

Building A Prescribed Fire Program

Austin Roby, Johnny Appleseed Metro Park District
Jennifer Windus, Ohio Prescribed Fire Council

Austin's Background

- Graduated from OSU in 2016
- Bounced around Soil & Water
- Started working for JAMPD in 2018
- JAMPD was established in 1972
- Manage 16 Parks, ~1600 ac
- Several habitat types including mature forests, prairies, wetlands, etc.
- NR dept. established in 2018



Jennifer's Background

- Graduated from SUNY-ESF in 1981
- M.S. in Environmental Biology in 1993 from OSU
- Retired from ODNR in 2014 (began in 1982)
- Worked in Parks & Recreation, Natural Areas & Preserves, and Wildlife (burning for 30+ years)
- Conducted land management, rare plant monitoring, invasive plant control
- Currently involved in the Ohio Prescribed Fire Council, Ohio Invasive Plants Council, Ohio Natural Areas & Preserves Association, & Crane Hollow, Inc.
- One of the instructors for DOF Fire Manager course



OHIO PRESCRIBED FIRE COUNCIL



The mission of the Ohio Prescribed Fire Council is to foster cooperation among the prescribed fire community, while promoting the safe use of prescribed fire as a natural resource management tool for Ohio's ecosystems.

The Council was formed in 2014 with the following objectives:

- ✓ Facilitate collaboration and sharing of information
- ✓ Provide education and outreach to improve public understanding
- ✓ Cooperatively review prescribed fire practices, regulations, and policies
- ✓ Foster support for the continued science-based use of prescribed fire
- ✓ Promote prescribed fire safety and related training opportunities
- ✓ Support prescribed fire research and facilitate sharing of findings

www.ohioprescribedfire.org

The Ohio Prescribed Fire Council was formed to promote and support the responsible use of prescribed fire in fire-adapted ecosystems in Ohio. It is a coalition of partners using prescribed fire as one of many land management tools, primarily in grasslands, prairies, savannas, and oak-hickory woodlands.

Our board of 16 members includes representatives from the ODNR Divisions of Forestry, Wildlife, & Natural Areas & Preserves; US Forest Service; US Fish & Wildlife Service; Ohio EPA; 5 County Metro Parks; and The Nature Conservancy. At least 26 other states now have prescribed fire councils, supporting the use of prescribed fire.



What the OPFC Does in Ohio

- Annual Meetings in late fall or winter since 2016 (except 2020-22)
- Workshops to provide training
- Review & provide input on DOF & OEPA fire regulations
- Assist DOF with Certified Prescribed Burn Manager training
- Hold 1-2 Board meetings a year



2019 OPFC Annual Meeting



2018 OPFC Workshop

- Provide a mentorship program to work with smaller park districts & organizations to develop prescribed burn programs (JAMPD is the first)
- Work with partners to improve their prescribed burn programs



**Fire is an important land management tool,
but it can be very unforgiving of error.**

ODNR DIVISION OF FORESTRY REQUIREMENTS FOR PRESCRIBED BURNING



See Division of Forestry's website for more information:
Fire Management Program, Prescribed Fire in Ohio

- Program was established in 2002 to provide guidance for prescribed burning & training for prescribed fire managers (CPFM)
- Any one conducting a prescribed burn must have a CPFM on-site
- DOF offers the 4-day CPFM training in late October every other year
- Any one conducting a prescribed burn must obtain a DOF waiver & submit notification to OEPA in advance; a burn plan must be prepared to DOF specs
- Recommended training for burn team members is offered at the Ohio Fire Academy (S130/190)

www.ohiodnr.gov/forestry

COMPONENTS OF A PRESCRIBED BURN PROGRAM



1. Certified prescribed fire manager
2. Trained prescribed fire crew
3. Appropriate equipment & supplies
4. Prepared burn units & firebreaks
5. OEPA notifications & DOF waivers
6. Notification to fire department
7. Prepared burn plan to DOF specifications
8. Appropriate PPE for full fire crew
9. Record of weather conditions
10. Contingency plan



The Roles on a Prescribed Fire Team:

1. Fire manager or burn boss (certified by DOF)
2. Igniter(s) – use of drip torch(s)
3. Holding crew – use of Indian or bladder tanks, leaf blowers, flappers, rakes
4. End of line, holding & lookout
5. Equipment operators – use of ATVs, trucks
6. Traffic control
7. Smoke spotters
8. Mop-up (holding crew)



HOW OPFC ASSISTED JAMPD IN 2018-2021

- JAMPD contacted Windus in 2018 for assistance to develop a prescribed burn program
- Windus recommended equipment & PPE to purchase with STEP grants from DOF
- Windus provided training for JAMPD staff in preparation for burns in 2019
- Windus served as the CPFM for several burns on JAMPD lands in 2019-2021
- Signed MOU between OPFC & JAMPD to cover liability & responsibilities
- Roby took the CPFM course in October 2021 & became certified
- Windus still serves as an advisor & mentor as needed



Getting Fire On The Ground

Motivations at Johnny Appleseed

- Lack of opportunities to gain experience
- We had native grasslands, and no good way to manage them
- Gave us another tool in the toolbox to manage what we have
 - *Sericea lespedeza*, woody spp., teasel rosettes, etc.
- Efficiency



Why Burn?

