!

Fire Use on Private Lands

CITY OF ANN ARBOR
Natural Area Preservation

David Borneman LLC

www.RestoringNatureWithFire.com


NATURAL AREAS ASSOCIATION
MIPN.org
Midwest Invasive Plant Network
The Stewardship Network
Pulling together for nature
Parks&Recreation
CITY OF ANN ARBOR
Michigan Prescribed
Fire Council
David Borneman LLC
www.RestoringNatureWithFire.com

How do I get a permit to burn my prairie? Or woods? Or Wetland?

- Talk to local Fire Department!
- See what they require, and what the process is for getting a permit
- WIDE range of requirements, from very permissive to very restrictive.
- But even IF they don't require a written burn plan, it would be prudent for you to prepare one for YOURSELF!

- **ACTIVE INVOLVEMENT WITH LOCAL FIRE DEPARTMENTS**

Can I do the burn myself?

Consider:

Size and complexity of site

The fuel that you're burning

Surrounding areas

Your burn breaks

Available resources

Your experience!


08.31.2004

How to find a burn contractor?

Michigan Prescribed Fire Council:

www.FireCouncil.org

Also includes a list of Rx Fire BMPs

(Best Management Practices)

So what goes into a burn plan?

Site info

Safety considerations

Burn objectives

Plan for how you will do the burn

Equipment/resource needs

Notifications

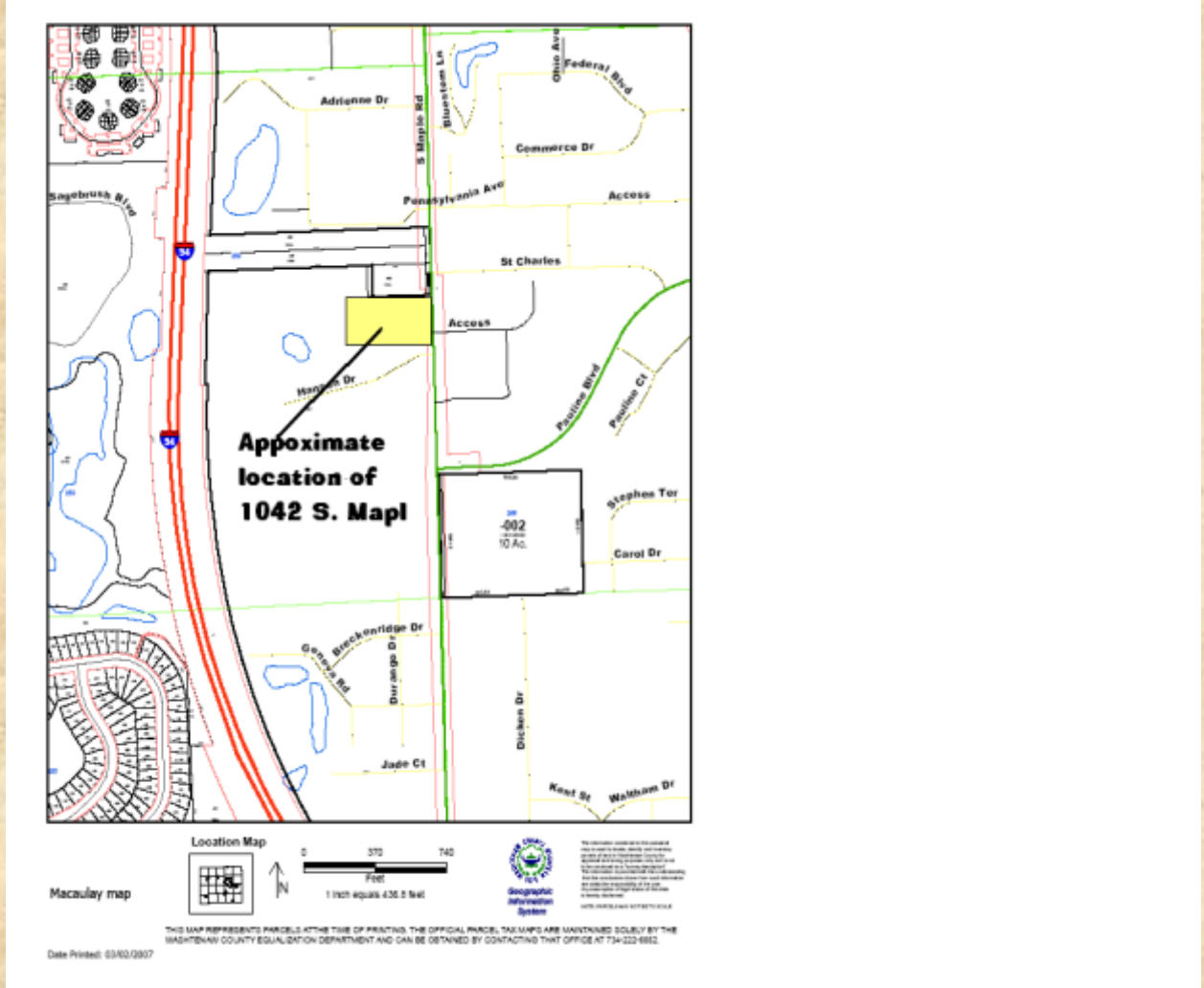
Prescribed Burn Plan

- Owner/Residents: Joe Homeowner
- 2750 Newport Road
- Ann Arbor, MI 48103
- Home Phone: 734-123-4567
- On-site Cell: 734-845-0634
- Joe.Homeowner@yahoo.com

Burn to be conducted by: David Borneman, LLC

- Contact info: 734.845.0634

Burn Location: East of Lake George Rd., North of W. Romeo Rd., South of Drahner Rd. and West of Walker Rd.



