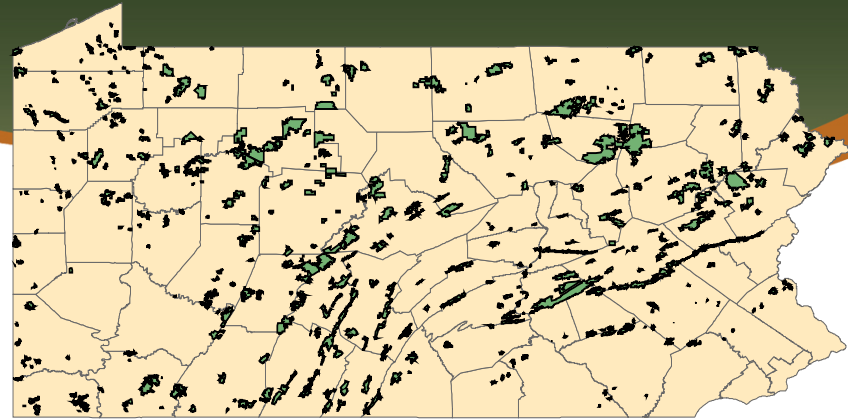




Building capacity to use prescribed fire for wildlife conservation and resilient landscapes



**Benjamin C. Jones, Habitat Division Chief
Pennsylvania Game Commission**



The Landscape

- 1.5 million acres on over 330 tracts
- ...create and maintain public hunting, special preserves or other wildlife management uses.
- Mandate to manage for wildlife conservation and hunting opportunity
- Forest sustainability, commercial timber, recreation



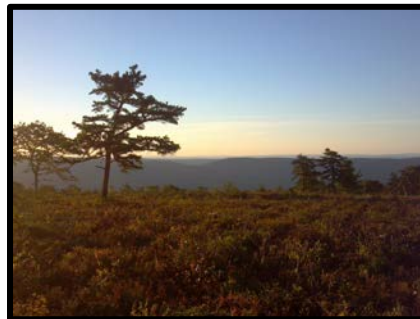
The Landscape

- 2.1 M acres State Forest; 450,000 State Parks; 500,000 Natl Forest; 50,000 Nature Conservancy; 18,000 National Guard Training Center.
- Ecosystem management, timber, wildlife conservation, recreation, clean water, native flora and fauna etc...



Goals

- Restore/maintain oak and oak-pine ecosystems (northern red oak to scruboak pitch pine)
- Restore/maintain early successional habitats
- Over 800,00 ac on PGC land alone





Justification

PENNSYLVANIA'S WILDLIFE ACTION PLAN



VERSION 1.0a

In fulfillment of requirements of the
Wildlife Conservation & Restoration Program and
State Wildlife Grants Program.

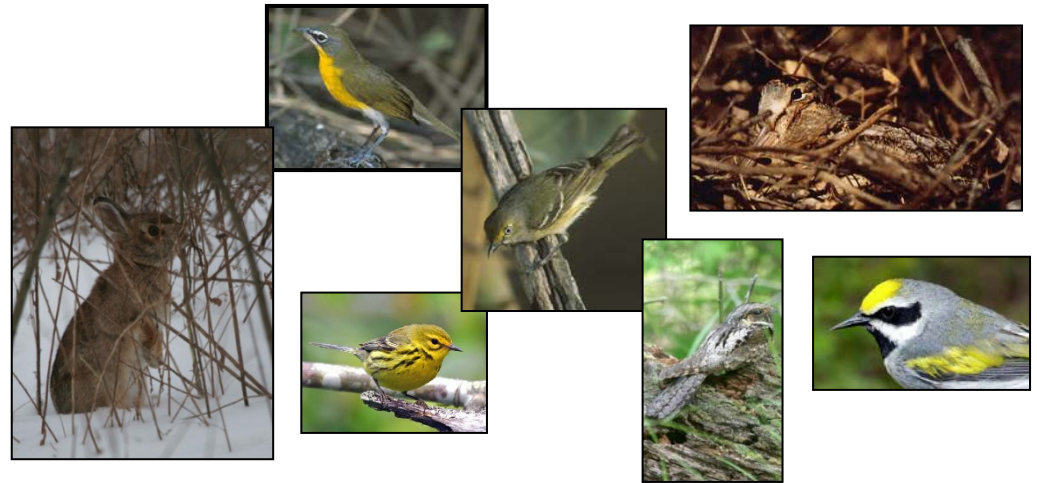
Compiled and Edited by
*The Pennsylvania Game Commission and
Pennsylvania Fish and Boat Commission*



September 2005
Updated May 2008



“Sensitive birds and mammals”



Cited fire exclusion as a
“major threat” to key
habitats



Management Guidelines for Barrens Communities in Pennsylvania



Funding was provided by the U.S. Fish and Wildlife Service through State Wildlife Grants program grant T-36-P, administered through the Pennsylvania Game Commission.

