

# Building a University Wildland Fire Program

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# The “Perfect” Burn



**Safe**

**Ecologically  
Effective**

**“Perfect”  
Burn**

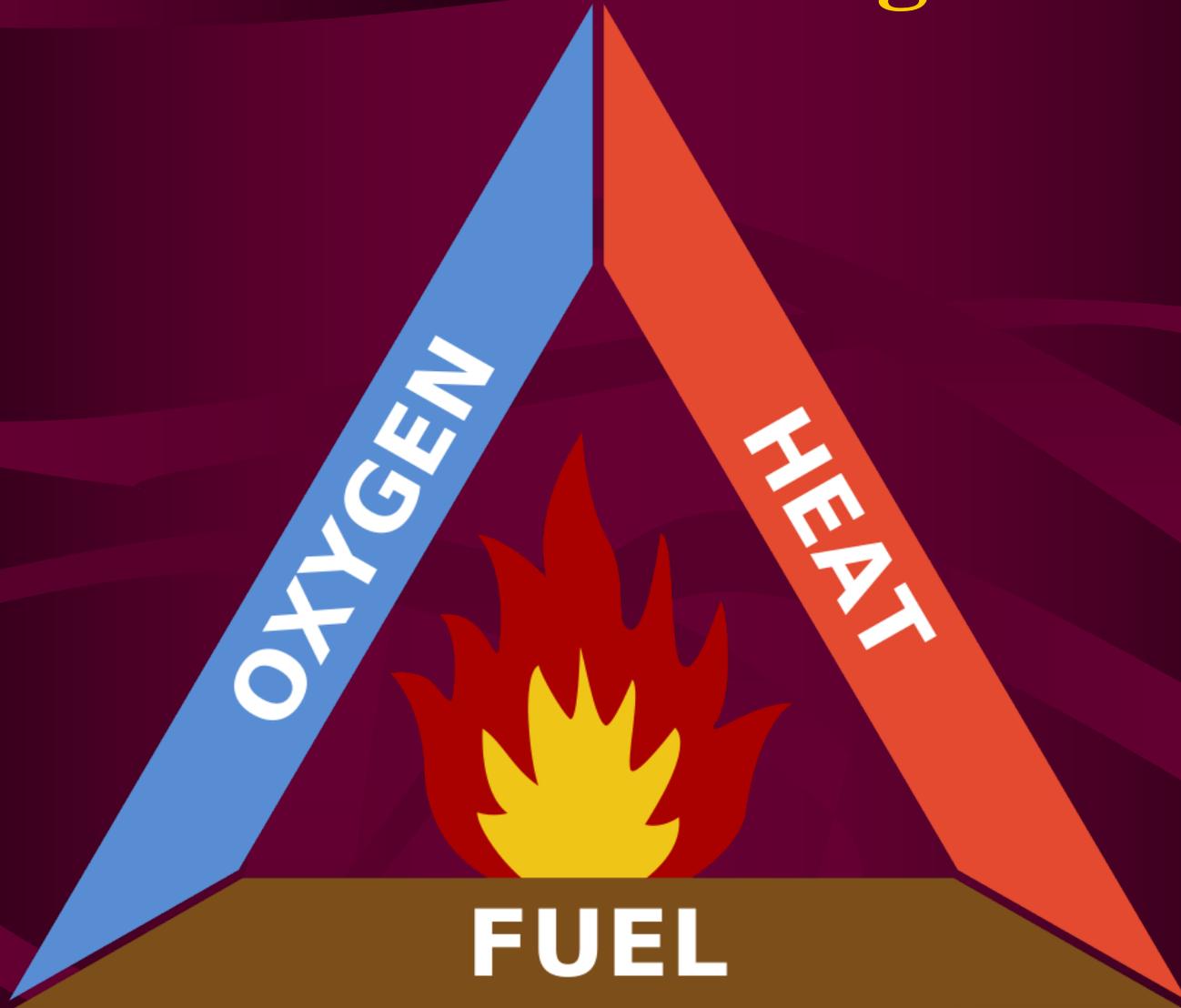
**Cost  
Effective**

**Learning**

# The “Perfect” Burn Program



# The Fire Triangle

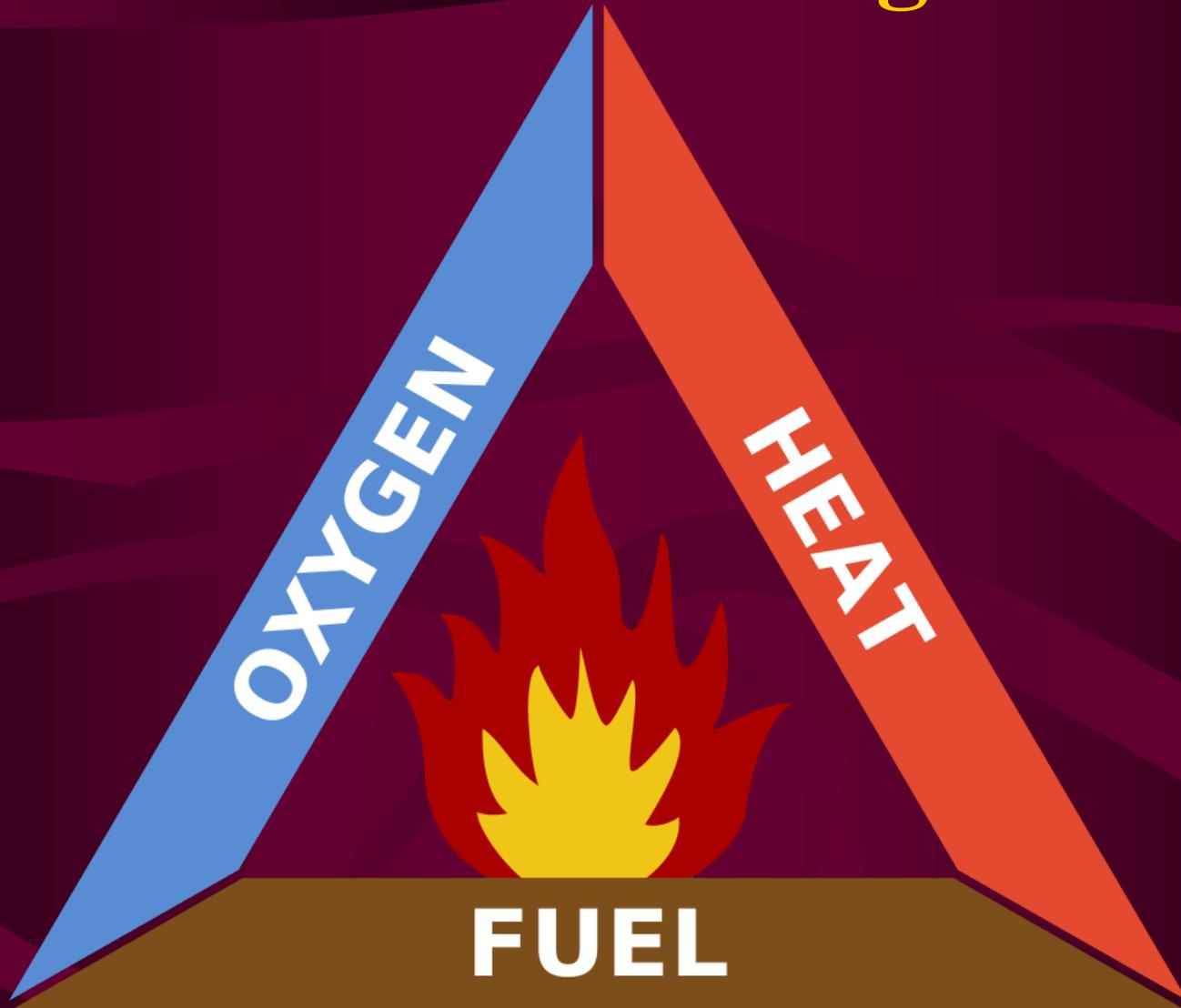


# Ignition Sources

**Lighting**  
**Matches**  
**Cigarettes**  
**Drip Torch**  
**Fusee**  
**Jack McGowan-Stinski**



# The Fire Triangle





2B-7-S190-EP

