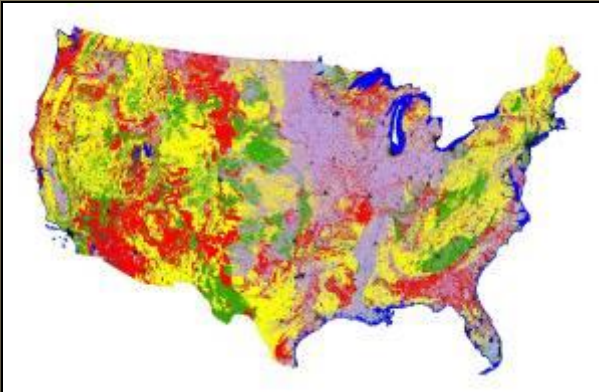
Future Trends

Conclusions



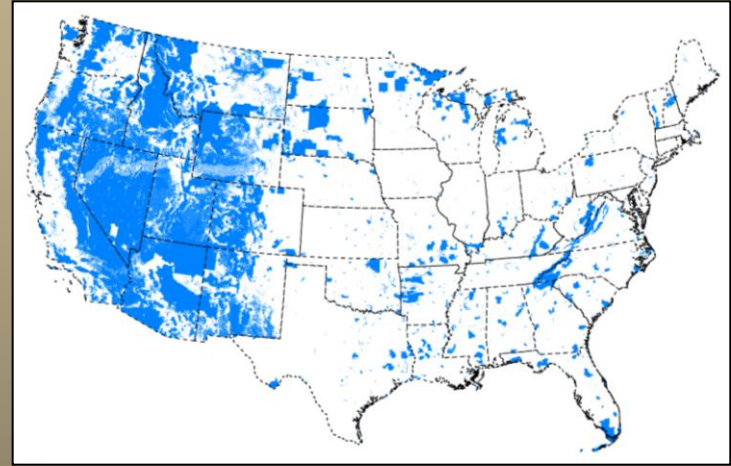


reference
fire regimes

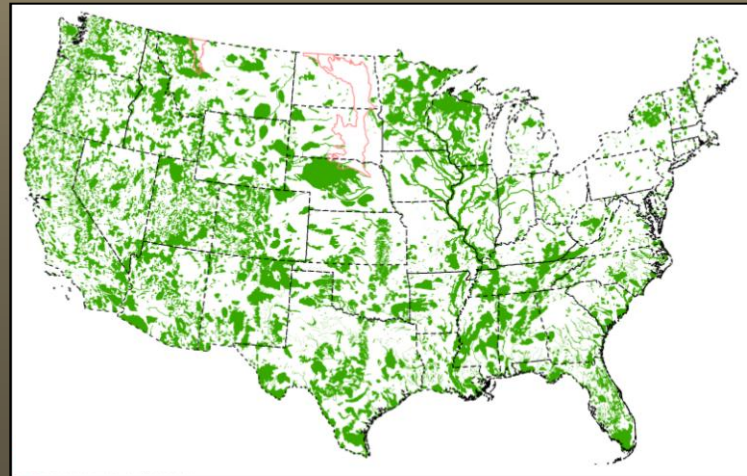


fire regime
condition class

federal lands



conservation areas





data

reference



fire regime groups (frg)

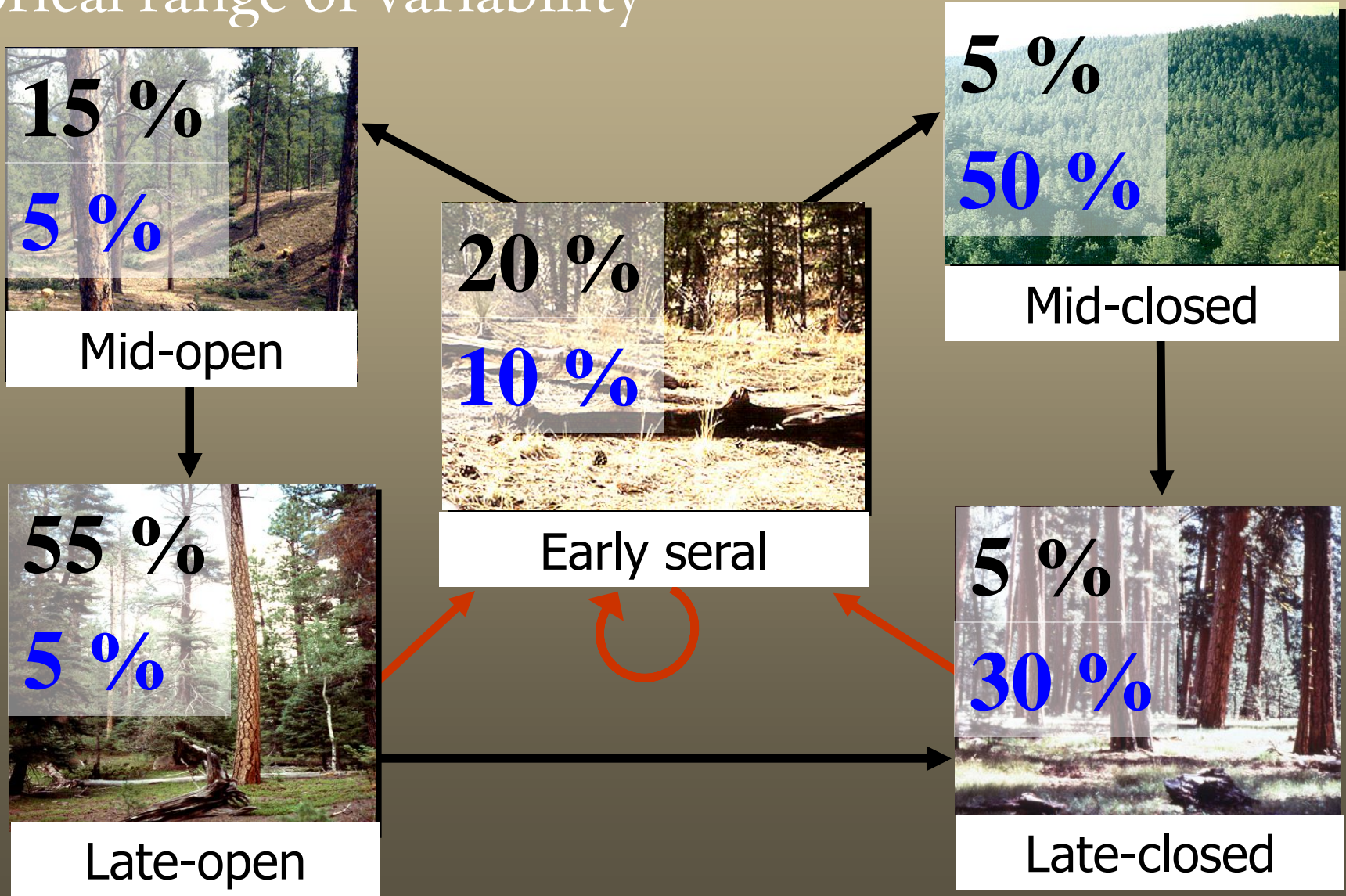
fire regime group	frequency (years)	severity
1	0-35	low - mixed
2	0-35	replacement
3	35-200	low - mixed
4	35-200	replacement
5	200+	replacement

fire regime condition class (frcc)