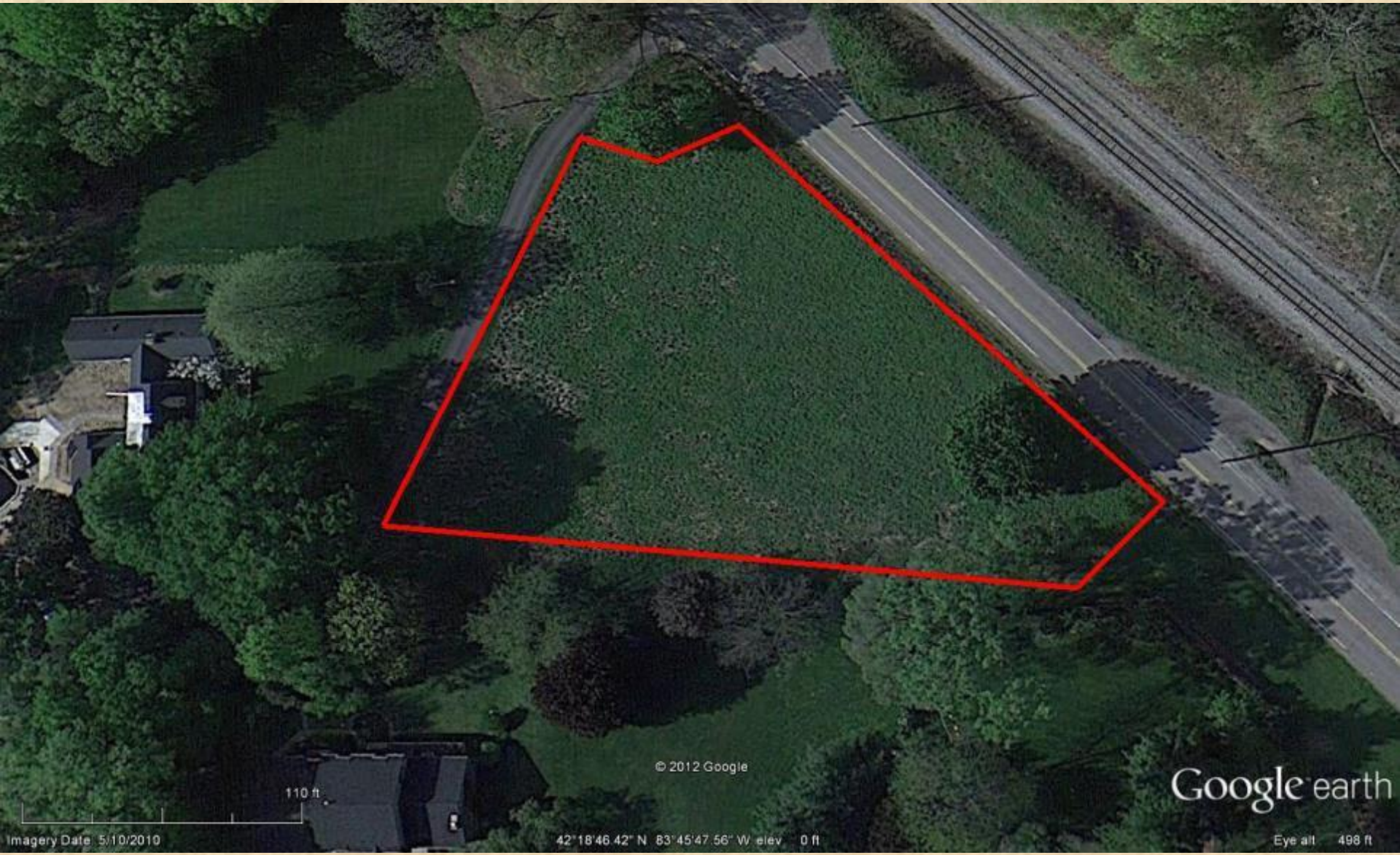
Site Info

Name and address

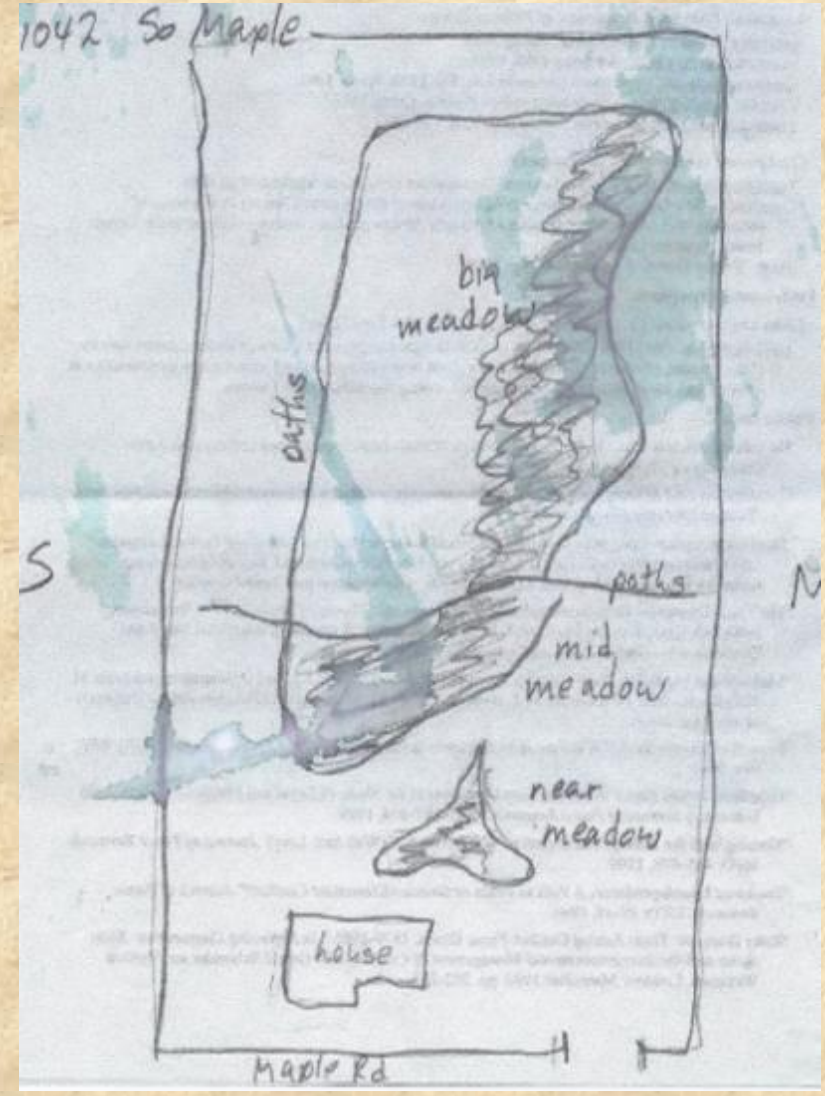
Your phone number, including on-site cell phone

A description of your burn unit (what you're going to burn)

- Size (square feet or acreage)
- Shape (square? Long and linear?)
- Fuel (Prairie grass? Oak leaf litter? Cattails? Phragmites?…)
- Aspect (S-facing? W-facing? Flat?)
- Location (maps are VERY helpful)
- Burn Breaks (Green lawn? Sidewalk? Driveway? Stream? RR tracks? 2-track? Shrub thicket? Blown line through leaf litter?)


© 2012 Google
110 ft
Google earth
Imagery Date: 5/10/2010
42°18'46.42" N 83°45'47.56" W elev 0 ft
Eye alt 498 ft

Burn Unit Description: Native prairie planting to west of house, bordered by green turf paths



Fuel


Fuel
fine, dead vegetation on the
ground that burns in the fire

Burn Objectives

Why are you doing this burn? What do you hope to accomplish?

Some examples:

Burn off old thatch to prepare site for planting.

Control woody invasives that are encroaching into the site.

Stimulate native grasses and wildflowers.

Kill Spotted Knapweed seedlings emerging in prairie planting.

- *Improve habitat for deer, turkeys, and other wildlife.*

Safety Considerations

On-site Fire Hazards:

- conifers
- telephone poles and plastic guy lines
- overhead wires
- wooden fences
- birdhouses
- woodchip paths
- wooden or vinyl siding
- plastic drainage pipes or irrigation heads
- small specimen trees within the burn unit
- benches and picnic tables
- wildlife (especially rare reptiles, amphibians, and insects)

Safety Considerations

Smoke Concerns:

- Nearby roads
- RR tracks
- Schools
- Day-care centers
- Hospitals
- Nursing Homes
- Residential areas
- Any commercial building with air-intake vents
- Livestock
- Anyone with asthma or compromised immune systems

Safety Considerations

…Smoke Concerns

Where do you want the smoke to go, and what weather and fuel conditions do you need to get it to there? (typically, sunny days without too much wind, and low RH [relative humidity] to dry out the dead vegetation that you'll be burning)

You typically want sunny days with good "uplift" so the smoke will rise high and leave the area.

How will you do the burn?

What wind direction will you need?

Where will you start the burn?

How many people will be helping you?

Ignition tool – Drip torch? Propane torch? Rake dragging grass?

Holding plan – How you'll keep the fire under control.

Water source – Garden hose that can reach entire perimeter of burn unit?

Portable tank with sprayer on ATV or 4WD truck?

Backpack sprayers?

And how will this water be deployed?

Where will you re-fill your water tanks?