- Combat woody sp.
- Recycle nutrients
- Remove dead vegetation
- Invasive plant control
- Promote native species



Burn Plan

- Main document for prescribed fires
- Should list:
 - Objective
 - Crew size
 - Tools
 - Contingency Plan
 - Acceptable weather conditions
 - Burn breaks
 - Emergency Contacts

Johnny Appleseed Metropolitan Park District PRESCRIBED FIRE BURN PLAN – YEAR <u>2022</u>														
LOCATION (Park county, township, address if available): Cottonwood trail, Allen County, Amanda Township, 10659 Zion church rd, Spencerville 45887														
UNITS TO BE BURNED (specific units to be burned at park for the specified year): Two units, totaling approximately 20 acres														
TIMEFRAME (specify spring, summer, or fall burns and planned dates): One day between October 1 and November 31, 2022														
BURN OBJECTIVE: To control woody vegetation, as well as clearing thatch for native species promotion.														
SITE / FUEL DESCRIPTIONS: The fuel mostly consists of grass species.														
TOPOGRAPHIC INFORMATION: This unit is flat, 15' firebreaks will be constructed around it														
PRE-BURN PREPARATION: The Johnny Appleseed Park District will be responsible for preparing the firebreaks in advance, providing burn crew members, some equipment including an ATV, and coordinating with the Spencerville Fire Department.														
PERSONNEL AND EQUIPMENT: There will be at least 1 certified fire manager and 5 burn crew members on-site to conduct the burn as well as drip torches, Indian tanks, flappers, rakes, and an ATV with a water tank.														
SMOKE MANAGEMENT PLAN AND SCREENING MAP (evaluate a half-mile radius at a minimum): Being a rural park, there are very few potential smoke issues. There are a couple residences on the Northwest corner of the property; Johnny Appleseed Metro Parks will be responsible for notification of these residences. There are no other significant concerns.														
WEATHER FACTORS: <table><tr><td>WIND SPEED:</td><td>WIND DIRECTION:</td><td>MIXING HEIGHT:</td><td>RELATIVE HUMIDITY:</td><td>TEMPERATURE:</td></tr><tr><td>5-20 mph</td><td>W,N,S,SW</td><td>>1700'</td><td>30-70%</td><td>40-80</td></tr></table>					WIND SPEED:	WIND DIRECTION:	MIXING HEIGHT:	RELATIVE HUMIDITY:	TEMPERATURE:	5-20 mph	W,N,S,SW	>1700'	30-70%	40-80
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PRE-BURN AND POST-BURN CONTACT LIST: Austin Roby, Land Steward at the park district, (419-672-8766) will handle notifications day of burn. Allen County Sheriff: (419) 227-3535 Spencerville Fire Department: 419-674-4615														
FIRING TECHNIQUE(S): A combination of back firing, flank firing, strip firing, and head firing will be used to conduct the burn, depending on the specific weather conditions. Techniques used will provide the best control of both fire and smoke dispersion, while trying to top-kill woody vegetation as effectively as possible.														
PATROL, MOP-UP AND CONTINGENCY PLANS: The fire will be continuously monitored by the burn crew as the burn is conducted. The burn will be terminated if conditions are not appropriate for smoke dispersion or to meet the burn objectives. Crew members will mop-up all fire breaks and burning fuels within the units before leaving the site. The Johnny Appleseed Metro Park District will be responsible for checking the units later in the day for any flare-ups or problems.														

Assembling a Crew

- Takes 4-10 or more people to perform a burn, depending on unit size & fuel load
- We started off by keeping crew internal
 - Had a day long training for all staff
- Slowly we are starting to accept hand-picked experienced volunteers/partners



Basic Equipment Needs - PPE

- ▶ Long sleeved shirt, Pants
 - ▶ Made of Nomex or other fire-resistant fabric
- ▶ Leather boots/gloves
- ▶ Face/eye protection



Equipment - Hand Tools

- Ignition Tools
 - Drip Torch
 - Fusee (flare)
- Suppression Tools
 - Flapper
 - Chainsaw
 - Rake
 - Leaf blower



Equipment - Water

- Backpack water pack
 - Vinyl vs Metal
- UTV unit
 - What can UTV handle?
 - Many commercial options
 - Can do it yourself



Get Creative



Equipment

- Road Signs
- Weather Unit (Kestrel)
- Radios



Program Expenses

For a crew of 5, you'll need at least:

- Nomex shirt and pants (5) - \$300
- Helmets, gloves, & face shields (5 of each) - \$100
- Flapper (3) - \$64
- Drip torches (2) - \$185
- Indian Tank (4) - \$200
- Radios (5) - \$75
- Kestrel - \$160
- Road signs (2) - \$50

Total = \$4,000 minimum

STEP grant- 50/50 cost share grant through Division of Forestry

Step Grant

- Competitive 50/50 Cost share grant through ODNR
- Can include equipment, PPE, educational signage/materials
- Very good opportunity for new programs
- First 2 years we spent just over \$8,000
 - With the STEP grant we got half of it back
- Usually available in the fall
 - Can be found under grant opportunities page of ODNR's website

Limits to burning

- Location
- Species composition
- Potential hazards on site
- Rare plants and animals



Burning isn't always the answer

- Mowing
 - Canada goldenrod
- Herbicide
 - RCG, Canada thistle, teasel
- Manual removal of invasives
- Most situations call for a combination of all



Lessons learned

1. You can never have too many Indian tanks
2. Help is hard to find on short notice
3. Plan on asking twice as many people you need
4. Don't be afraid to reach out- everyone needs more help
5. Every fire is different, you always have to be on your toes
6. Don't be afraid to cancel a burn



IN CONCLUSION:

- ✓ Prescribed fire is an important land management tool in grasslands, prairies, savannas, and woodlands
- ✓ Land managers must use prescribed fire responsibly as it can be very unforgiving of error
- ✓ The Ohio Prescribed Fire Council is a good resource for building a prescribed fire program
- ✓ Don't be afraid to ask, experience is the best way to learn, and a lot of managers are always looking for help



Contact Information

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