



Chapter 1: Introduction to the Wildland Fire Education Handbook¹

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Welcome to Chapter 1 of the Wildland Fire Education Handbook. This handbook originally accompanied the Wildland Fire Education Toolkit which consisted of print materials, videos, CD-Rom, and roadside sign. The toolkit, in its entirety, may be borrowed from your Florida County Extension or Florida Division of Forestry office. Much of what is in the Toolkit is now available on the web in this handbook and its companion documents.

In addition to this first chapter, this handbook consists of six more chapters. Please review each chapter for more information.

Chapter 2: Publications on Wildland Fire (FOR 73)

Chapter 3: Audio-Visual Resources on Wildland Fire (FOR 74)

Chapter 4: Press Kit for Wildland Fire (FOR 75)

Chapter 5: Wildland Fire Demonstration Area (FOR 76)

Chapter 6: Reporting Wildland Fire Activities (FOR 77)

Chapter 7: Wildland Fire Appendices and Acknowledgements (FOR 78)

This handbook was produced by the University of Florida with assistance from a grant by the Advisory Council on Environmental Education of the Florida Fish and Wildlife Conservation Commission.

This chapter of the Wildland Fire Education Handbook contains key information to welcome you to the Toolkit and to help you get started:

- Welcome and Introduction to the Wildland Fire Education Handbook
- Key Issues for the Public to Understand
- Audience Analysis: What Floridians Already Know

1. This document is FOR 72, a chapter in the Wildland Fire Education Handbook, Circular 1245, School of Forest Resources and Conservation, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Published in January 2000; revised in March 2000. Reviewed August 2006. Part of this publication may be reproduced for educational use, please provide credit to the School of Forest Resources and Conservation. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>

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Welcome to the Wildland Fire Education Handbook

This handbook is designed to provide extension agents and Division of Forestry staff with background information and resources to:

- conduct public programs on wildland fire,
- increase public awareness through publicity and events, and
- establish demonstration areas for prescribed burning and fire-wise landscaping.

All three avenues for reaching target audiences have been shown to be helpful in conveying scientific information to adult residents.

Wildland fire is a timely and important topic for many people in Florida. Although fire is a natural process of Florida's ecosystems, with the conversion of natural areas into homes and subdivisions, residents tend to expect fire protection services. As the fires of 1998 and 1999 showed, there can be times when excessive fuels and weather conditions make it difficult for fire fighters to suppress every fire or protect every home. Just as coastal residents take responsibility for preparing for hurricanes, residents near natural areas must do their part to live with fire and take precautions to protect themselves from wildfire.

This handbook provides information to help county teams tell the story of fire in Florida, describe the risks homeowners may face, and outline things to do to protect their homes if they live in a fire-prone area. Although many of the actions residents can take involve an environmental or economic cost, those at high risk for fire should be strongly encouraged to take these precautions. We greatly appreciate the participation of county teams that will make this program a success.

Introduction to the Wildland Fire Education Toolkit

The fires of 1998 served as a wake-up call to many Floridians. Although long-time residents, corporate property owners, and forestry officials were

familiar with fire, the public and the media seemed to be surprised by the powerful wildfires that raced through forests and into subdivisions, damaging or destroying 330 structures and burning nearly 500,000 acres. Educators rushing to provide information to the public discovered that most publications and videos were designed for western states.

Questions were more abundant than answers. What is the most important message for Floridians about wildland fire? How is fire behavior in the Southeast different from the West? How can homeowners attract wildlife and reduce water consumption in their yards while maintaining a “defensible space?” How much do Floridians already know about wildfire and prescribed fire?

The materials in this toolkit represent the best answers to these questions. The publications and videos assembled here have been reviewed by a team of technical experts from The Division of Forestry, The Nature Conservancy, and the University of Florida. We have generated our own materials where none were available. Some are based on interactions with a wide variety of stakeholders and represent the best thinking currently available on how rural residents should landscape their homes. Others seek to address technical concerns, such as the impact of prescribed burning on air quality.

This toolkit was produced by the University of Florida with assistance from a grant by the Advisory Council on Environmental Education of the Florida Fish and Wildlife Conservation Commission. It is part of a 15-month project (February 1999–May 2000) that also includes:

1. a needs assessment of 675 rural and suburban Florida residents,
2. training for county teams of extension agents and Division of Forestry staff,
3. public programs and media events generated by the county teams, and
4. an evaluation of materials and workshops.