Burn Break

Burn Break


Site Prep –
Burn Breaks

Site Prep – Burn Breaks


Site Prep –
Burn Breaks

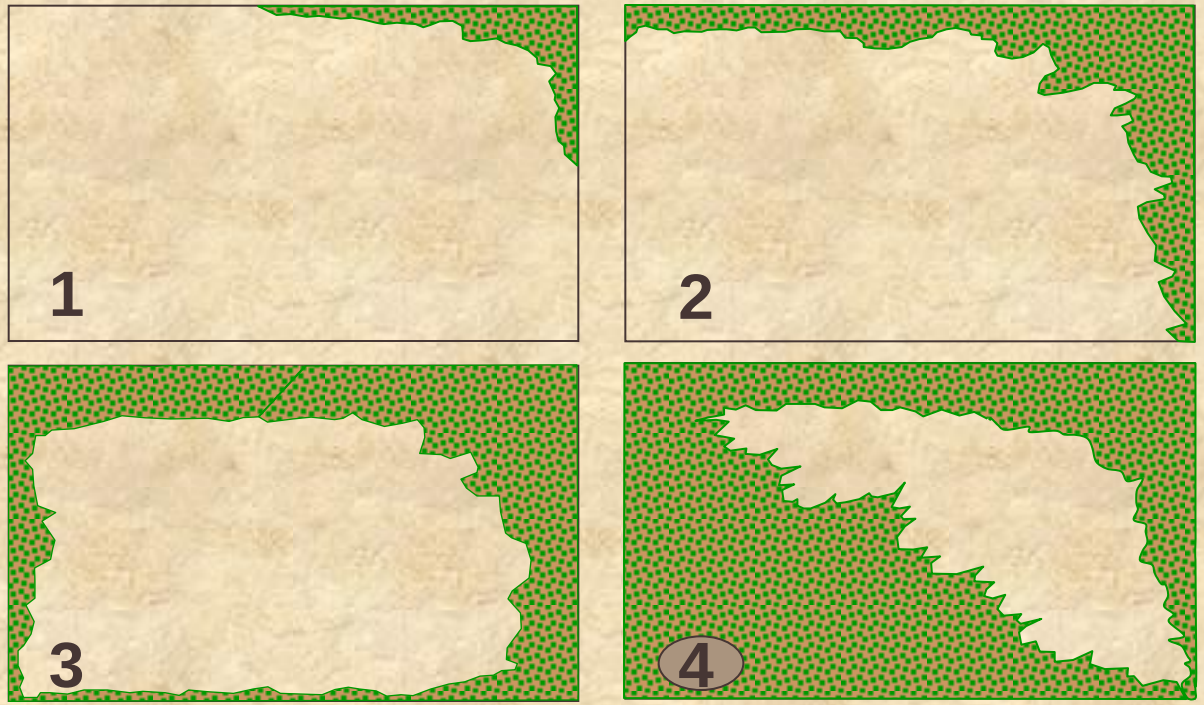
Burn Break

Site Prep – Burn Breaks

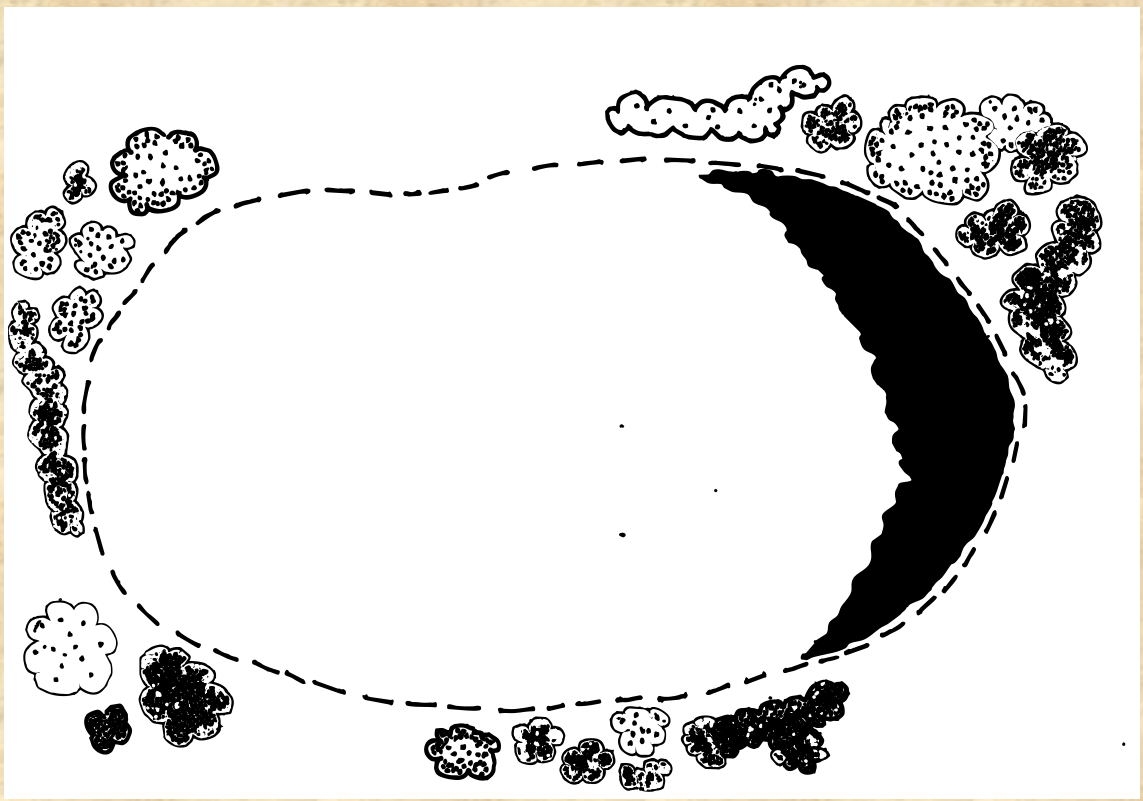
Burn Break

Slop Over

Ring Fire Ignition for Tallgrass Prairie

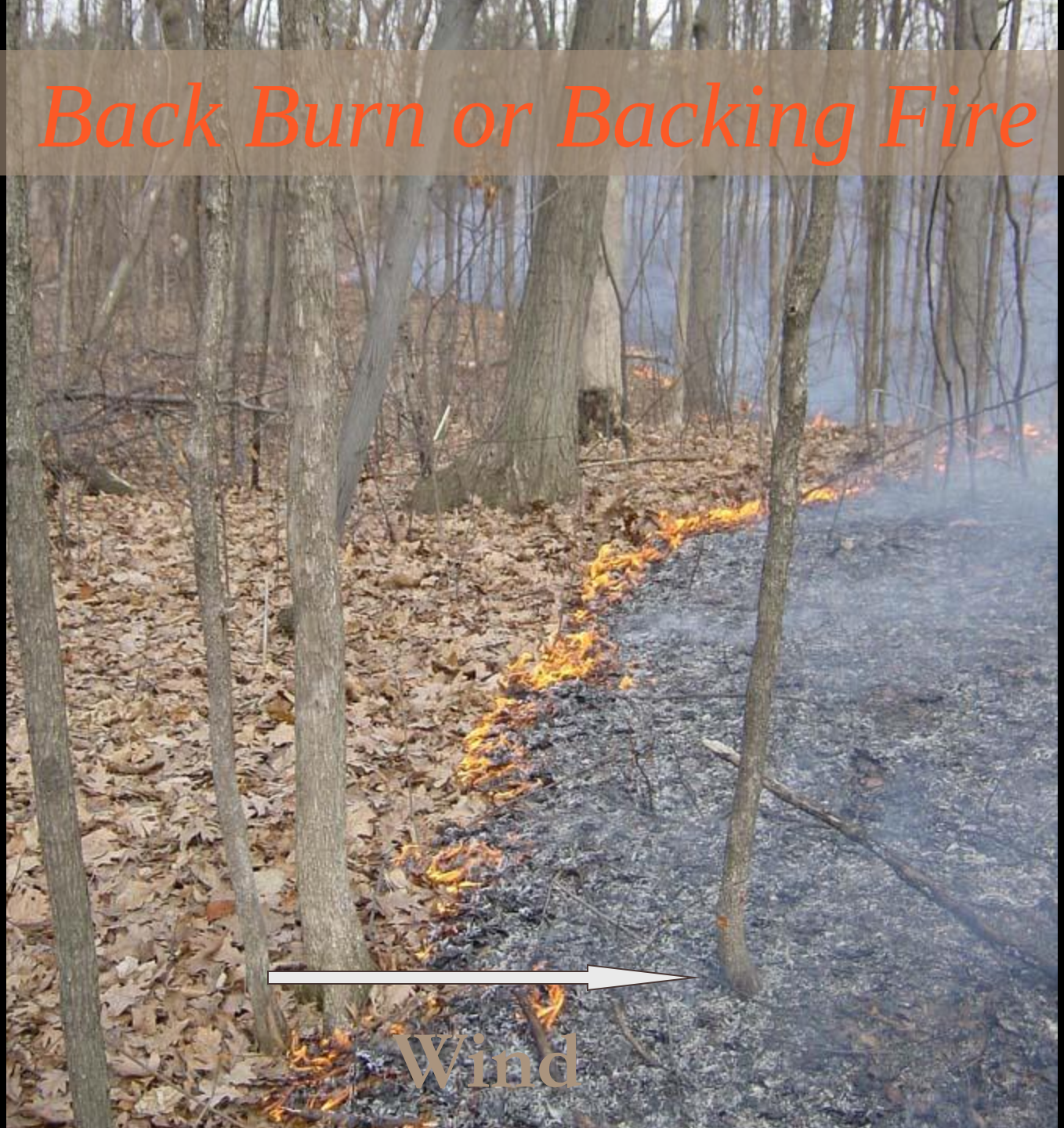


Back Burn/Fire or Backing Burn/Fire

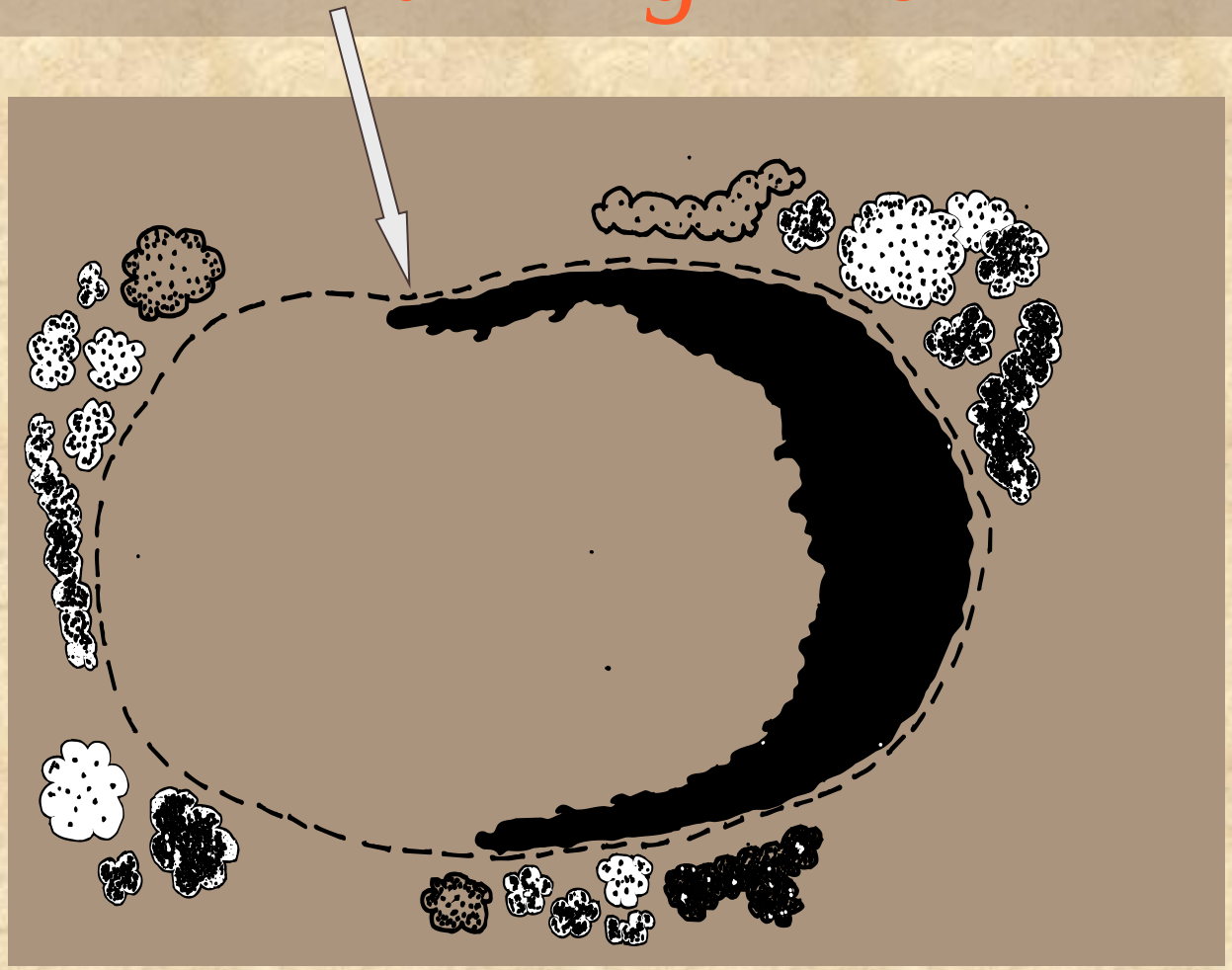