- FRCC 1: low/within historic range of variability
- FRCC 2: moderate departure
- FRCC 3: high departure

historical range of variability



fire regime condition class departure

- **vegetation characteristics**

 - species composition*

 - structural stages*

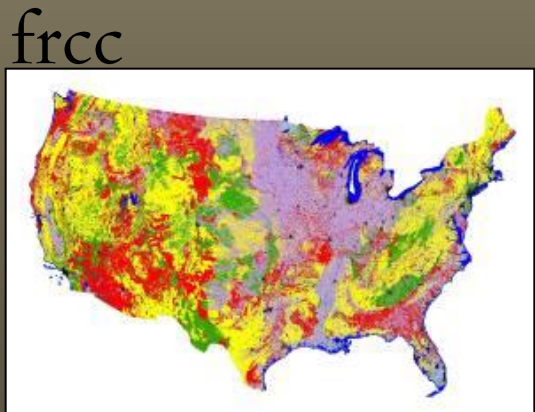
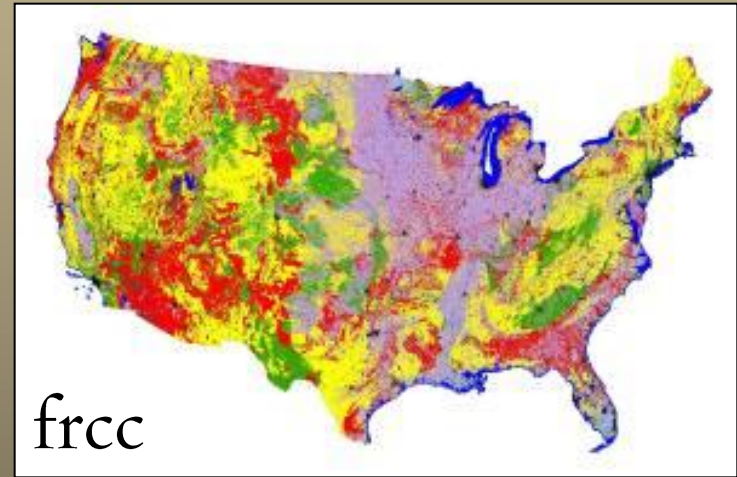
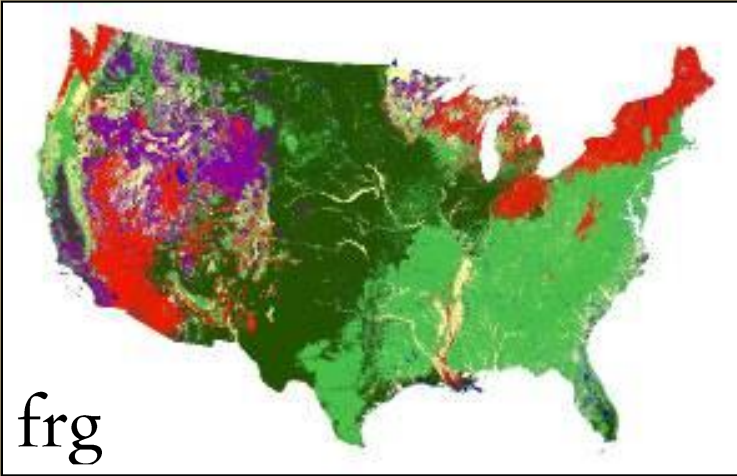
 - stand age*