**1 Hour Fuels**



**10 Hour Fuels**



**100 Hour Fuels**



**1000 Hour Fuels**



# 1 Hour Fuels



# 1 Hour Fuels: Students



# 1 Hour Fuels: Students



# 1 Hour Fuels: Students



# 10 Hour Fuels



# 10 Hour Fuels: Courses

- **NRM 230: Introduction to Wildland Fire Management**
  - S-130 Firefighter Training
  - S-190 Introduction to Wildland Fire Behavior
- **NRM 415: Fire Ecology and Management**
  - RX-310: Introduction to Fire Effects
- **NRM 430: Intermediate Wildland Fire Management**
  - S-290 Intermediate Wildland Fire Behavior
- **NRM 380: Wildland Fire Field Trip**
- **NRM 480: Burning Issues**

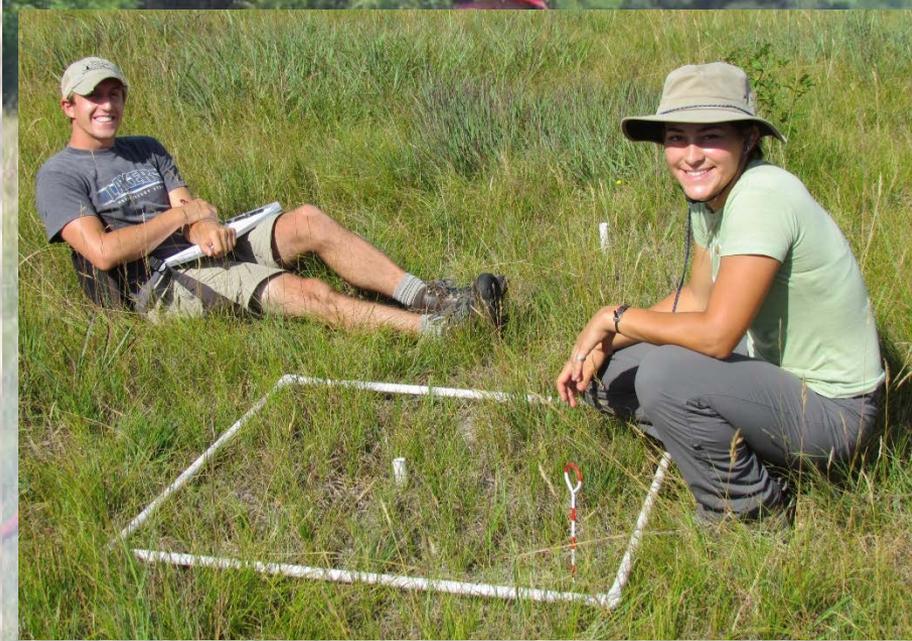


# 100 Hour Fuels



# 100 Hour Fuels: Research

Aschenbach, T.A. and P. R. McGhan. 2015. The application of prescribed fire and herbicide to reduce *Carex pensylvanica* cover at the Newaygo Prairies Research Natural Area, Manistee National Forest, Michigan. *Ecological Restoration* 33:352-355.