Wind Direction

Back Burn or Backing Fire



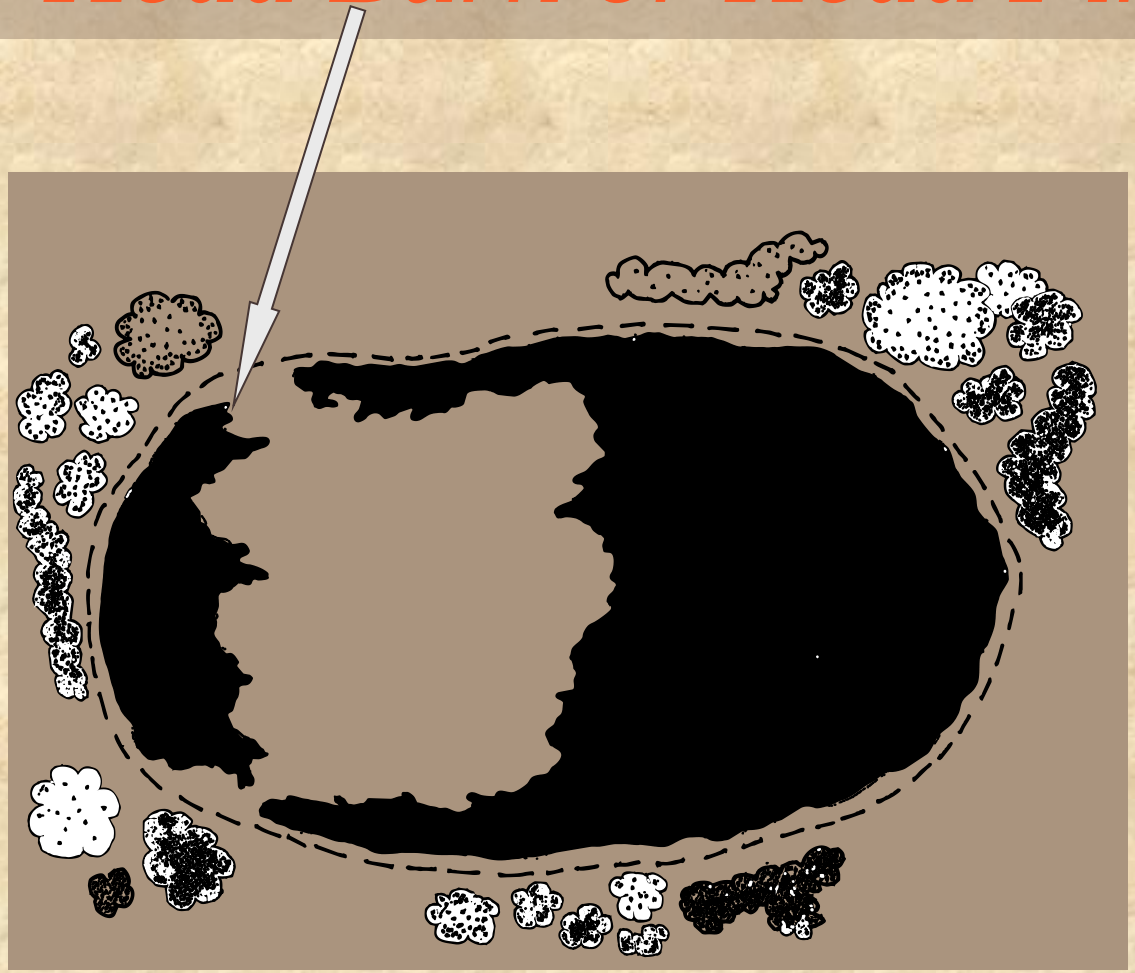
Flanking Fire



Wind
Direction

Flanking Fire

Head Burn or Head Fire



Wind
Direction

Head Burn or Head Fire

Head Burn or Head Fire

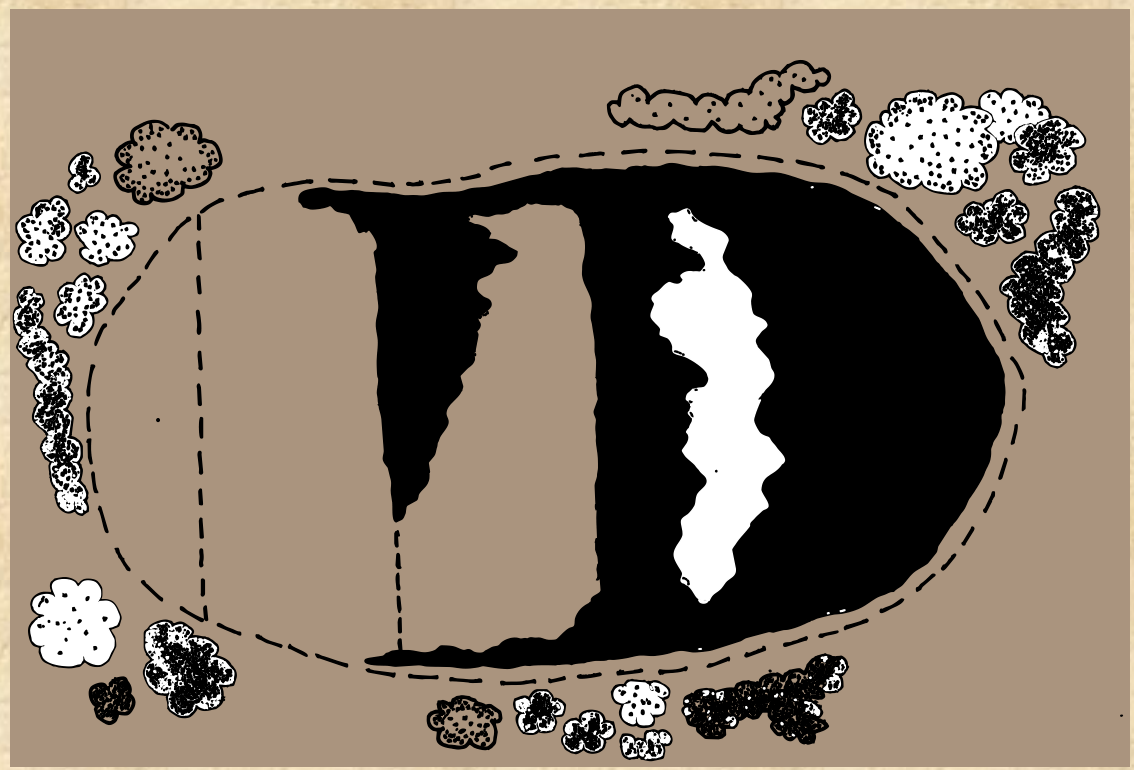

Ring Fire


Interior Ignition or
"Burning out the Interior"


“Burning Around”

Evergreens are especially fire-sensitive

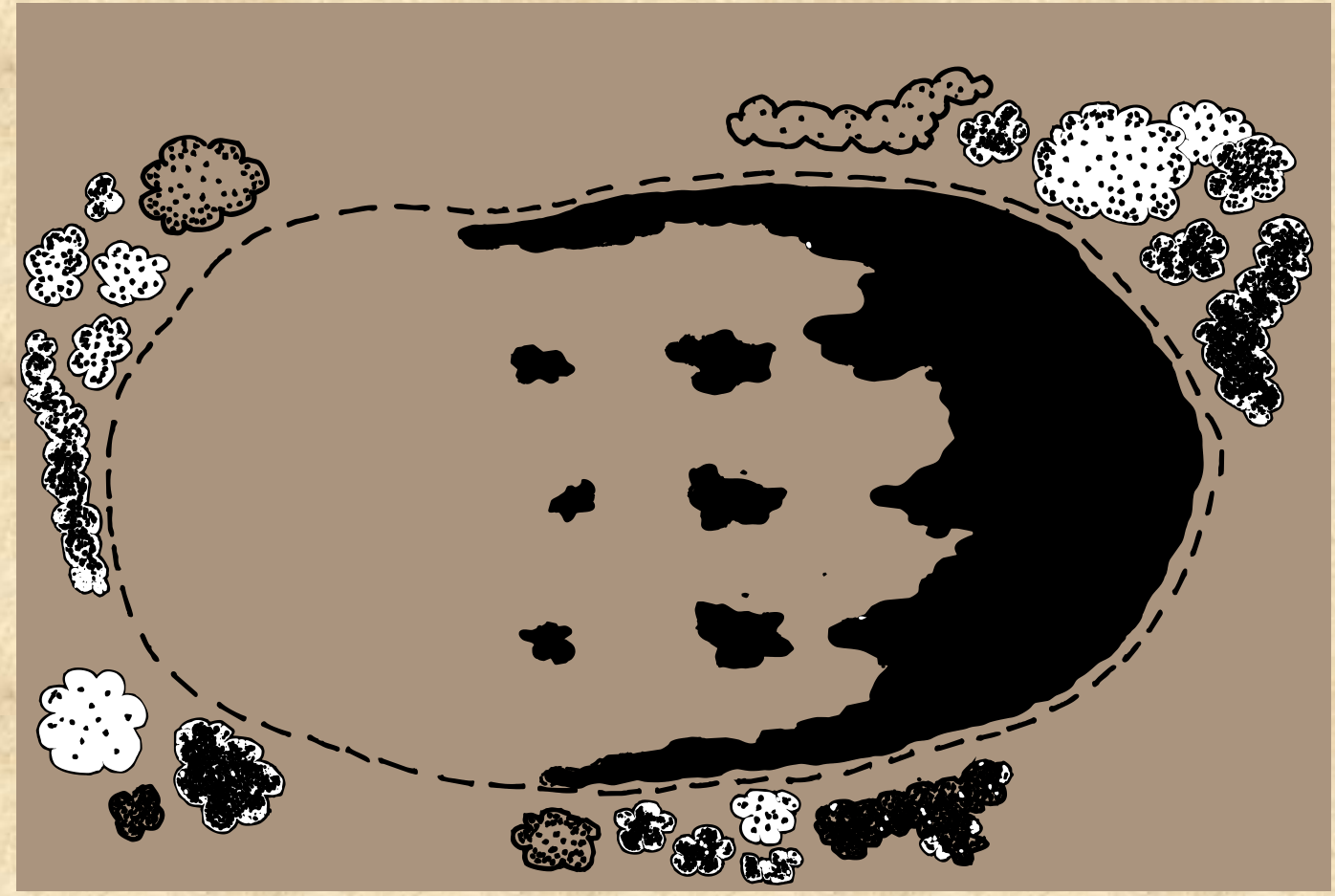
Strip Head Fires or Strip Fires



Wind Direction

Strip Head Fires or Strip Fires

Spot Fire



Wind
Direction


Spot Fire 1 of 3


Spot Fire
2 of 3

Spot Fire *3 of 3*

Equipment/Resource Needs

Water Source

And a way to deploy the water

Ignition Tool

Rakes for creating/improving burn breaks?

Smoke signs for nearby roads?

PPE (Personal Protective Equipment) for crew?

Walkie-Talkies for crew?