 - canopy closure*

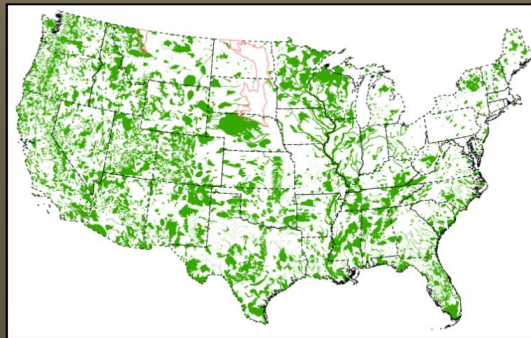
- **fire regime**



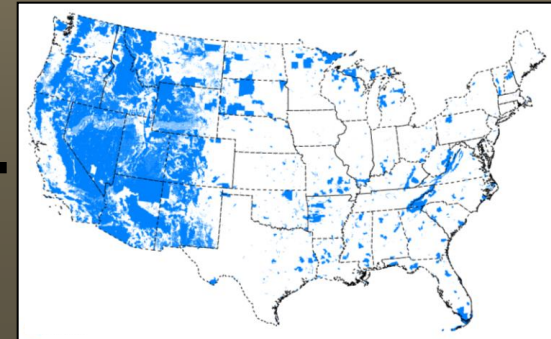
gis analysis



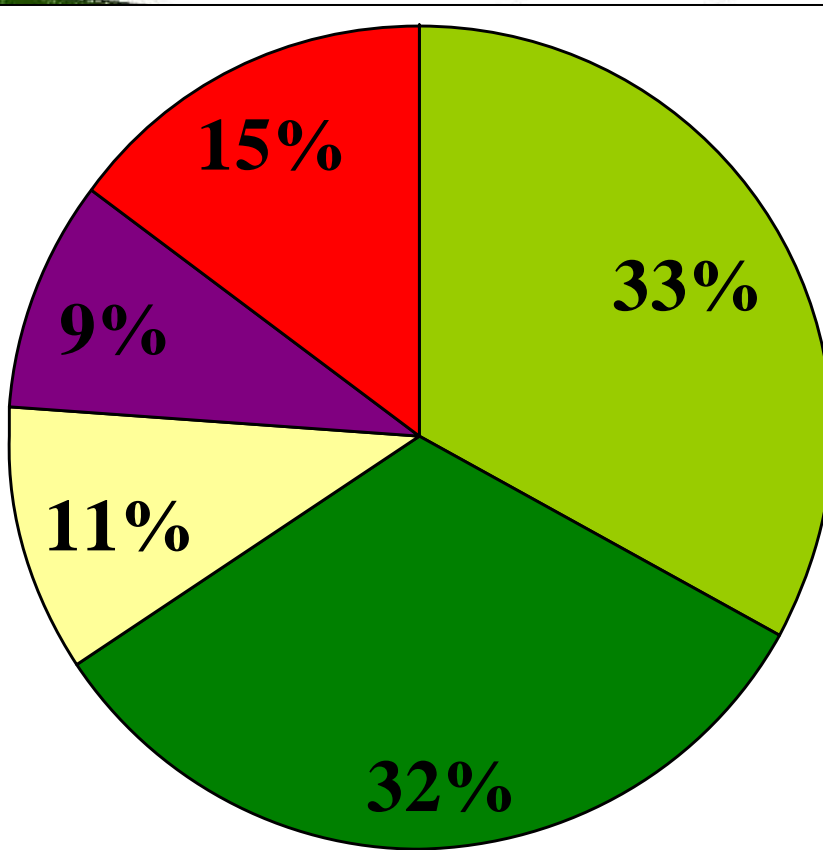
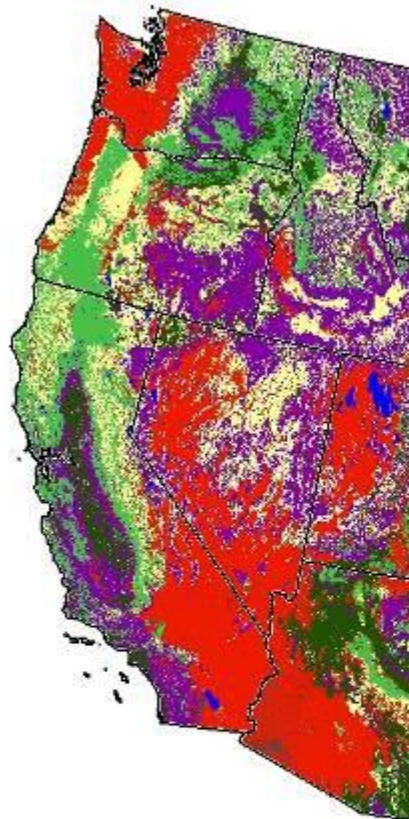
conservation areas



federal lands



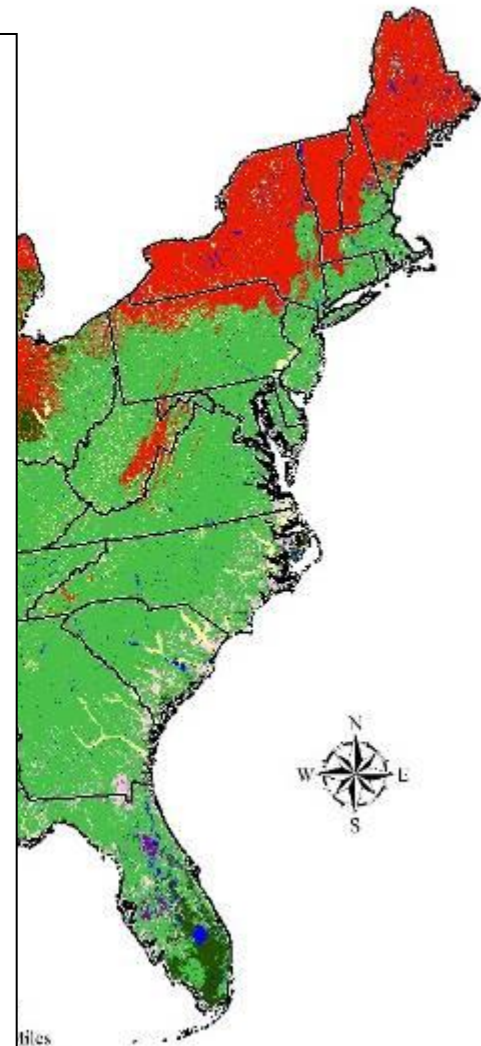
LANDFIRE Rapid Assessment
Reference Fire Regime Group



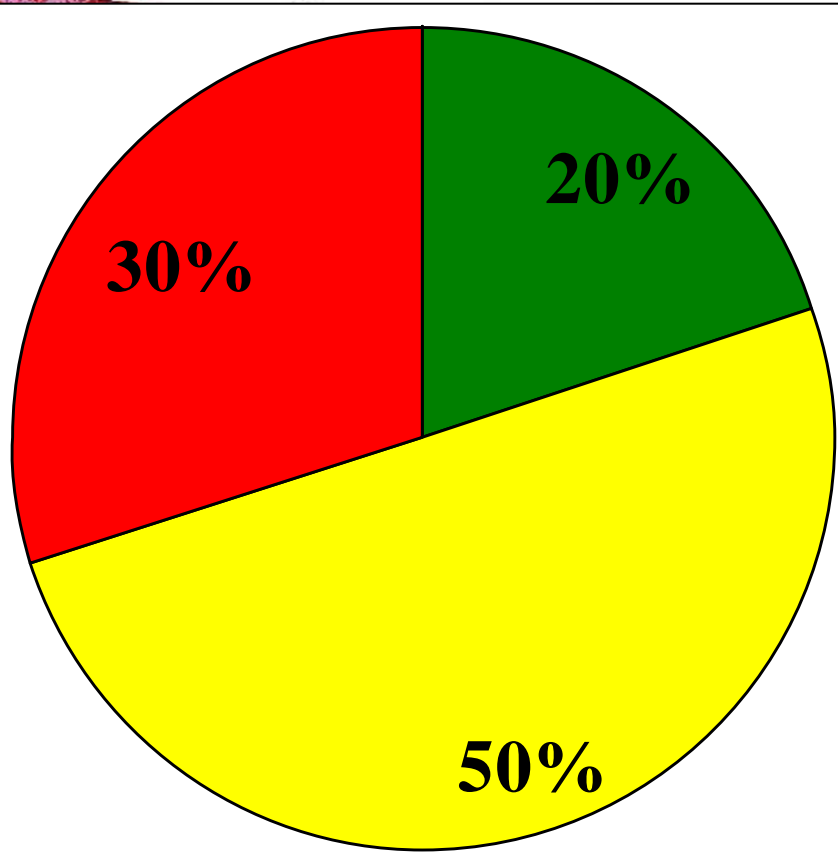
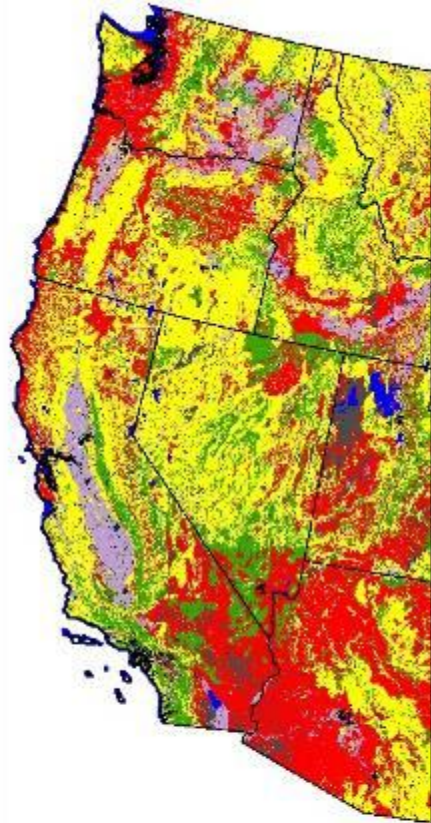
LEGEND