Objectives

The objectives of this project are listed in two categories: those related to the project, and those related to participant outcomes:

Project Objectives

1. Current awareness and knowledge of target audience members about specified fire topics will be measured through a needs assessment survey and compiled from literature sources to support the development of more effective educational materials and programs.
2. Educational and model media materials will be created and additional materials obtained to form a Wildland Fire Education Toolkit.
3. Three training workshops will be offered to county teams of Extension agents and Division of Forestry staff to teach them how to use the toolkit, to expand their knowledge of fire in Florida, and to help them develop their own county programs.
4. A prescribed fire demonstration area will be established in Volusia County to enhance the training workshop and to pilot test materials and methods for effective use of demonstration burns.
5. With support from project staff, county teams will adapt the materials and conduct effective programs for up to a total of 2000 residents of Florida's fire-prone regions.

Behavioral Objectives

1. Ninety percent of County Extension agents participating in the training will increase their awareness and knowledge of specified fire topics, and 100% of training participants will indicate an intention to use the Wildland Fire Education Toolkit to create county programs and activities.
2. Public programs will be offered for 2000 rural residents by April 30, 2000.

3. Seventy percent of citizens participating in county programs will increase their awareness and knowledge of specified fire topics and will indicate their intention to perform actions to support the maintenance of fire-dependent ecosystems and to live safely in them.

This program represents an important contribution to the citizens of Florida by the University of Florida Cooperative Extension Service, The Nature Conservancy, and the Division of Forestry. Citizens attending public programs will have increased awareness of the natural role of fire and increased desire to take action to live safely with fire in Florida. An additional benefit of this concerted effort to create and distribute materials on wildland fire issues is that county teams will be able to continue to provide programs, information, and services long after this project's final report is written.

Key Issues for the Public to Understand

To conduct public programs, it is helpful to have a sense of what the public needs to know. The toolkit staff asked several groups of experts and educators to suggest what the public needs to know about wildland fire. Their responses are listed below, along with the key concepts identified by the granting agency that funded this project. We also conducted a random phone survey of adult rural and suburban Floridians to determine what they already know and believe about wildland fire. This research is briefly reported here and provided in greater detail in Chapter 7. Research on what Floridians already know, what they need to know, and what they care about was combined to develop resources for public programs and media coverage.

Key messages Floridians need to understand about wildland fire

- Fire is a natural process in Florida. Fire set by lightning has historically occurred most often in the spring and summer, but lightning fires are possible in any month in Florida.
- Because of a history of periodic fires, many of Florida's natural communities are adapted to burning. Many plants are dependent on and

benefit from fire they flourish in a landscape that is periodically burned with low-intensity fire. Florida's common fire-dependent ecosystems are pine palmetto flatwoods, longleaf pine/wiregrass sandhills, native grass and shrub prairies, and sand pine/oak scrub.

- Animals such as the scrub jay, red-cockaded woodpecker, gopher tortoise, and Sherman's fox squirrel are dependent on fire-adapted communities. Few individual animals are harmed by fire, and animal populations benefit.
- Fire-dependent ecosystems provide a variety of services. Plants take up carbon dioxide and release oxygen; trees buffer noise and some forms of air pollution; wetlands replenish groundwater, filter water pollutants, and control floods; trails and other recreational sites allow visitors to rest, relax, and rejuvenate. Wildlife pollinate plants, disperse seeds, turn the soil, and provide recreational opportunities such as wildlife viewing and hunting.
- As people move into Florida's fire-dependent ecosystems and periodic, low-level natural fires are excluded, vegetation and fuels build up and catastrophic wildfires become more likely. People need to protect their homes from wildfire and learn to live with periodic fire in Florida.

Key messages Floridians need to understand about prescribed fire

- Catastrophic wildland fires can be prevented through several fuel reduction techniques, one of which is prescribed fire. A prescribed fire is a fire that land managers set in a controlled manner. Prescribed fire provides many of the benefits of natural fire and the predictability of when and where the fire will occur. Prescribed fire can protect homes from wildfire by reducing level of fuels that support wildfires.
- Areas that have been burned under prescription may look charred, but new vegetation sprouts within a few weeks. The young vegetation extracts the nutrients readily available from the ash. Grazing wildlife and livestock are among the first to benefit from prescribed fire.
- Because prescribed fires are usually smaller and burn at a lower temperature than wildfires, most wild animals can escape or hide during a controlled burn.
- Fire helps to maintain habitat for many species of plants and animals.
- There are disadvantages to prescribed fire, such as smoke and ash, which may aggravate lung problems or reduce visibility on roads. Because prescribed fire is generally cooler and is managed to minimize smoke production, the smoke from a prescribed fire is usually much less than would be produced from a wildfire of equal area. Prescribed fires are conducted when conditions are favorable for low production and quick dispersal of smoke.
- Smoke-sensitive facilities located near natural areas—highways, airports, hospitals, and senior citizen centers—reduce flexibility for conducting prescribed burns. Burn authorizations are granted only if weather conditions will move smoke away from these areas.
- Depending on the temperature and time of burn, mature trees may be scorched, stunted, or killed in a prescribed burn.