MQ
GX160
HONDA
5.5
COXREEL


Drip Torch
Drip torch fuel mix:
4:1
kerosene:gas
3:2 diesel:gas

Backpack Sprayer


Equipment &
Safety
SMITH
INDIAN
ROSS

Hand Tools

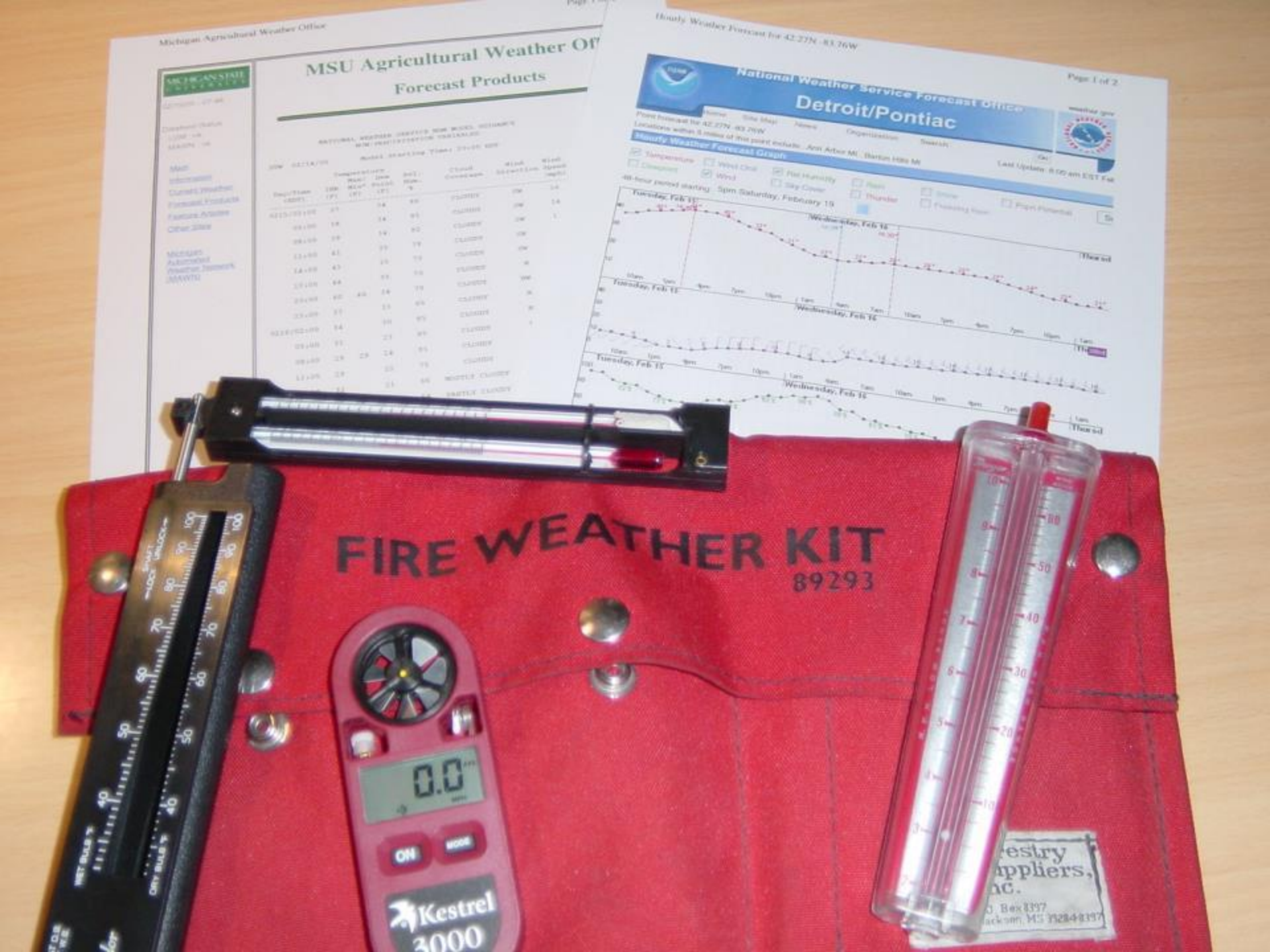
Gator with Water Tank

Radios help on any burn, especially on burns > 10 acres

Burn Day Prep Signage


Equipment &
Safety


0044 LT


Michigan Agricultural Weather Office
MSU Agricultural Weather Of
Forecast Products
Hourly Weather Forecast for 42.27N -83.76W
National Weather Service Forecast Office
Detroit/Pontiac
Page 1 of 2
FIRE WEATHER KIT
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ON
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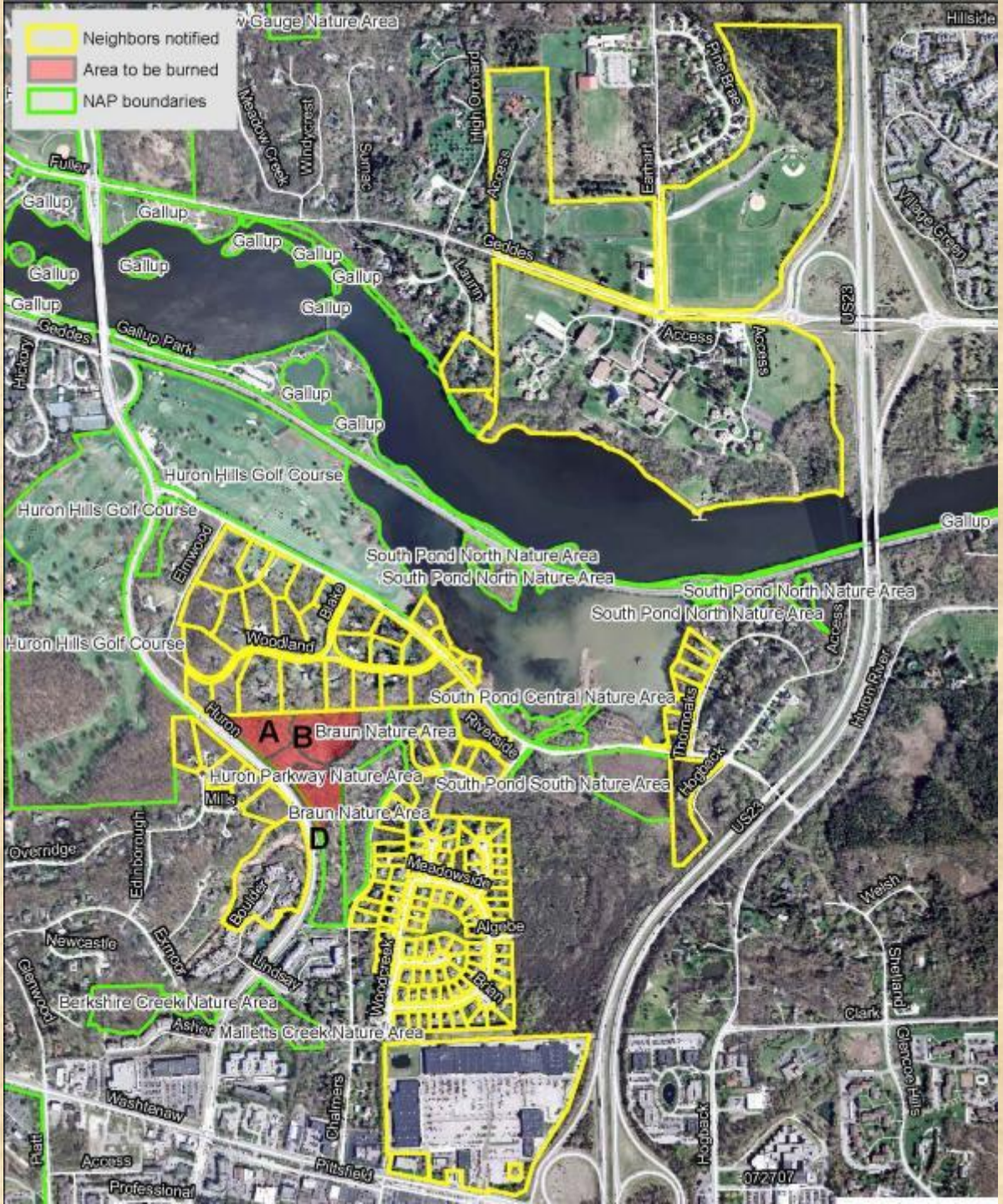
3000

Photo Monitoring

Notifications

- Fire Department – before AND after the burn
- Other County Dispatch Number?
- Neighbors (residences and businesses) – in advance of burn day
- Motorists – on burn day


Neighbors notified
Area to be burned
NAP boundaries
Gauge Nature Area
Hillside
Meadow Creek
Windycrest
Sumac
High Orchard
Access
Elmhurst
Pine Brae
Village Green
Fuller
Gallup
Geddes
Lawrn
US23
Gallup Park
History
Huron Hills Golf Course
South Pond North Nature Area
Elmwood
Blake
Woodland
South Pond Central Nature Area
Huron
A
B
Braun Nature Area
Riverside
Thomas
Huron River
Huron Parkway Nature Area
South Pond South Nature Area
Hogback
Mills
D
Overridge
Edinborough
Meadowside
Algonac
Welsh
Boulder
Newcastle
Exmoor
Lindsay
Woodcreek
Brian
Shetland
Clark
Glencoe Hills
Berkshire Creek Nature Area
Asher
Mallets Creek Nature Area
Washtenaw
Clarmers
Hogback
Access
Professional
Pittsfield
07/27/07

NEIGHBOR NOTIFICATION LETTER
Prescribed Burn

Greetings!

I am writing to let you know of our plans to conduct a **prescribed ecological burn** within the next several weeks on our privately-owned land at:_____. This burn will be safe and carefully controlled by trained personnel. The company that has been contracted to conduct this burn is **David Borneman LLC.** David has over 22 years of professional experience conducting prescribed, ecological burns.

"Why Burn?" Fire was a regular and frequent component of our landscape here in southern Michigan. Many of our local ecosystems such as prairies, dry oak-hickory woodlands, and certain wetlands burned frequently. The fire stimulated many of the plant species to grow more vigorously and discouraged others who were not adapted to the heat from the fire.

Today, many non-native plant species have invaded our natural fire-adapted ecosystems, decreasing the diversity of native plants and animals. By bringing fire back to these sites we encourage the competitive advantage that native species have evolved with and restore the site to its former ecological health.

