

North Carolina Department of Agricultural & Consumer Services

North Carolina Forest Service

Forest Protection Chief

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Drought Effects on Forest Health

Currently:

Continuing impacts from *Ips* engraver Beetles:

- Opportunistic beetle that attacks stressed pines
- Winter aerial survey of <25% of state found ~150 significant spots totaling 77 acres
- Increased calls from public for dead pines
- Also seeing black turpentine beetles associated with *Ips*

Some wilt and mortality related to heat and drought

- Mostly trees with shallow root systems and trees growing in shallow soils



Drought Effects on Forest Health

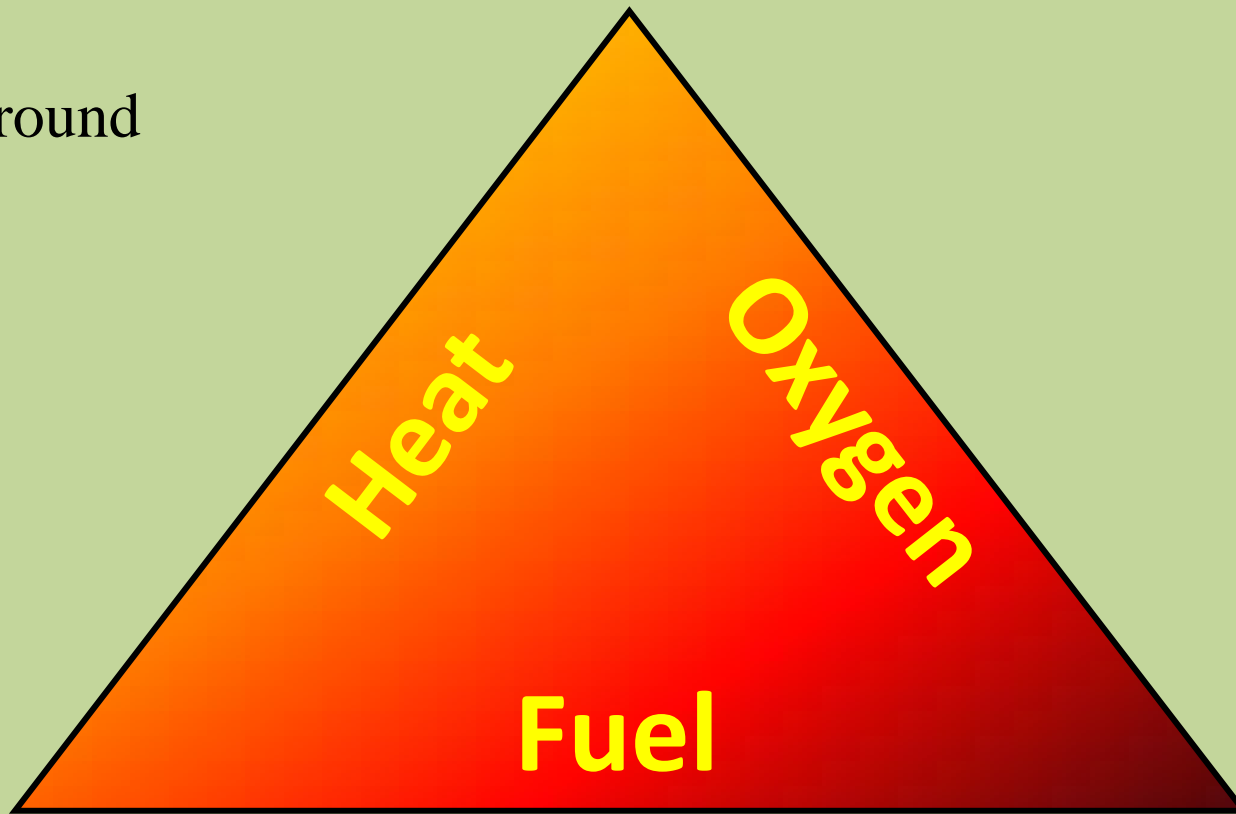
Also seeing:

- Increased opportunistic insect and disease activity contributing to oak (and other hardwood) decline
 - Hardwood borers
 - Hypoxylon canker
- Herbicide damage
 - Residual soil active herbicides on sandy soils affecting pines 3-4 years after application
- Reduced effectiveness of systemic insecticides due to decrease in water uptake
- Increase in sapsucking insects (scale and mites) attacking drought stressed trees

Fire Needs

Drought impacts fuel

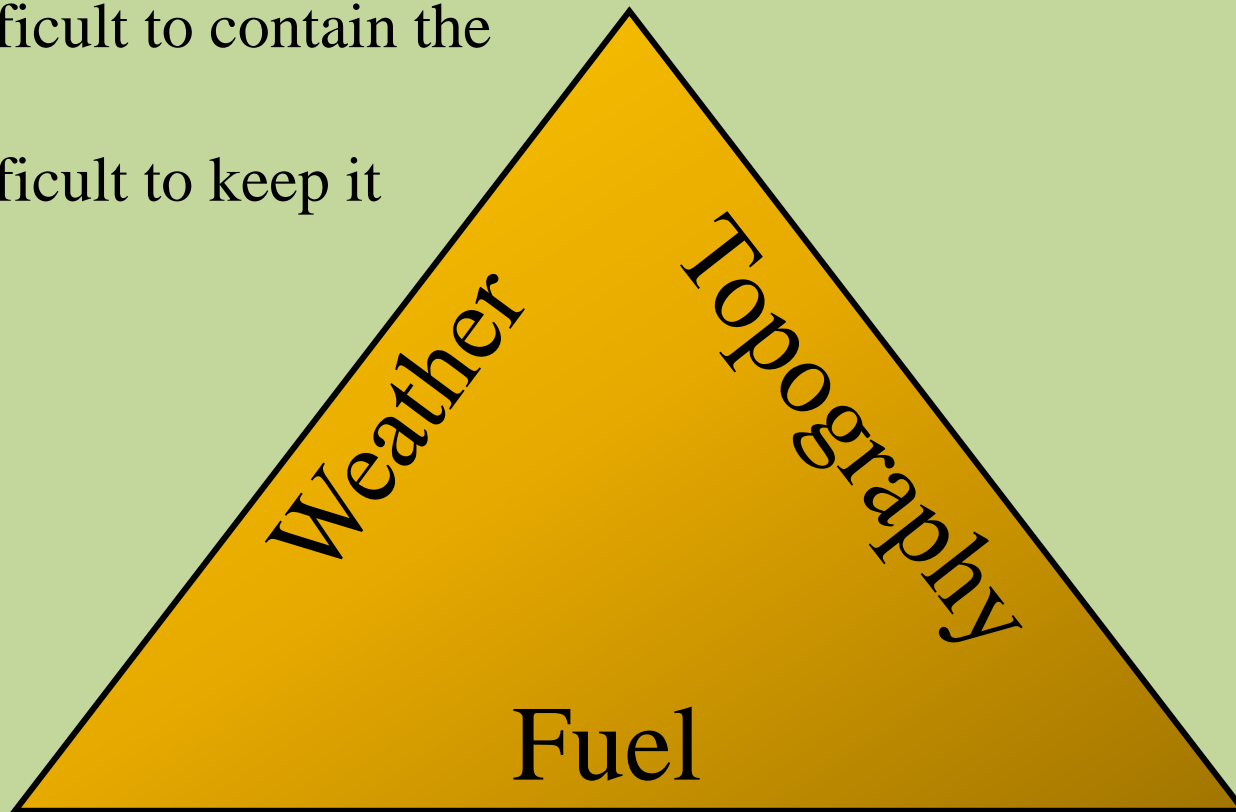
- Above
- Surface
- Underground



Wildland Fire Behavior

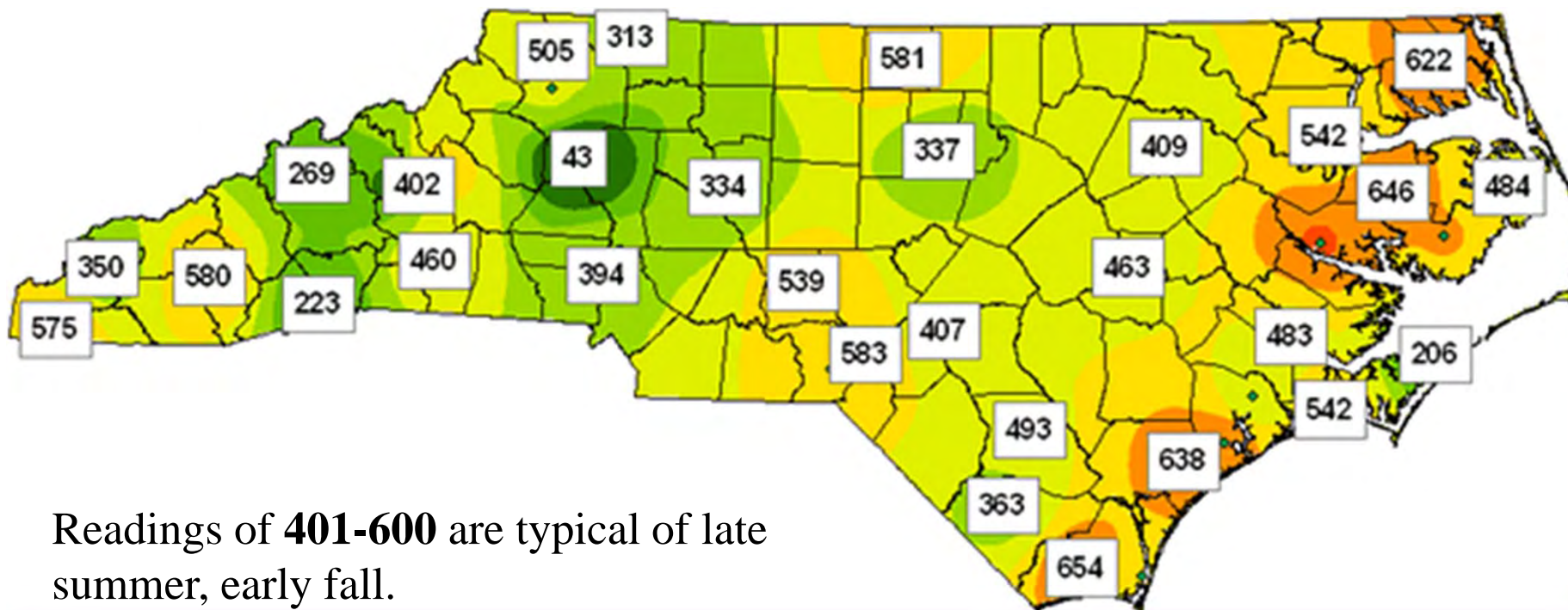
Drought impacts fuel

- More difficult to contain the fire
- More difficult to keep it contained





July 18, 2011 KBDI Readings



Readings of **401-600** are typical of late summer, early fall.

