Growing Season Burning

Or off season burning?

What is the objective?

- Can the objective be met with growing season conditions?
- Higher live fuel moistures
- Potentially dryer heavy fuels and organic layer
- Impacts on all those living things that seem to immerge with warmer conditions

How to develop growing season prescriptions

- Canadian System or NFDRS Based System
- Personal Choice based on training and background
- Fuel Types vs Fuel Models
- Available web based information for both systems

Canadian System

- CFFBP Tables and Fuel Types
- CFFDRS
- Mesowest Great Lakes Fire and Fuels
- Reporting Stations wide spread state wide in Michigan
- Information updated daily for fine fuel moisture(FFMC), duff moisture (DMC), drought (DC), spread (ISI), and build up (BUI)
- All based on current weather predictions for a local area

PRESCRIPTION FACTOR	PARAMETERS CONSIDERED	PURPOSE OF PRESCRIPTION
Plant Physiology	Season of Year	Many species exhibit seasonal variation in their sensitivity and response to fire on the landscape. Limits are to protect valued species and to assure desired fire effects on others.
Fuel Consumption, Residence Time, and Duration of Burn	Duff Moisture Code Buildup Index Drought Code	Lower limits may be established in situations where fire is needed to reduce surface vegetative competition and litter/duff layers, and to expose mineral soil. Both lower and upper limits may be established to minimize smoke production, both during and after the burn. Generally, DMC values should be below 40 in the spring, BUI values below 80 and DC values below 400 in the summer.
Fireline Intensity	Flame Length Initial Spread Index Fire Weather Index Air Temperature	Again, usually both lower and upper limits are established. Lower limits are to assure that the fuel complex will burn sufficiently to produce significant effects. Maximum limits are intended to limit mortality of overstory vegetation. See also section 1.2.4

Cover/Fuel Type	Description	Fuel Loading	Fuel Consumption			
			Wet Fuels	Moderate Fuels	Dry Fuels	Very Dry Fuels
			FFMC <80 BUI <30 DC <200	FFMC 80-88 BUI 30-50 DC 200-300	FFMC 89-91 BUI 50-100 DC 300-400	FFMC 92+ BUI 100+ DC 400+
Slash	Activity Fuels & Natural Disturbance, much of the loading is woody limbs and tops, but litter and duff are included	15-50 t/ac	20%	30%	50%	75%
Forest Understory	Primarily Pine, Oak and Aspen types, any shaded forest floor that is not dominated by shrubs or grasses	10-30 t/ac	7%	18%	30%	50%
Shrublands	Hazel, Cherry, Rubus, Sumac, Rose, and Viburnam as examples with admixtures of grass/herbaceous cover	5-15 t/ac	<10%	20%	60%	75%
Openlands, Light Load	Openings dominated by cool season grasses/herbs. Burned savannah/barrens. Little if any vegetative mat	1-3 t/ac	<10%	20%	50%	90%
Openlands, Moderate Load	Fallow pasture, productive forest openings, barrens and savannahs	3-10 t/ac	<10%	30%	60%	90%
Openlands, Heavy Load	Cultivated plots and productive sites of warm season grasses, generally under green growing season conditions	10-20 t/ac	<10%	40%	70%	100%
Emergent Wetlands	Cattails/Phragmites as predominantly live fuels during the growing season	20-30 t/ac	<10%	<10%	20%	50%
Fen/Wet Prairie	Sedges/graminoids on organic soils that may be seasonally dry	10-20 t/ac	<10%	35%	65%	95%

Firing Methods

- Flanking
- Backing
- Utilize a range of ignition patterns if necessary
- Be creative

Conditions Burn Day

- CFFDRS Outputs
- FFMC 90-91
- DMC 52-58
- DC 180-176
- ISI 9-11
- BUI 60-64
- FWI H-VH

- NWS Forecast
- Mostly Sunny, 85-90 degrees, 33-38% Rh, SE 5-10, Smoke Dispersion Excellent, Over night Rh recovery 92-97%.
- On site mid 80’s, Rh 42%, SE 3-6 (EL)
- Next day lower Rh, Smoke poor