Key messages Floridians need to understand about living with fire

- Some homes are more at risk from wildfire than others. Risk depends on the type of ecosystem, the level of development of nearby land, the ground-level vegetation near the house, the ability of fire fighters to get to and around the home, and the home's building materials.
- There are many things Floridians in high-risk areas can do around their homes and on their properties to reduce wildfire risk and to feel more comfortable with prescribed burning.
- Everyone is responsible for preventing wildfires. In Florida, human carelessness causes more wildfires than lightning.

What Floridians Already Know

A telephone survey of 675 rural and suburban residents of Central and North Florida (April 1999) provides an assessment of the knowledge and attitudes of our program audience. The survey was conducted by the Bureau of Economic and Business Research at the University of Florida and included 58 questions about wildland fire and related topics.

The survey reveals a somewhat discordant perspective on fire in Florida. People know fire is good for natural areas, they think residents who live near natural areas should tolerate smoke, and they know prescribed fire is “better” than wildfire for a variety of reasons. However, they favor stricter controls on burning, and they value air quality more than burning.

Some confusion about the difference between unwanted fire and prescribed fire exists. Only 63% of respondents correctly define prescribed fire, while 25% answer incorrectly, and 12% do not know the answer. The 37% who did not know the correct definition of prescribed fire are a large minority. In another recent random survey of both urban and suburban/rural Floridians, only 40% correctly defined prescribed fire. While rural and suburban residents are more knowledgeable than urban Floridians, there clearly remains a need for programs to emphasize the distinctions between wildfire and prescribed fire.

Attitudes

Despite the barrage of news coverage during the 1998 and 1999 wildfires, only 28% of respondents say they are very concerned about the threat of wildfire, while 45% of residents are unconcerned and 27% are moderately concerned. Rural and suburban Floridians believe the greatest benefit of prescribed fire is to prevent wildfire, while maintaining natural landscapes is the least important benefit. Respondents believe that the greatest risks of prescribed fire include threats to wildlife and to nearby land. Car accidents, health concerns, and more regulation are perceived to be less serious risks. Thus, how wildlife responds to fire should be clarified and home landscaping measures could be introduced as a way to protect property from the risk of *any* kind of fire, either wildfire or escaped prescribed fire.

Experience

While only 3% of respondents were evacuated from last year's wildfires, more than half of the respondents were exposed at home to smoke from the fires. Furthermore, 30% of respondents said the natural area near their home has burned since they've lived there. Suburban and rural Floridians have a reasonable level of exposure to natural area fires. This may be why over 40% of respondents claim to have already trimmed branches and moved woodpiles away from their homes to reduce their risk.

Wildland Fire Education Programs

Respondents are interested in attending programs about how to protect their homes from wildfire and about air quality and health. They are not interested in learning about fire-prone areas near their homes. Residents are likely to plant but have not already planted less flammable landscaping plants; similarly, they are likely to replace but have not already replaced fire-prone building materials. These home protection actions could be valuable program topics. Respondents did not report radio as a source of information about fire, so programs should also be advertised through TV and newspaper media if possible.

Our Target Audience: Rural and Suburban Floridians

Slightly more females (57%) than males (43%) responded to the survey. Respondents ranged in age from 18 to 90 years, at an average of 48 years old. Thirty-one percent (31%) of the respondents completed a high school degree, 32% had some college and 16% had a four-year degree. Only 12% of the sample had attended graduate school. Regarding ethnicity, 86% were white, 6% were black, and 2% were Hispanic. Nearly a quarter of respondents (24%) had worked in agricultural or natural resource professions.

The respondents live an average of 7.2 miles from a natural area; 78% say their natural area has pine trees. When asked if this natural area has burned since they have lived at this location, 30% said yes. More than half the sample (58%) smelled smoke at their homes during the 1998 or 1999 fires for an

average of 8 days. Only 3% of the respondents were evacuated due to the wildfires, but 38.5% of the respondents say the fire was near their home (on average, 10 miles away). Despite this proximity and potential risk, 45% of the respondents were unconcerned about wildfire.

This snapshot of our target audience—rural and suburban residents of North and Central Florida—can be compared with county data to give program developers some ideas of how to present a public program. Local demographic data, information about local ecosystems, and the balance of local rural/suburban/urban mix will greatly enhance these state results in developing public programs about fire in Florida.