- Fire Regime Group I
- Fire Regime Group II
- Fire Regime Group III
- Fire Regime Group IV
- Fire Regime Group V
- Water
- Snow/Ice
- Barren
- Wetland
- Alpine
- Unclassified

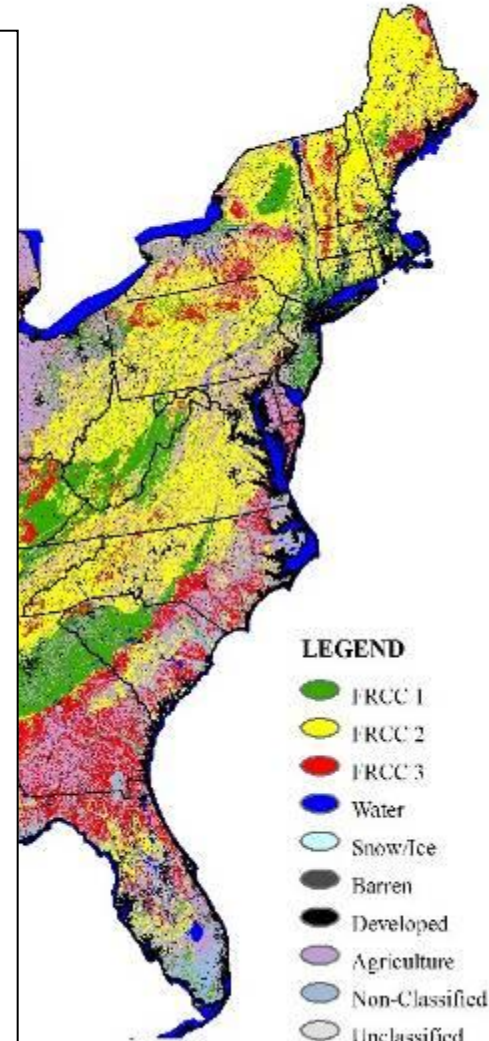
- FRG1
- FRG2
- FRG3
- FRG4
- FRG5



LANDFIRE Rapid Assessment
Fire Regime Condition Class



■ FRCC1 ■ FRCC2 ■ FRCC3



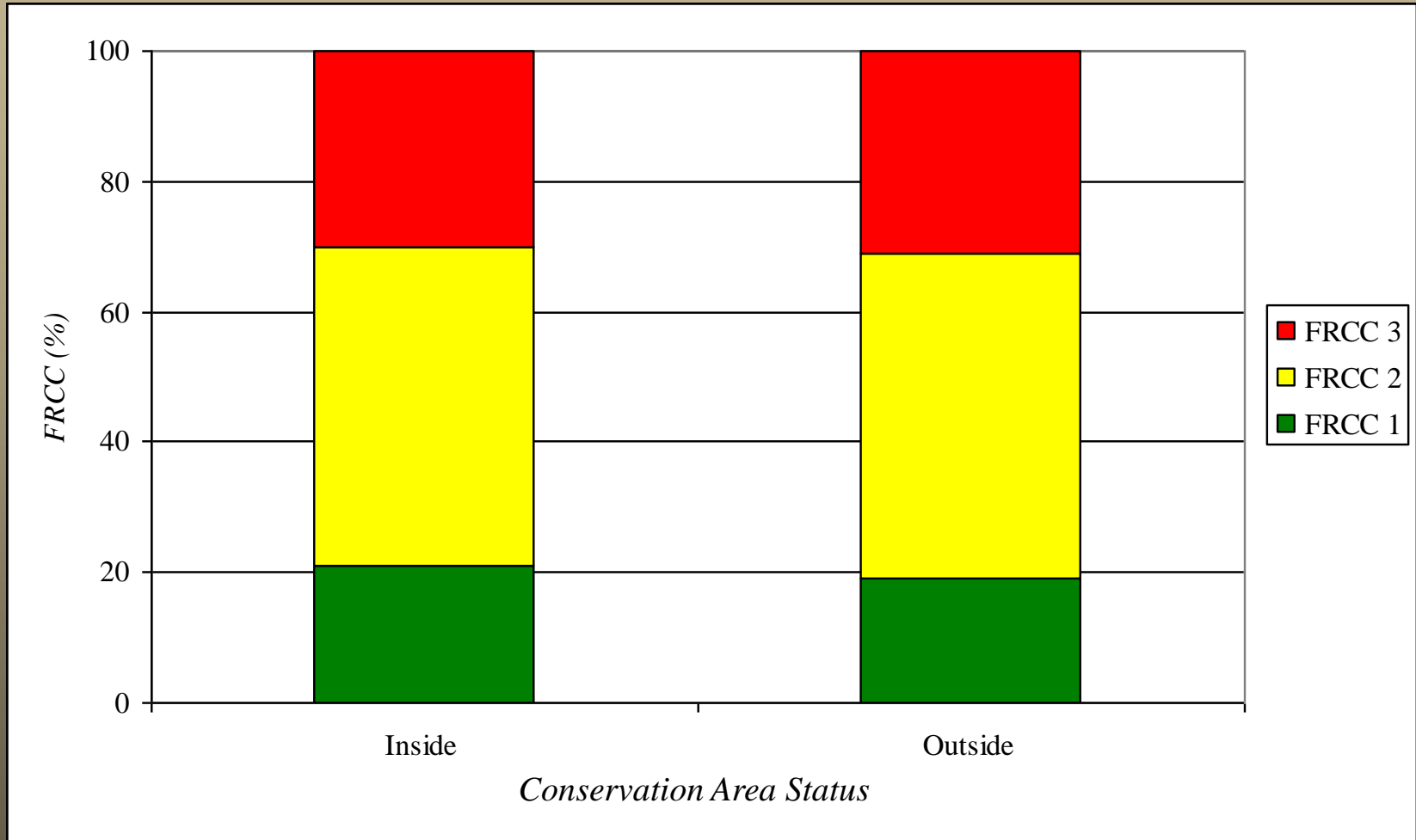
LEGEND

- FRCC 1
- FRCC 2
- FRCC 3
- Water
- Snow/Ice
- Barren
- Developed
- Agriculture
- Non-Classified
- Unclassified