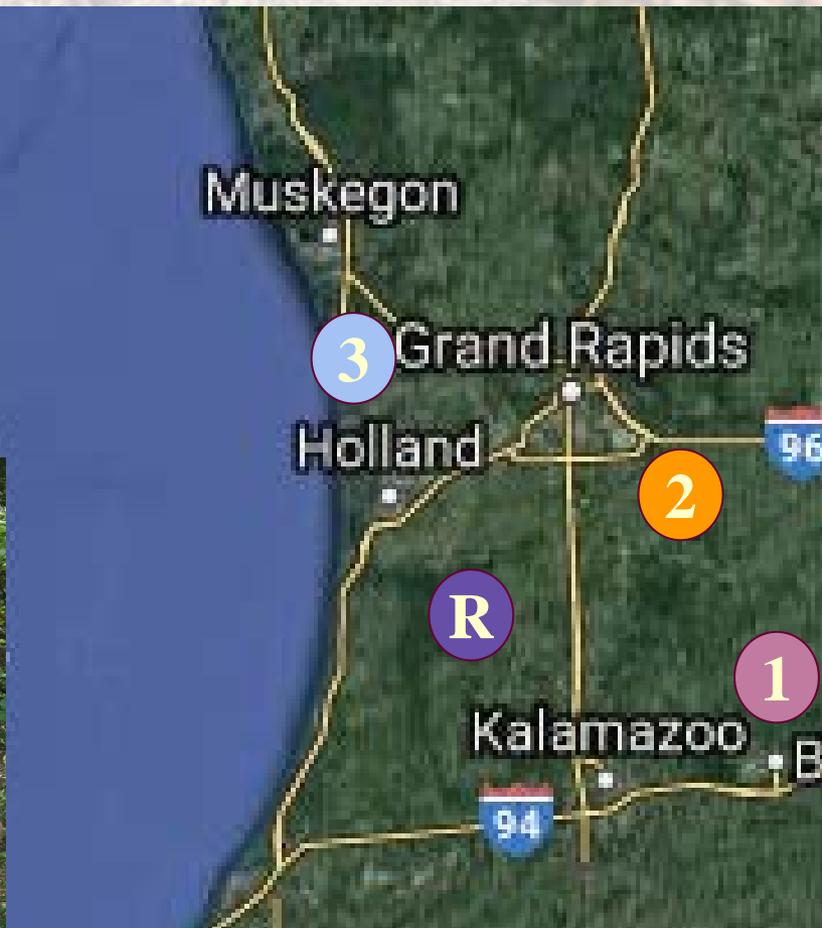
# 100 Hour Fuels: Research

Pitman, Z.T. and T.A. Aschenbach. 2019. Simulated fire season and temperature affect spotted knapweed (*Centaurea stoebe*) dominance, native species establishment, and soil ( $\pm$ )-catechin levels in a Michigan tallgrass prairie. *Ecological Restoration* 37:246-255.