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United States Department of Agriculture

The Fire–Oak Literature of Eastern North America: Synthesis and Guidelines

Patrick H. Brose
Daniel C. Dey
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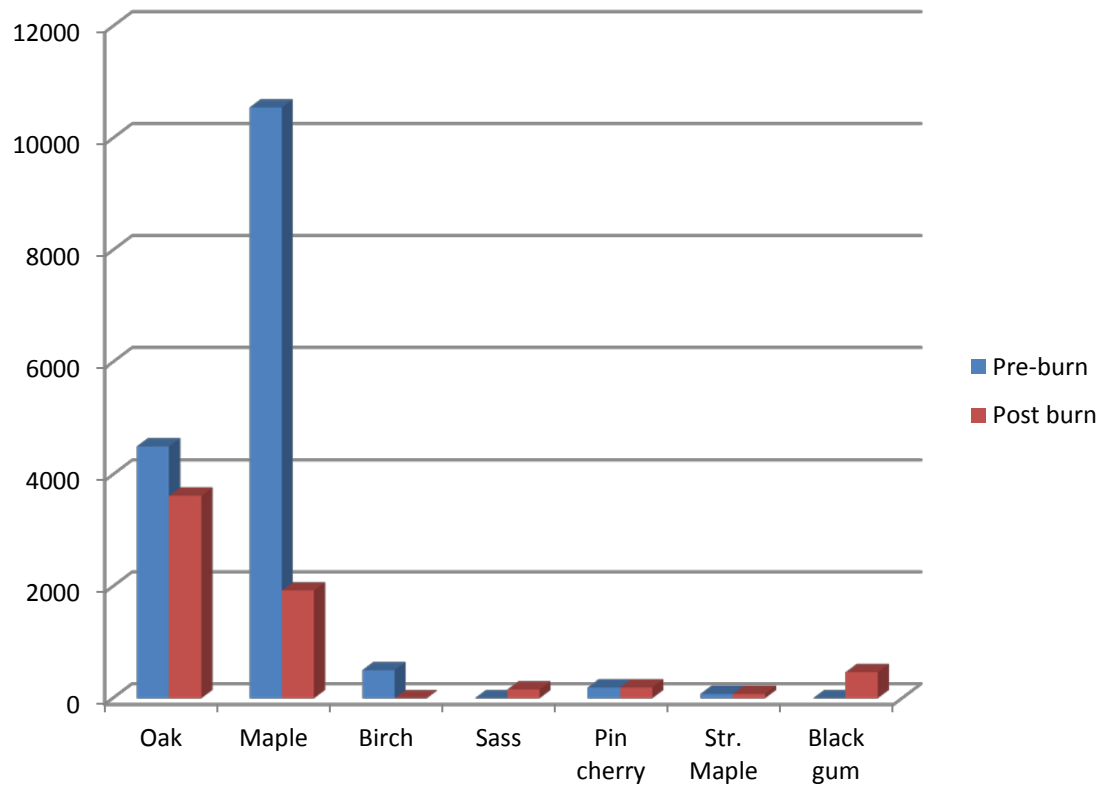