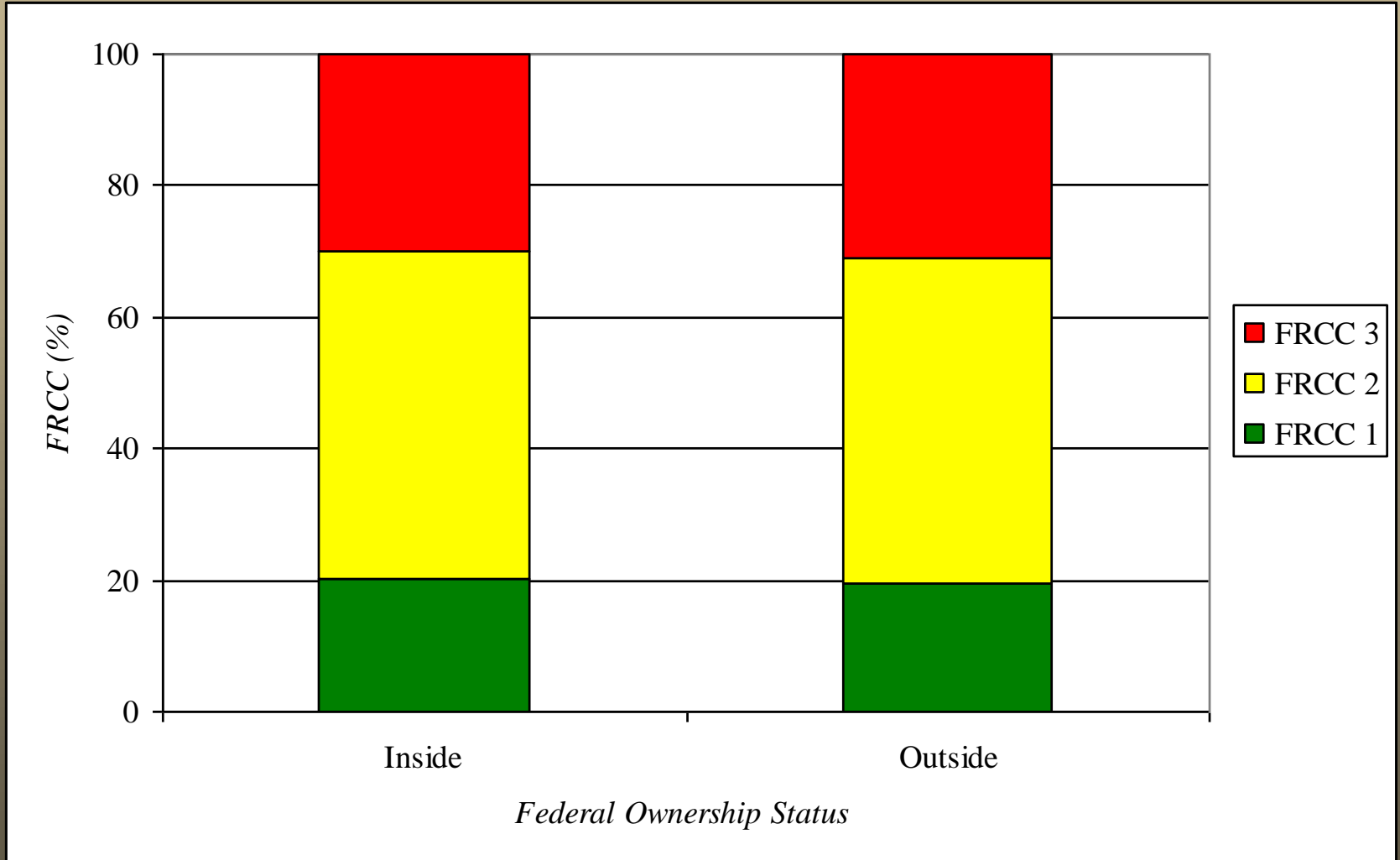
0 200 400 600

current conditions



FRCC Inside and Outside the Conservancy's Conservation Areas in the Conterminous U.S.