# 100 Hour Fuels: Research

## The Influence of Prescribed Fire Season and Order on Oak Savanna Restoration



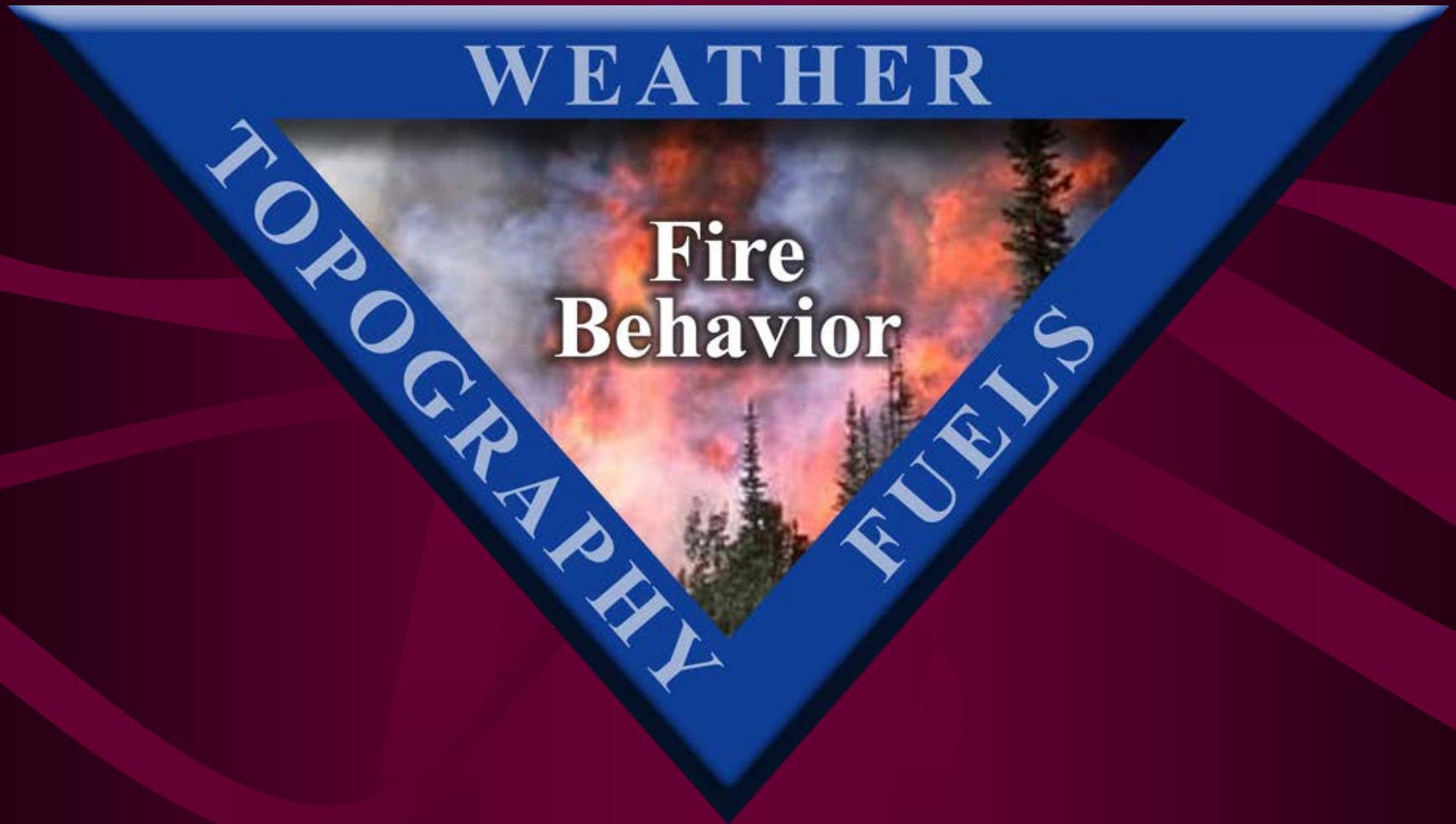
# 1000 Hour Fuels



# 1000 Hour Fuels: Administrative Support

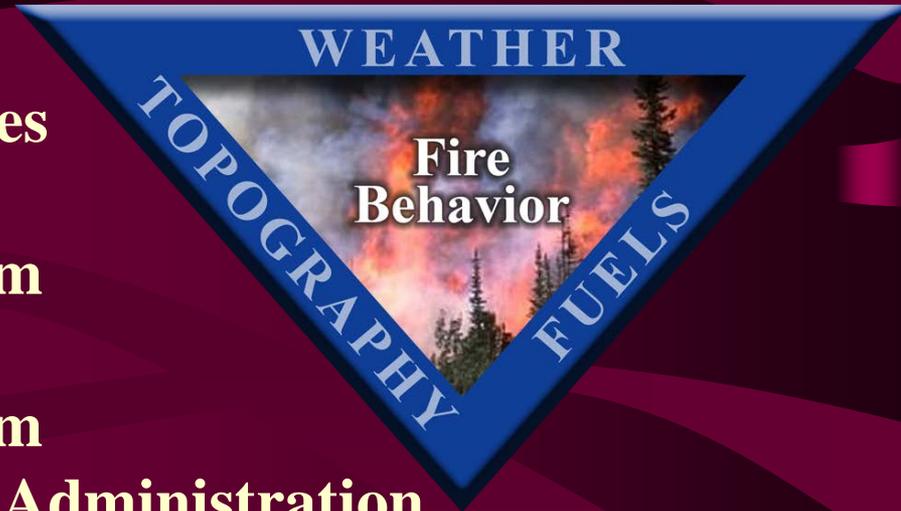
- **Grand Valley State University**
- **Michigan Department of Natural Resources**
- **US Fish and Wildlife Service**
- **Lake States Fire Science Consortium**
- **Michigan Prescribed Fire Council**
- **National Oceanic and Atmospheric Administration**
- **Association for Fire Ecology**

# Fire Behavior Triangle



# Weather: Instructors

**Michigan Dept. of Natural Resources**  
**US Fish and Wildlife Service**  
**Lake States Fire Science Consortium**  
**Michigan State University**  
**Lake States Fire Science Consortium**  
**National Oceanic and Atmospheric Administration**

