



**SOUTHERN
Fire Exchange**

Uniting Fire Science and Natural Resource Management



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Effects of Prescribed Fire and Wildfire: Frequently Asked Questions from Florida

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INTRODUCTION

Neighbors or news media often ask questions of those involved in prescribed burning. Although some questions require unique answers relative to that particular burn, other questions are more general in nature. This fact sheet offers helpful answers and resources for those general questions, with the intent that you can use them to enhance public education about prescribed burning. While written from a Florida perspective, this information can be more widely used in most southern states.

WHAT IS PRESCRIBED FIRE?

Prescribed burning is a precise vegetation management tool that is utilized to meet different management objectives. The Commissioner of the Florida Department of Agriculture and Consumer Services states that prescribed fire is a safe way to apply a natural process, ensure ecosystem health, and reduce wildfire risk. In Florida, nearly every ecosystem is shaped by fire. When fire is excluded from these ecosystems, large amounts of vegetative fuel accumulate and create dangerous conditions when they do catch fire. Prescribed burning allows land managers to decide when and under what conditions fire takes place to optimize their resource management objectives.

WHAT HAPPENS TO ANIMALS DURING A WILDFIRE OR PRESCRIBED FIRE?

Fire has been a part of Florida's history for thousands of years, and wildlife that dwell in fire-prone ecosystems have adapted to this natural process. Most animals have little trouble escaping from fires, both prescribed and wild. Larger animals (e.g., deer, fox) will generally outrun the fire. Smaller animals often find shelters in burrows, under logs or in low, wet areas. Of course, it would be naïve to think that all animals escape a fire, but in general, wildlife populations benefit from fires (see next question). Drs. Main and Tanner of the University of Florida point out that wildfires may move much faster and burn at higher temperatures than prescribed fires, posing a greater risk to wildlife and humans alike.¹ They have found that the controlled nature of prescribed burning serves as a valuable



Prescribed fires are planned and managed by trained professionals to meet several management objectives. PHOTO BY LARRY KORHNAK.

tool to improve the habitats for populations of native animal species such as the red cockaded woodpecker, quail, and deer.

HOW DOES PRESCRIBED FIRE HELP ANIMALS AND HABITATS?

Most areas in Florida were historically maintained by regular fire. This means that the flora and fauna were adapted to regular fire patterns. Prescribed burning helps keep those areas healthy by reducing competition from non-fire dependent species and creating new and refreshed food sources. This varies from habitat to habitat. For example, the red-cockaded woodpecker (RCW) requires open pine stands with grassy groundcover. This type of habitat is maintained through frequent, low-intensity fires that occur every 1 to 3 years. If an area does not experience fire at regular intervals, this understory will soon be overgrown with shrubs and eventually the forest will no longer be



Gopher tortoises, along with several other species, live in habitats that are maintained by frequent, low-intensity fire.

PHOTO BY LARRY KORHNAK.

suitable RCW habitat. The Upland Ecosystem Restoration Project² has identified many other species that rely on habitats that frequently burn including grasshopper sparrow, loggerhead shrike, gopher tortoise, indigo snake, and bob-white quail.

WHAT ARE OTHER BENEFITS OF PRESCRIBED FIRE?

Vegetation management in Florida is vital to preserve desired native ecosystems, to decrease the threat of wildfire, and to meet other management objectives. Properly managed prescribed fire can provide the following benefits:³

- Reduces the risk of wildfire by decreasing dense understory shrubs, harvest residues and accumulated dead fuels.
- Improves wildlife or grazing habitats.
- Maintains successful forest regeneration.
- Cycles nutrients for healthy ecosystems.
- Preserves fire-dependent species.
- Controls insect and disease problems.
- Improves forest access.

HOW MANY PRESCRIBED BURNS ESCAPE?

A common misconception is that prescribed fires often escape and become wildfires. John Saddler with the Florida Forest Service reports that from 2005 to 2010, Florida had 131,506 burn authorizations for 13.38 million acres. Of those, 530 (0.40%) escaped and became wildfires. From 2010 through 2019, Florida experienced 23,121 wildfires that destroyed 511 (2.2%) structures. Since very few wildfires are started by prescribed fire escapes, prescribed burning is a relatively safe tool considering the many benefits it provides.

REFERENCES

- ¹ Tanner, G., & Martin, M. (1999). *Effects of fire on Florida's wildlife and wildlife habitats*. Gainesville, FL: Florida Cooperative Extension Service. Retrieved from <https://edis.ifas.ufl.edu/uw132>
- ² Tall Timbers Research Station and Land Conservancy. Misc. publications and conference proceedings. <https://talltimbers.org/information-resources-publications/>
- ³ Long, A. (1999). *Benefits of prescribed burning*. Gainesville, FL: Florida Cooperative Extension Service. Retrieved from <https://ufdc.ufl.edu/IR00001810/00001>

FOR MORE INFORMATION

Southern Region of the National Cohesive Wildland Fire Management Strategy <http://southernwildfire.net/>

GoodFires.org
<https://www.goodfires.org/>

Encyclopedia of Southern Fire Science
<http://www.forestencyclopedia.net/p/p4/view>

Florida Forest Service Prescribed Fire in Florida
<https://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Prescribed-Fire>

National Coalition of Prescribed Fire Councils
<http://www.prescribedfire.net/>

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