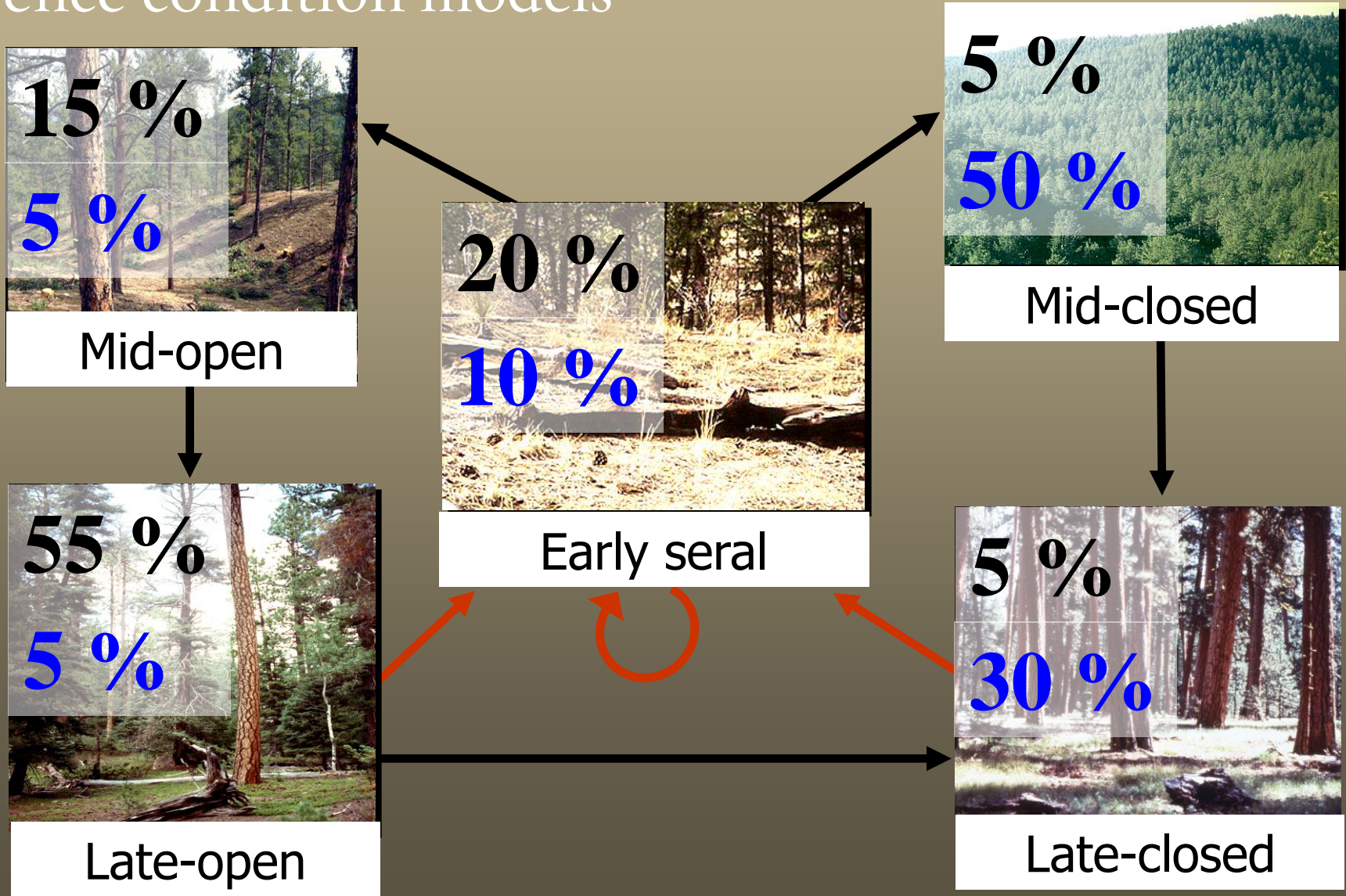
current conditions



FRCC Inside and Outside of Federal Lands in the Conterminous U.S.