May 1 – June 30 Fires

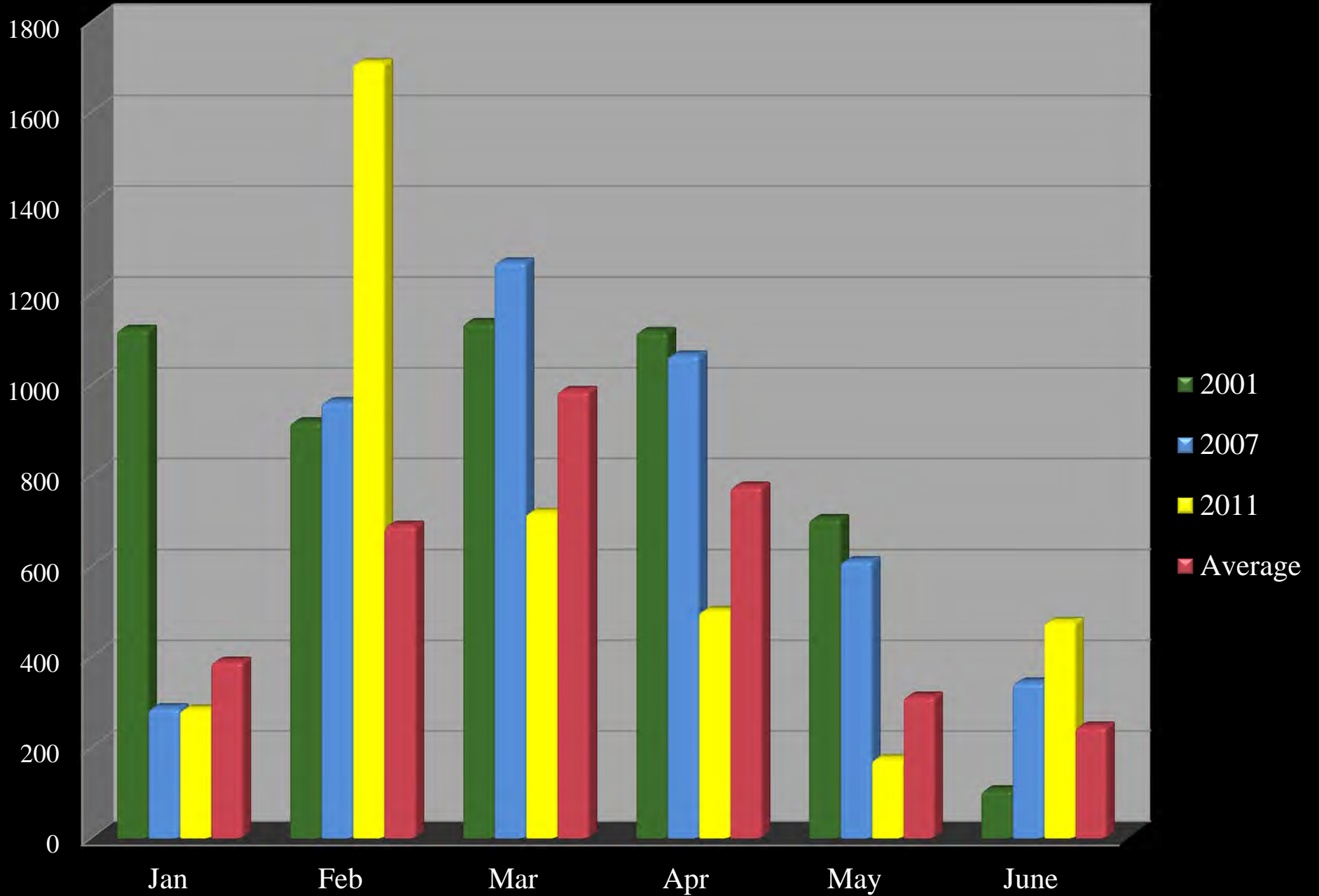
	Coastal Plain	Piedmont	Mountains
Fires	312	256	76

These are preliminary fire numbers and are not part of the official fire database