Forest
Service

Northern
Research Station

General Technical
Report NRS-135

July 2014





Gypsy moth





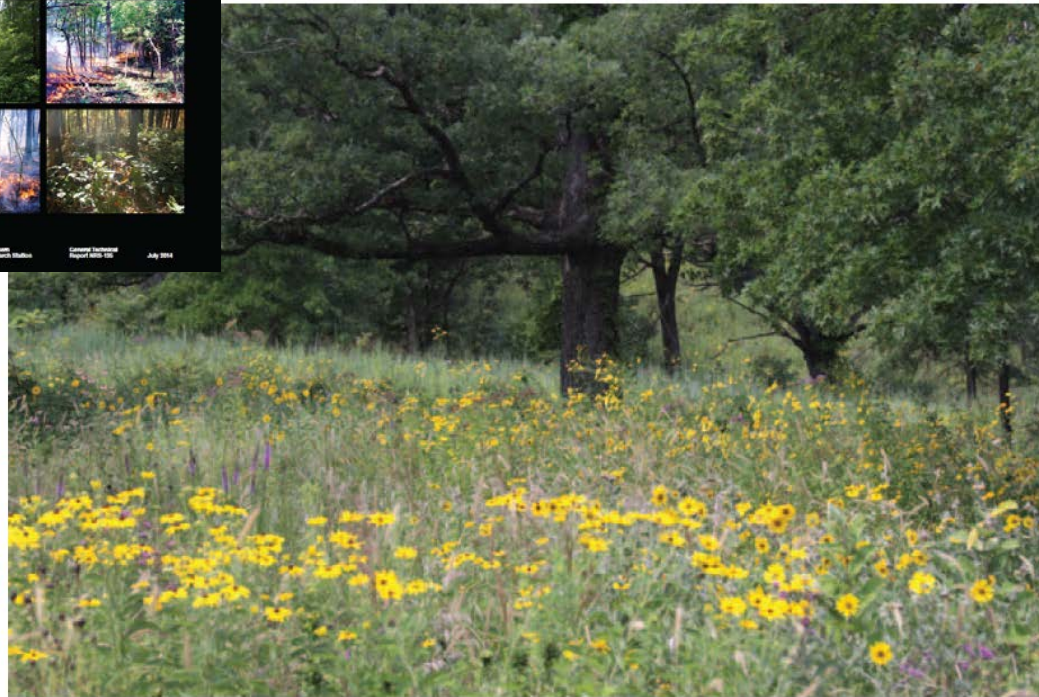
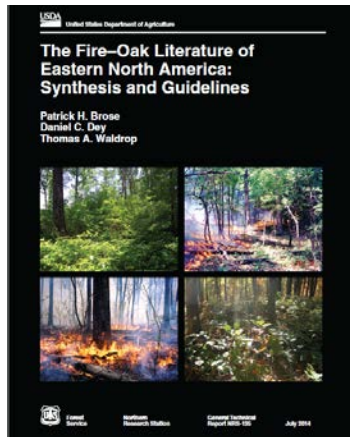


Figure 58.—Oak savannas are characterized by widely-spaced trees and a diverse herbaceous community of forbs and grasses. In eastern North America, oak savannas only occupy a small fraction of their historic range. Photo by Daniel Dey, U.S. Forest Service.





Reconstructing historical fire regimes across Pennsylvania

Investigators:

University of Missouri

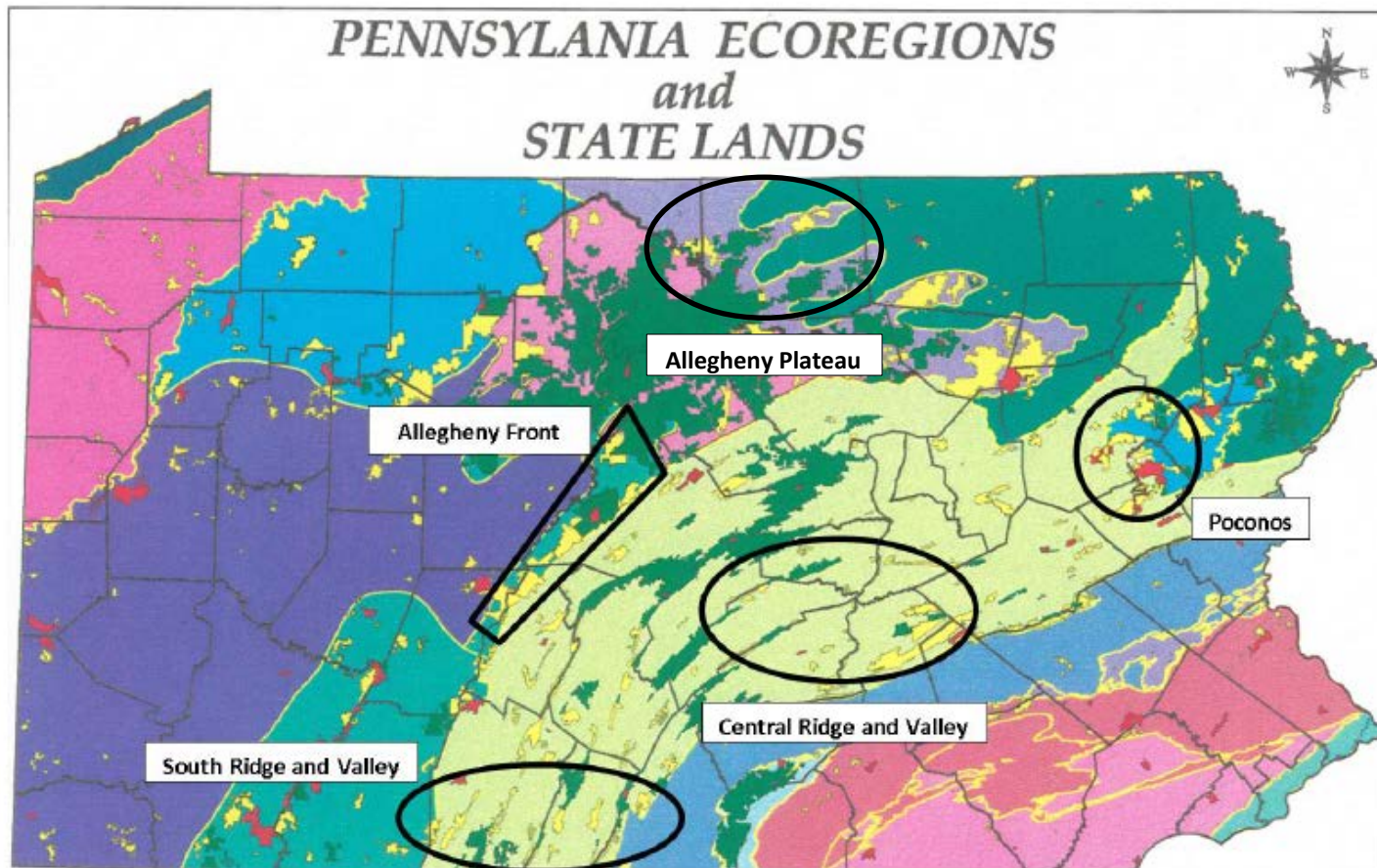
Michael C. Stambaugh, Joseph M. Marschall, Richard P. Guyette

Cooperators:

Pennsylvania Game Commission, Benjamin Jones

U.S. Forest Service, Patrick H. Brose, Daniel C. Dey

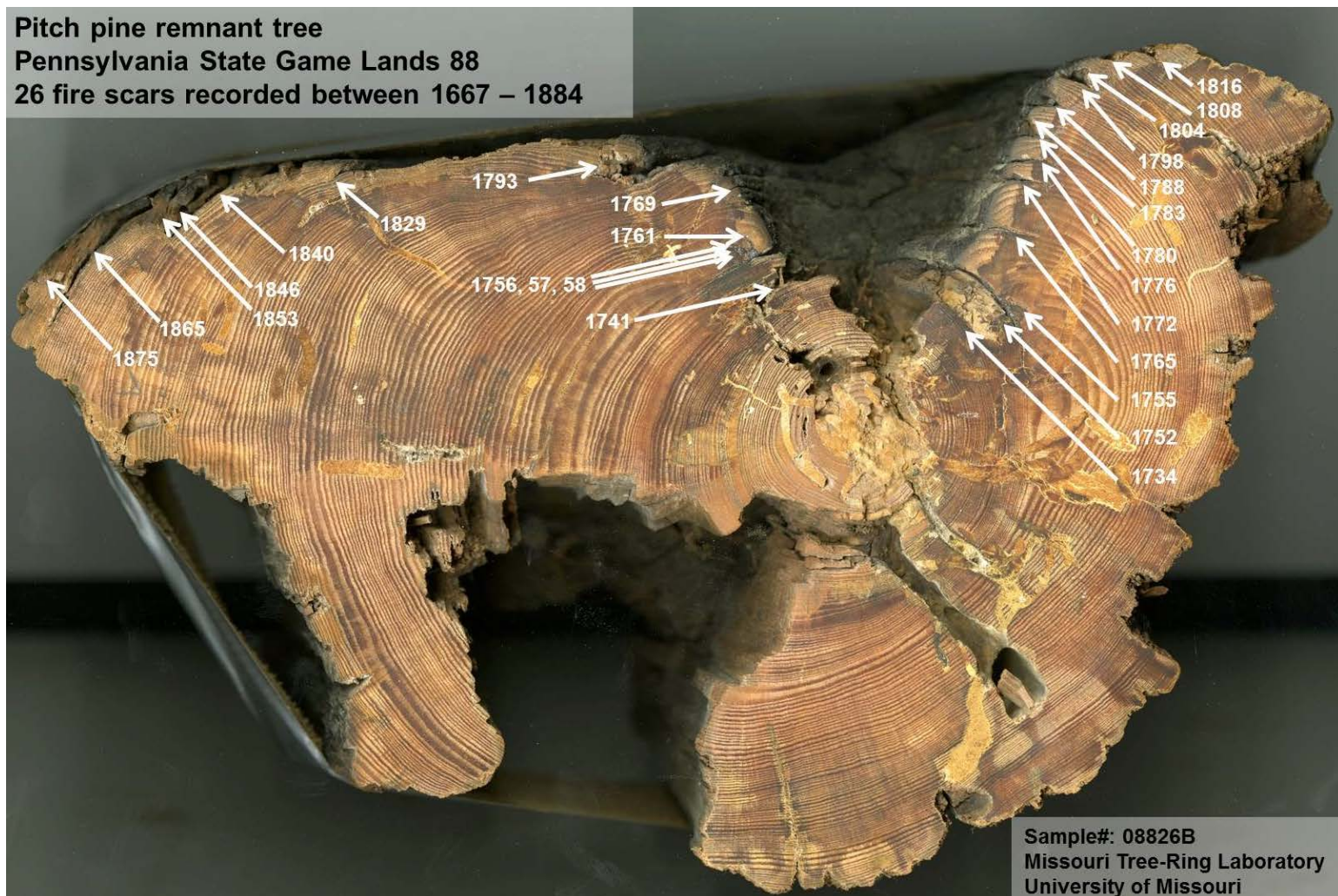








Pitch pine remnant tree
Pennsylvania State Game Lands 88
26 fire scars recorded between 1667 – 1884



Sample#: 08826B
Missouri Tree-Ring Laboratory
University of Missouri



Numerous hurdles to overcome

- State law that held burn managers criminally and civilly liable.
- Culture of fire suppression.
- Lack of prescribed fire training, experience.
- But there were a few torch bearers.



Formed the Pennsylvania Prescribed Fire Council

PA Game Commission, The Nature Conservancy, Fort Indiantown Gap NGTC, Department of Conservation & Natural Resources, National Park Service, U.S. Forest Service, Natural Lands Trust, U.S. Fish & Wildlife Service, Quality Deer Management Association, National Wild Turkey Federation, Pheasants Forever, Natural Resources Conservation Service, Penn State, PA Forestry Association.





PRINTER'S NO. 282

THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 262 Session of
2009

INTRODUCED BY HALUSKA, BARRAR, BENNINGHOFF, BEYER, CARROLL,
FLECK, GODSHALL, GOODMAN, HUTCHINSON, LEVDANSKY, READSHAW,
ROHRER, SIPTROTH, STABACK, BRENNAN AND WALKO,
FEBRUARY 5, 2009

REFERRED TO COMMITTEE ON ENVIRONMENTAL RESOURCES AND ENERGY,
FEBRUARY 5, 2009

AN ACT

1 Regulating prescribed burning practices; providing for the
2 powers and duties of the State Forester and the Department of
3 Conservation and Natural Resources; and establishing certain
4 immunities.

5 The General Assembly of the Commonwealth of Pennsylvania
6 hereby enacts as follows:

7 Section 1. Short title.

8 This act shall be known and may be cited as the Prescribed
9 Burning Practices Act.

10 Section 2. Legislative declaration and findings.

- Removed criminal and civil liability for those lawfully engage in prescribed fire.

- Set standards for using prescribed fire.

- Burn plan requirements
- Review process
- Burn Boss credentials
- Training standards



Building Capacity

- Actively engaged with partners (TNC, NPS, DMVA).
- Threw pride out the window – Accepted help!
- Convinced upper levels of importance to mission.
- Invested Pittman-Robertson funds to build program.