future trends

reference condition models



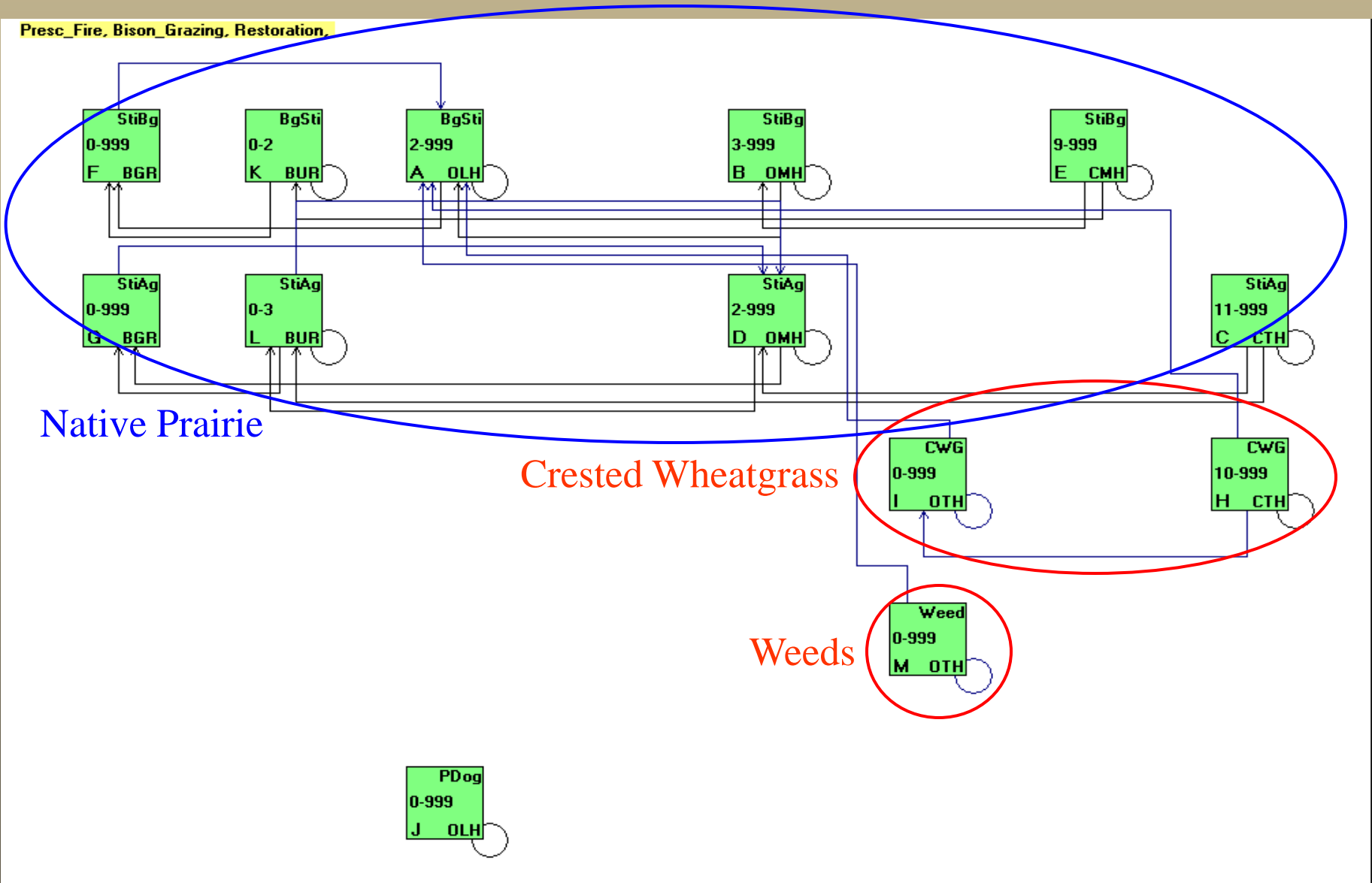
future trends



Grasslands National Park, Canada

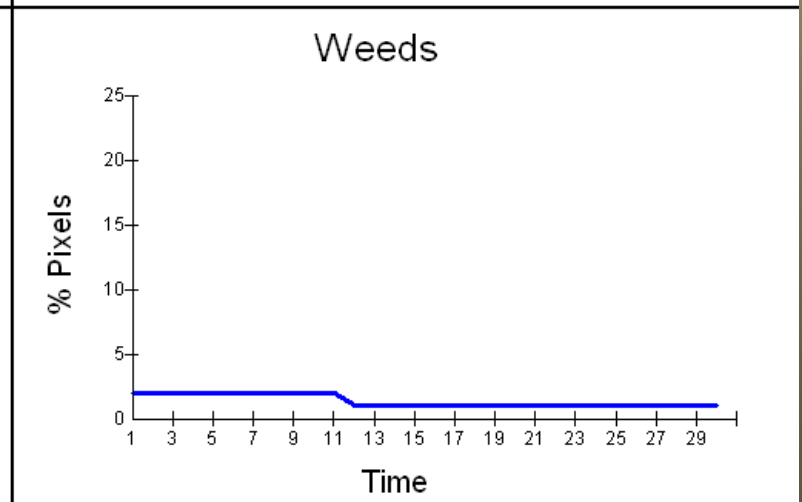
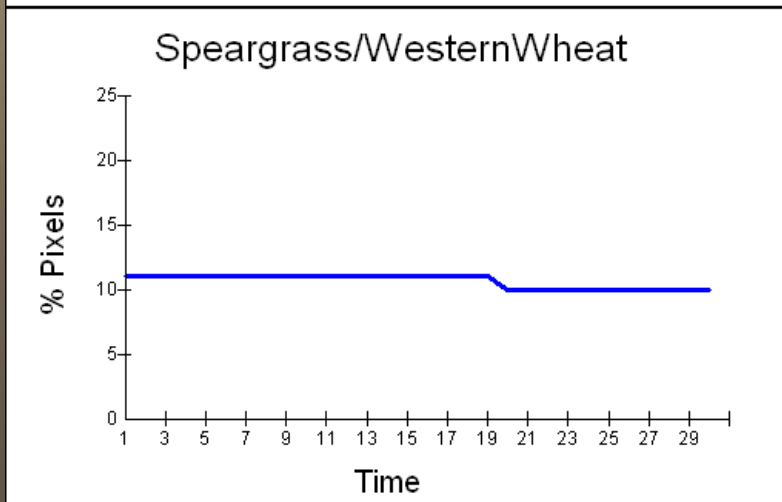
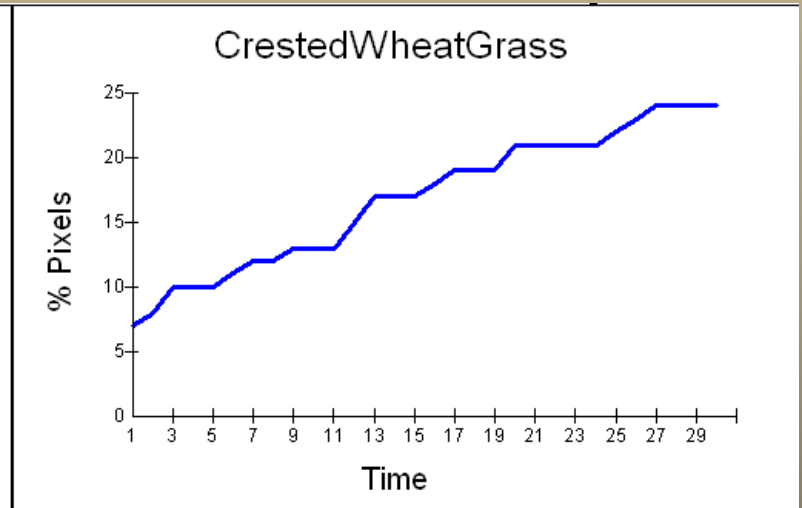
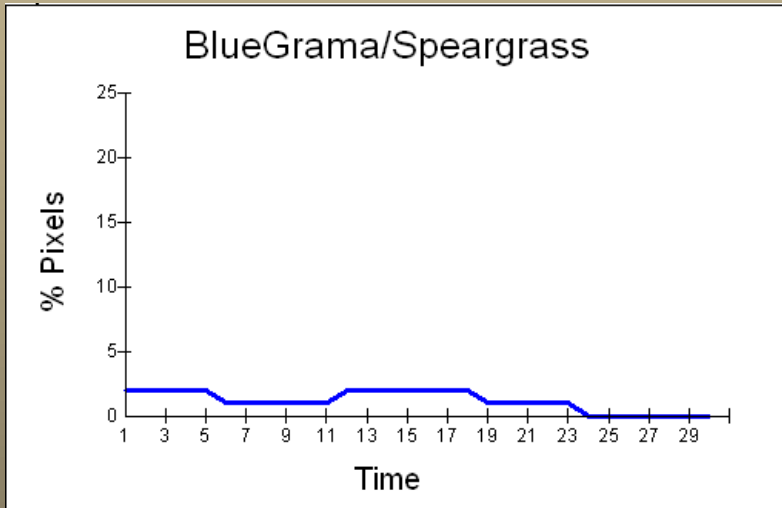
future trends