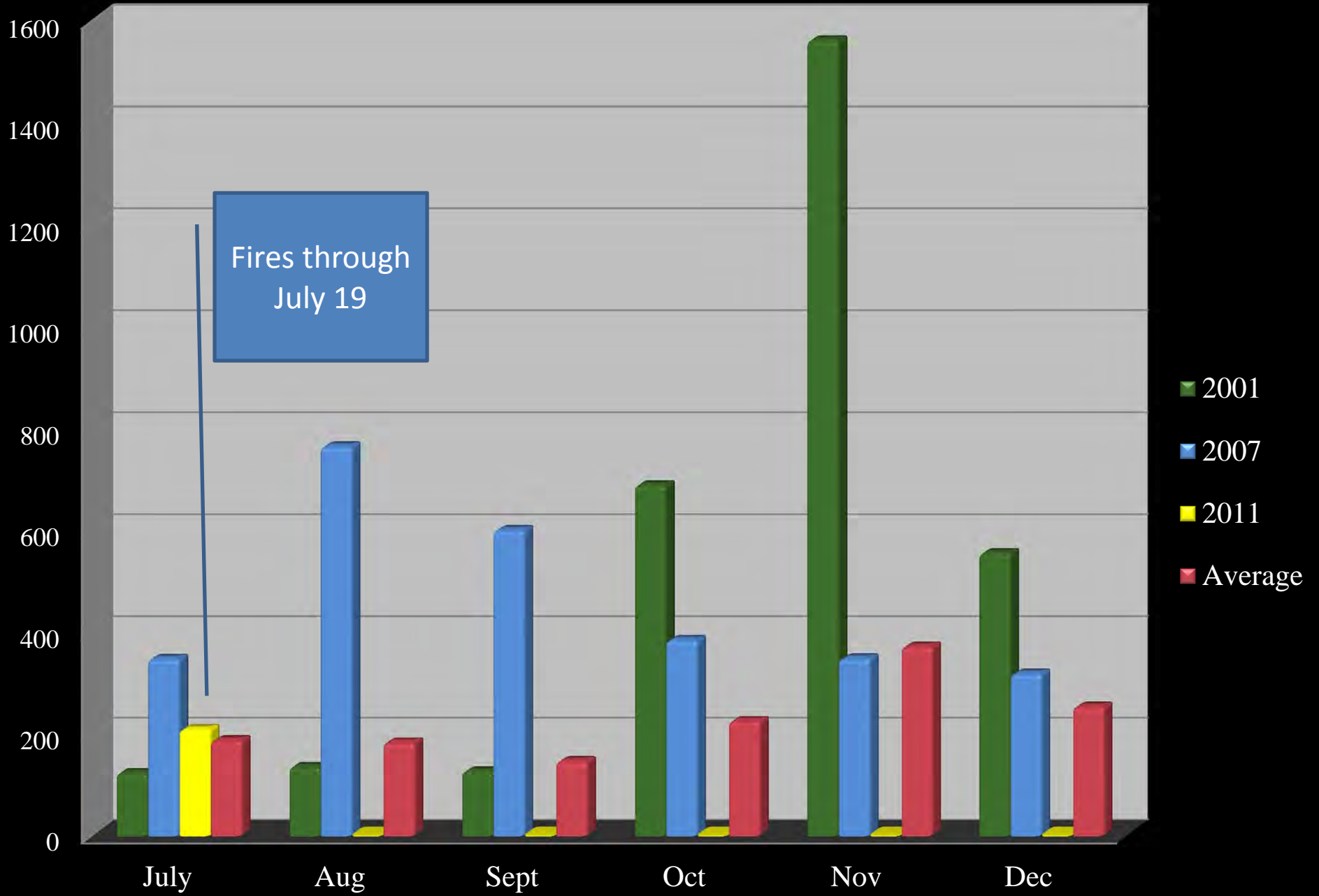
On average, about 70 % of fires occur within the first 6 months of the calendar year.

There have been about 15 % more fires this year (2011) in the first 6 months when compare to the number of fires we typically have in a calendar year

Fire Occurrence



Fire Occurrence



What's in the Future

- Expect more fires that normally seen in a year
 - 2001 over 8200 fires
 - 2007 over 7200 fires
 - 2011 ?
- If the drought continues and other parts of the NC become an active player then fires will increase
- However without the weather conditions for fire spread and growth fires will normally be smaller but will require more time to contain and control
- The exception are the foothills and mountains where topography become a factor



Pains Bay Fire June 4, 2011