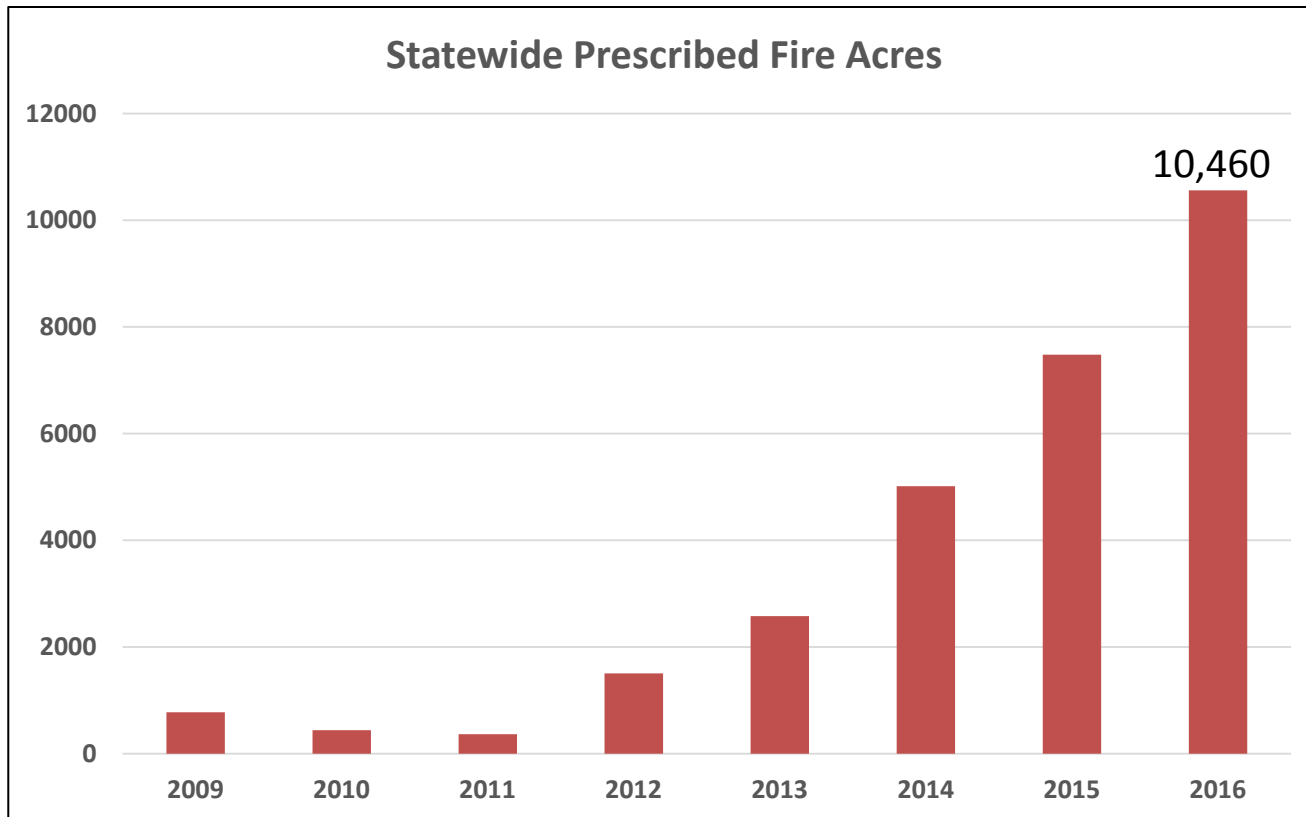


- Prescribed Fire Council remains relevant.
- Reviews proposed changes to the state standards.
- Networking hub for fire managers.
- Training clearinghouse, and sponsors courses.
- Public outreach and education primary objectives.