Presc_Fire, Bison_Grazing, Restoration,

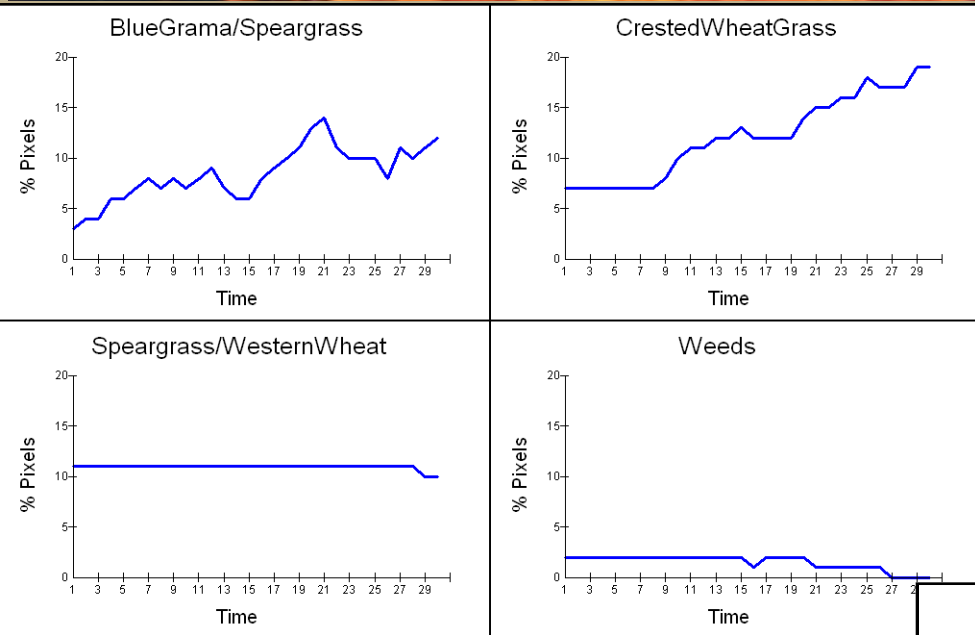


future trends

no management

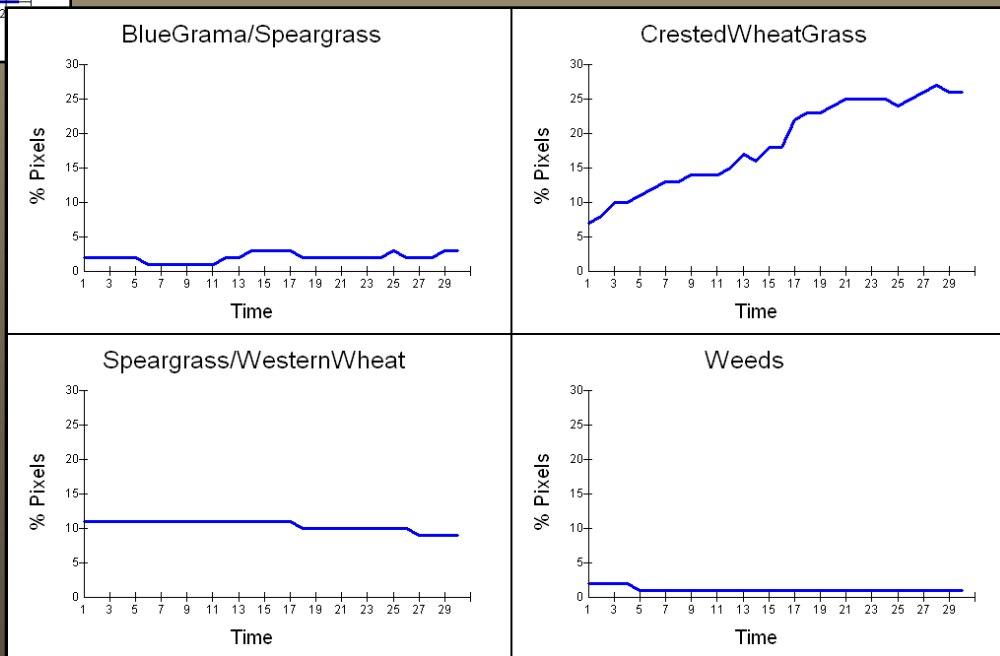


future trends



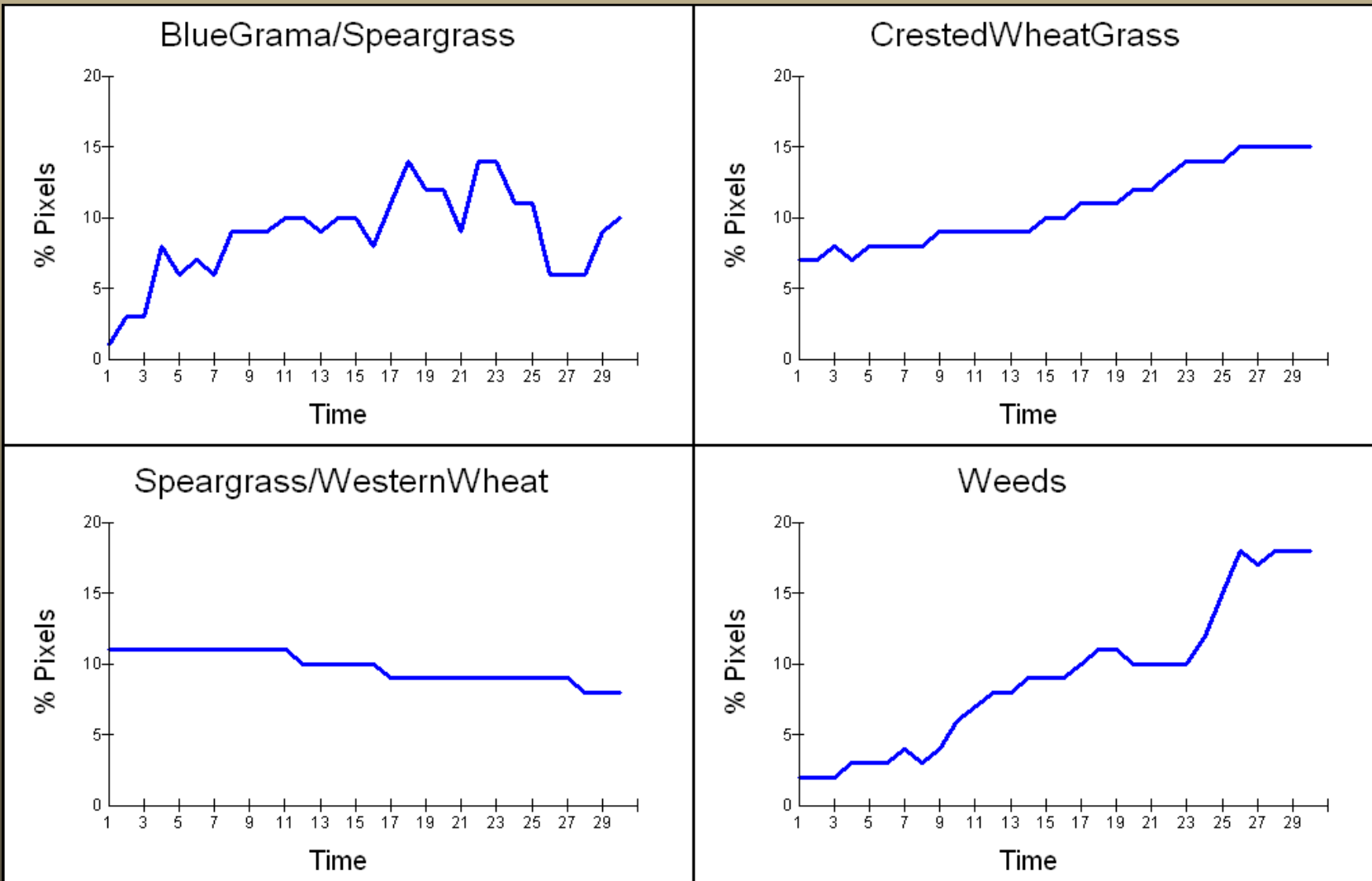
restoration

restoration + Rx fire



future trends

restoration + Rx fire + bison grazing



conclusions

frequent fire
regimes dominate the US

moderate to **high departure** across
80% of the US

no **great differences** in FRCC
inside and outside conservation areas or
federal lands

reference condition models help predict
future trends

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