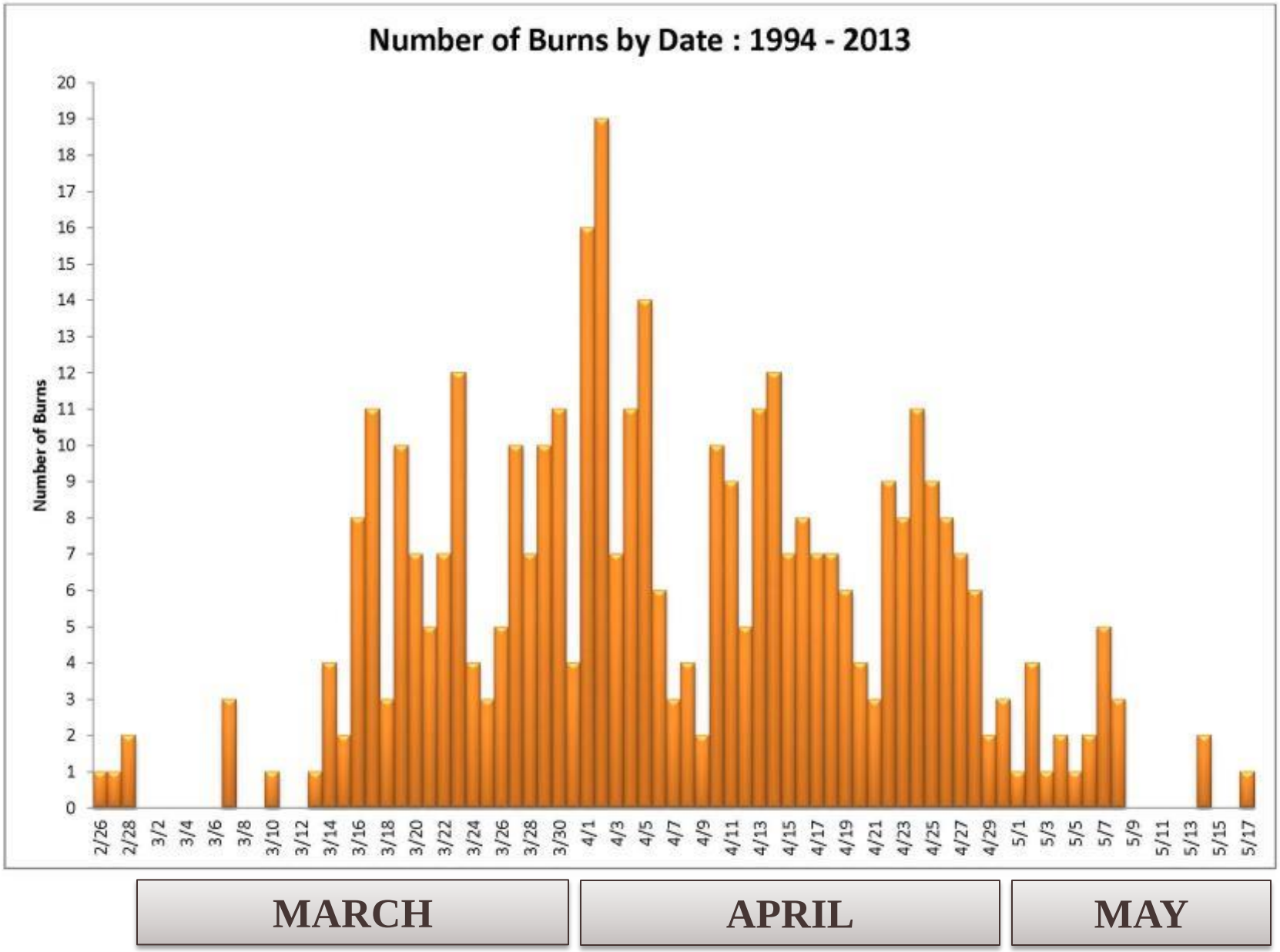
The prescribed burn is safe. The burn is done in cooperation and approval of the local fire department, which has issued a permit for this burn to be conducted. David has outlined the weather conditions, personnel, equipment, and other parameters needed for the burn to be conducted safely. Prior to burning, he creates "burn breaks" around the area to be burned to help control the fire. The burn is done in a slow and deliberate manner, with safety equipment on hand to monitor and control its spread. The burn will also be conducted in such a manner as to minimize the amount of smoke produced and to direct any smoke away from smoke-sensitive areas as much as possible. Due to the burn being weather-dependent, it is impossible to predict exactly when it will occur, though it is likely to occur between 12 p.m. and 7 p.m.

If you have any questions or concerns, or if you have any special needs that require you to be notified by phone on the day of the burn, you may contact me at _____. If you have specific questions about prescribed burning, please see David's website at www.restoringnaturewithfire.com or contact him at either davidborneman@yahoo.com or 734-845-0634. Thank you.

Sincerely,

Almost burn day

Wait for Acceptable Weather Conditions


Number of Burns by Date : 1994 - 2013
Number of Burns
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15
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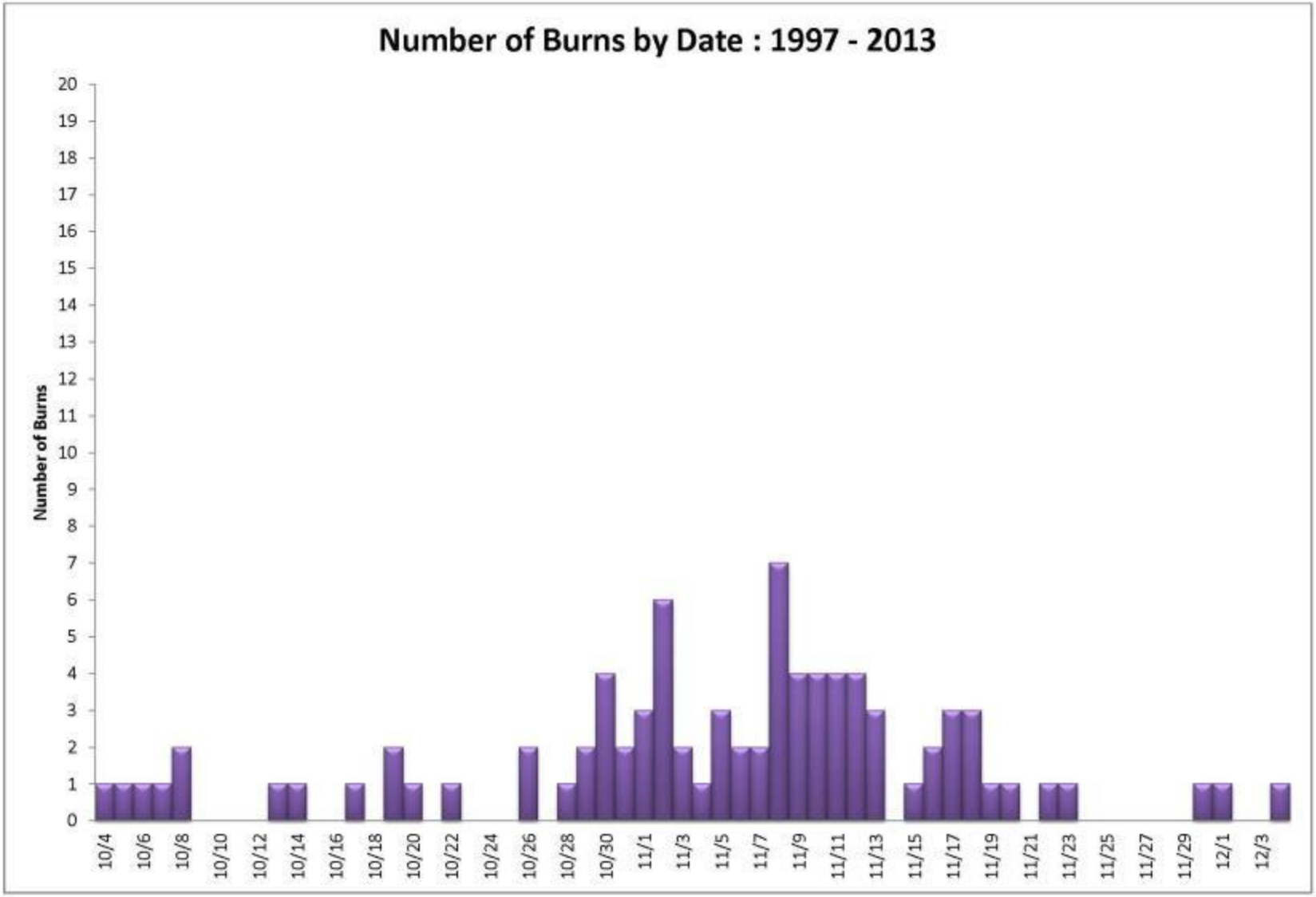
MARCH
APRIL
MAY


Number of Burns by Date : 1997 - 2013
Number of Burns
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11/29
12/1
12/3