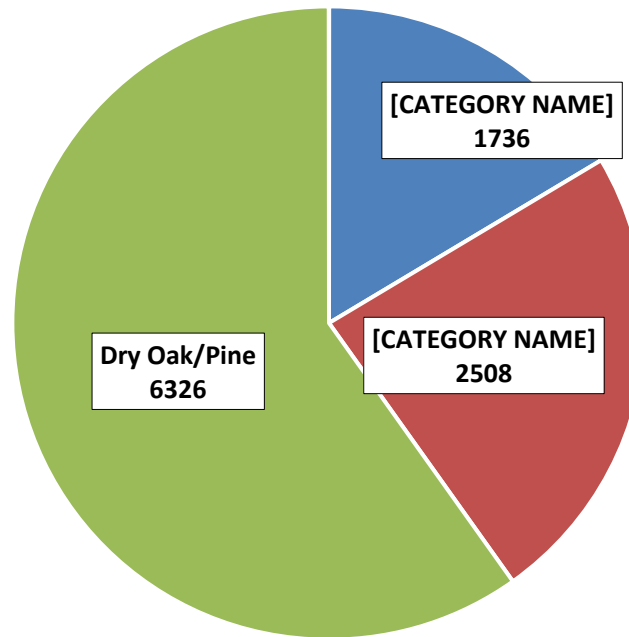


PA Game Commission Prescribed Burning since 2009



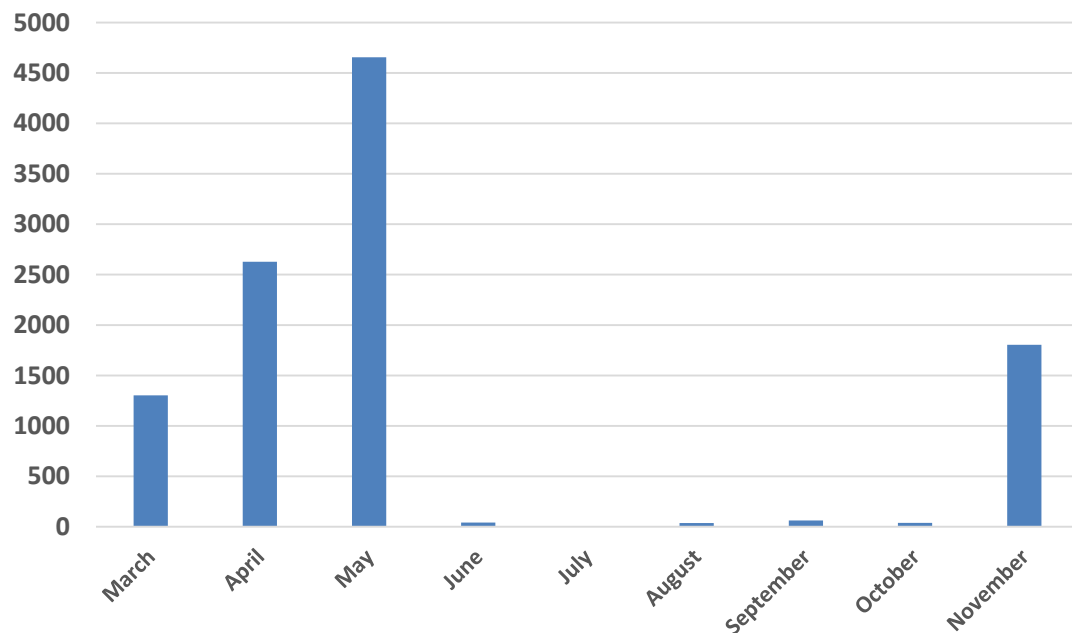


2016 Prescribed Fire Acres By Management Goal





2016 Prescribed Fire Acres By Month





Monitoring

- Balance of time spent vs information gained
- Goals of monitoring are to improve our:
 - adaptive management process
 - ability to make informed management decisions
 - efficiency in habitat restoration and management
 - shared knowledge base as habitat ecologists and fire managers (i.e., FLN)
- Goals of monitoring are NOT to:
 - get manuscripts accepted in peer-reviewed journals
 - determine if fire really works in oak ecosystems



Cost of managing oak habitats

- Herbicide (foliar and stem treatments)
\$81 – \$158 / acre
- Mechanical felling
\$300 – \$450 / acre
- Prescribed fire (standard 300 – 500 ac hand ignition)
\$24 – \$14 / acre (\$3664 crew time; \$3500 new breaks)
- Prescribed fire (1500 acre aerial ignition)
\$7.73 / acre (\$5090 crew; \$3000 air; \$3500 new breaks)





Pre-Burn, closed canopy, red maple with a few oak, decadent blueberry and scrub oak.



Post-Burn one growing season, canopy (mostly maple) mortality, scruboak sprouting, blueberry production exponential.





