



2005 mid season outlook for Boulder County

Our fire danger is increasing. It has been incredibly hot and dry this month and fires are starting to become more frequent. Be careful of what you hear on the news, they tend to generalize and may be referring to something they heard from a different area and applying it across the board. It is important to have the best available information so you won't be unprepared when responding to fires in your district.

Fuels:

Fine Fuels

As you have probably noticed, our fine fuel load is very high. Fine fuels are growing in the understory of closed canopy forests where typically you would only see needle cast. Higher fuel loads contribute to higher intensities and higher flame lengths. This makes direct attack more difficult. Fine fuels will also make a continuous fuel bed and allow fire to spread to larger fuels. Expect to see faster rates of spread and increased spotting.

1000 hr fuels

Anything below 12% fuel moisture contributes to large intense fires and extreme fire behavior. We are currently at 9%. Kiln dried lumber has 8% fuel moisture. While this is not as low as 2002, it is likely to reach those levels with the current heat wave. This will make fires more difficult to extinguish and make direct attack with hand crews difficult. Use foam to help penetrate into the large dead and down material. This is also going to contribute to torching and crown fire development.

Live fuel moisture

Our live fuel moistures have dropped dramatically in the last two weeks. In the trees, we are seeing 80-85% LFM, which is very low- at 50% it is considered going into dormancy. The shrubs and forbs are even drier and will burn readily. This is the most significant contributor to the development of crown fire. Even though, the vegetation appears green, it doesn't take much heat to drive off the moisture and ignite. Watch for group torching as this is a sign that crown fire is very probable. Direct attack will be ineffective. With a little wind, the fire behavior can become extreme.

ERC:

Energy Release Component (ERC) – Does not take winds into account, it considers heavy fuels, relative greenness and live fuel moistures. It looks at long term drying trends and is a good snapshot of the fuels profile. Our ERCs are currently at the maximum ever recorded. This means that all the elements necessary for large fires are in place. This does not predict probability of ignition but what the potential is if we get a fire.

Weather:

We have been seeing temperatures in the 90s and Relative humidities in the low teens and single digits. Winds have been moderate but with the development of afternoon T-storms- strong, gusty erratic winds are possible.

Wind is the most critical element in Front Range fires. Be aware of wind shifts and gusts! It can quickly change a surface fire into a crown fire with little warning.



Haines Index (1-6) is a measure of dryness and instability and potential for large fire growth (plume dominated fire). The ratings have been 5 or 6 (moderate to high) regularly the last few weeks. You should plan your tactics accordingly.

Relative humidity and temperature have a very dramatic effect on fine fuels. Even after an afternoon rain, the fuels can become receptive within the hour.

Precipitation is helpful but needs to be significant to change the fuel conditions. The monsoon is reported to be delayed. There are always conflicting reports on weather patterns. For an analysis of long term weather discussions go to http://www.fs.fed.us/r2/fire/rma_monthly_outlook.pdf
Monitor the weather and check the zone forecasts daily and prepare your response accordingly.
<http://www.crh.noaa.gov/den/awebshtml/fir3znft.shtml>

Topography:

Slope varies throughout the county but on average we all have very steep slopes. There are also many topographic features such as chimneys, saddles and box canyons throughout our area. You should always do a size up that includes where the likely path of the fire will be. Slope will increase rate of spread and flame lengths, and pre heat fuels ahead of it.

Summary:

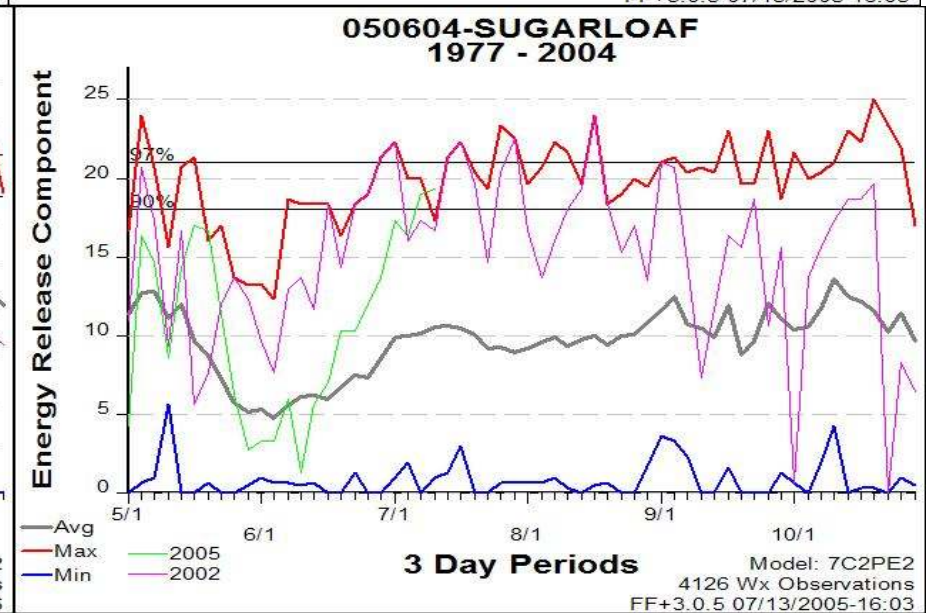
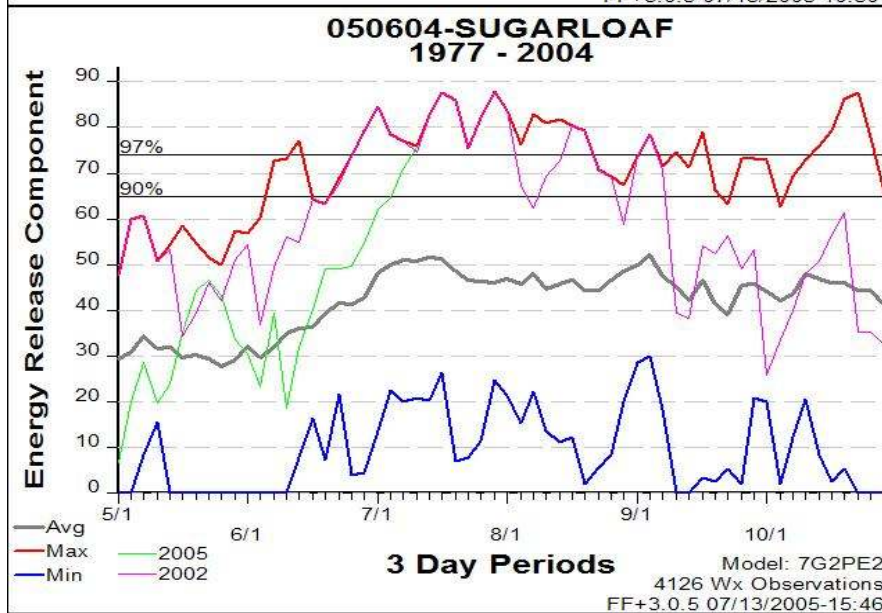
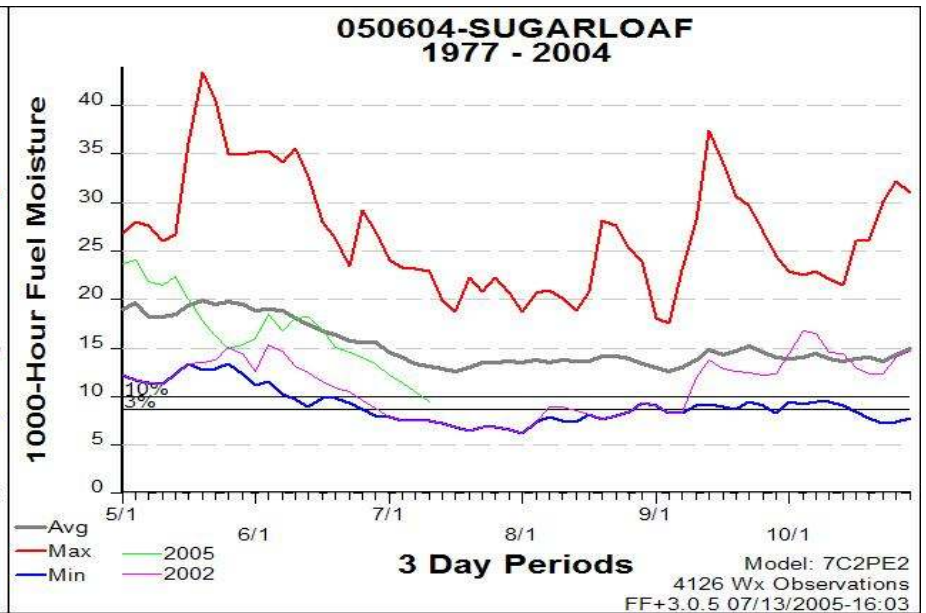
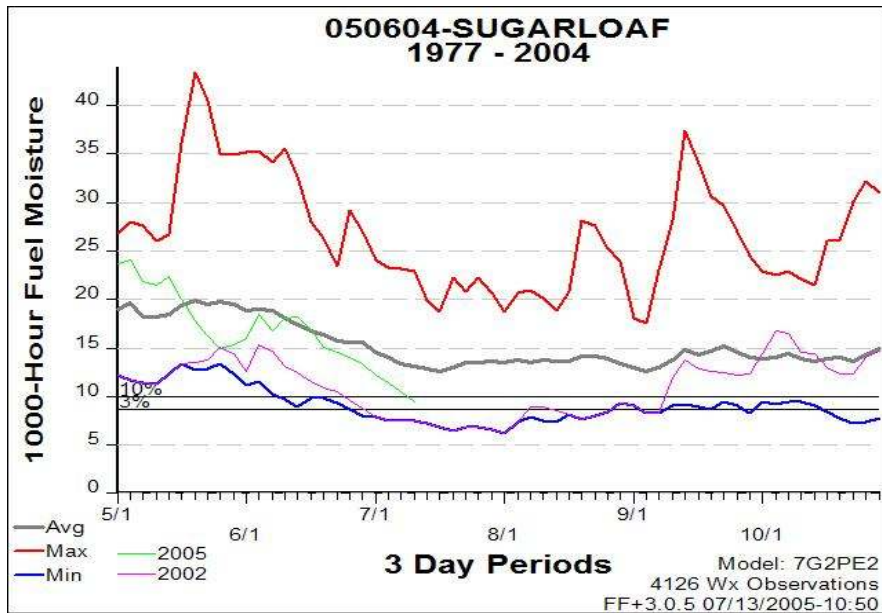
Fire season is upon us. We may or may not get a large project fire in our area (Eldorado, Hayman) but that doesn't mean that we won't get a very dangerous and damaging fire. We are currently in very high fire danger and we will be in Extreme by the end of the week. Don't underestimate the potential for large fire growth. Be prepared and be informed so you can do the safest job possible.
<http://www.fs.fed.us/r2/armf/fire/fire.html> (Fire Danger/Severity)

Review your fire orders and watch out situations.

Always establish LCES and re evaluate frequently.

Fire order #2: Initiate all actions on current and expected fire behavior

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Fuel model G: Short needle pine (heavy dead)

Fuel Model C: Open Pine with grass