OCT. **NOV.**

Detroit/Pontiac

Home News Organization Search for: NWS All NOAA Go

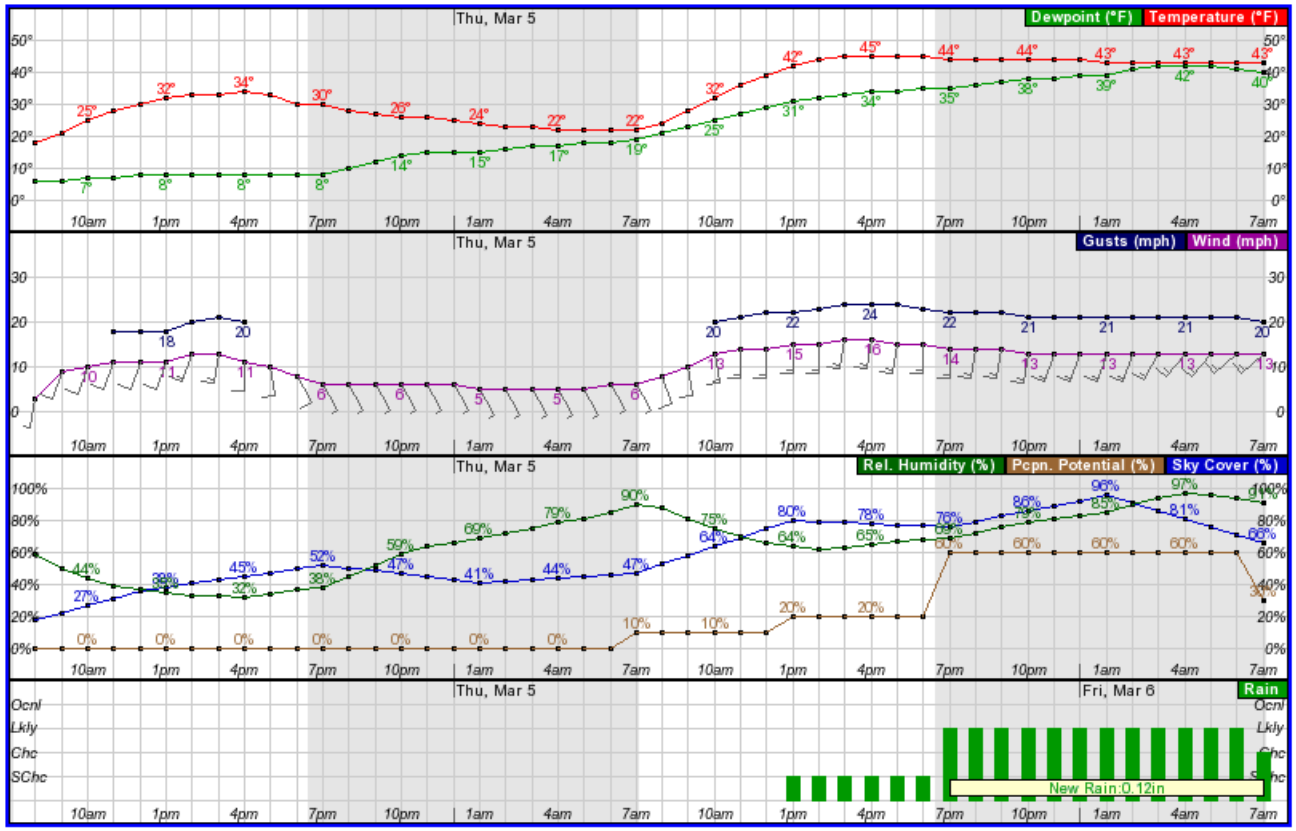
Point Forecast: Ann Arbor MI

www.weather.gov hourly weather graph

[hide menu]

☑ Temperature (°F)	☑ Surface Wind (mph)	☐ Thunder
☑ Dewpoint (°F)	☑ Sky Coverage	☑ Rain
☐ Wind Chill (°F)	☑ Precipitation Potential	☐ Snow
	☑ Relative Humidity	☐ Freezing Rain
		☐ Sleet

48-Hour Period Starting: 8am Wed, Mar 4 Submit Back 2 Days Forward 2 Days

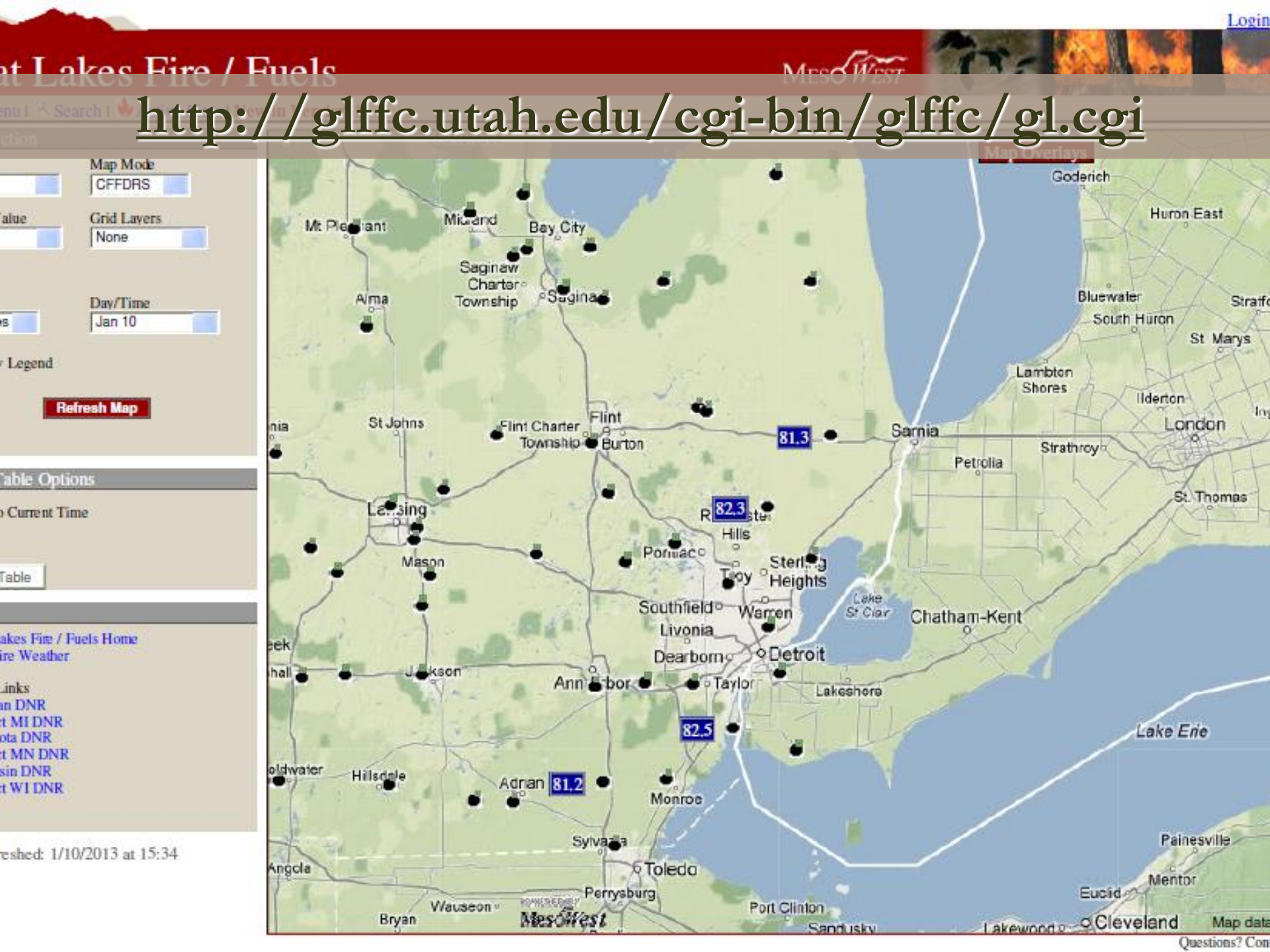


Wednesday, March 4 at 12pm

Temperature: 30°F Dewpoint: 8°F Surface Wind: SSW 11G18mph
Sky Cover: 36% Precipitation Potential: 0% Relative Humidity: 37%
Rain: <10%

Login

http://glffc.utah.edu/cgi-bin/glffc/gl.cgi




Conduct
Burn


Conduct
Burn


Burn Break

"Mop Up" – extinguishing any and all smolders before we leave the site.

Mop Up

MOP UP= MINIMIZING SMOKE


Avoid igniting heavy fuels


TER
MS:
Burn Break


Post Burn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