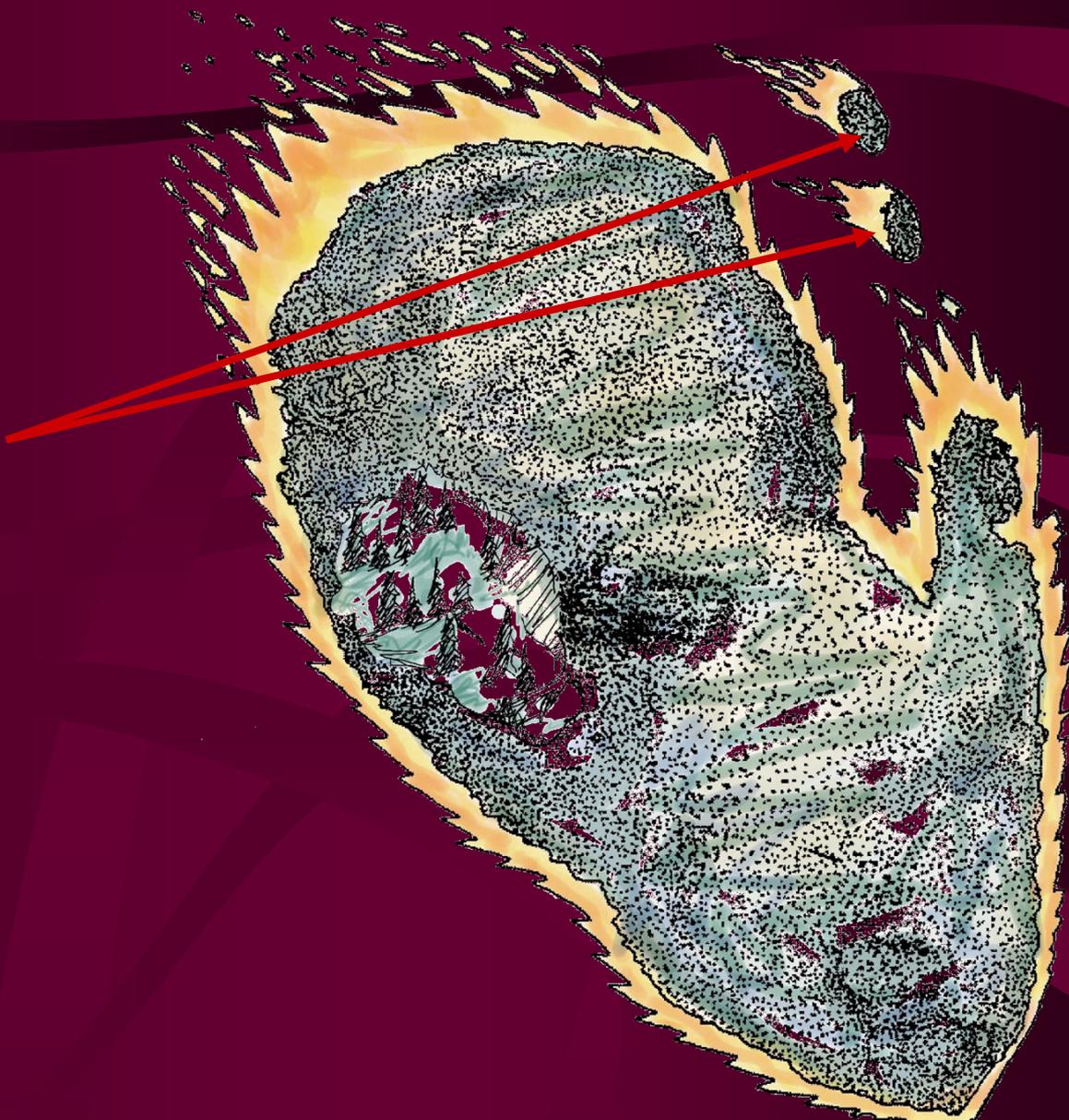


# Topography: Venues

**GVSU**  
**Pierce Cedar Creek Institute**  
**Ed Lowe Foundation**



# Spot Fire



# Spot Fires: Professional Opportunities



# Spot Fires: Professional Opportunities



# Spot Fires: Professional Opportunities



# The “Perfect” Burn Program

