



# Carleton College Cowling Arboretum & McKnight Prairie

**Student Involvement with Fire  
Management and Research Programs**

# Cowling Arboretum

- Established in 1927
- 880 Acres
- Adjacent to campus
- Remnant plant communities and restorations

## Fire Dependent Plant Communities:

- Tallgrass Prairie
- Oak Savanna
- Oak dominated forest
- Sedge meadow

## McKnight Prairie

- 35 Acre Prairie Remnant
- Acquired in 1968
- Disjunct from campus
- Managed with fire since early 1970's





# Property Management Philosophy

- Primarily support educational uses
- Conservation as goal supports both class and research use
- Recreational use where it does not conflict with educational uses



# Early fire management – 1970's



# Current fire management

- Active fire program in close proximity to town and campus
- Burn 8-10 units a year, ~80 acres – some very small units!
- Smoke management issues include busy state highway, sports activities, neighbors





# Current fire management

- 250 acres now under fire management
- Goal of >400 acres under fire management
- Working on smoke easements with neighbors



# Fire Program Staffing

- Staff – goal of attaining NWCG standards but this is a reach for a small program
- Volunteers – full day training program with live fire experience
- Students – mix of classroom and field experience – a few hours





# Student Roles in Fire Operations



- 35 Students each year
- Fire break preparation
- Fire operations – ignition, control, mop-up
- Weather observations

# Faculty Research Projects

Students assist with many aspects of on-going research and initiate their own projects



- Plant community and ecosystem changes in restored prairies over time
- Effect of nitrogen deposition and herbivory on plant communities (burned and unburned)
- Effects of disturbance on carbon and nutrient cycling

# Questions?

