

Chapter 9B—Wild Land Fire

TABLE OF CONTENTS

Florida Emergency Services Demographics	127
Florida Fire Behavior	129
Fuels	130
Spot Weather Forecasts	131
Smoke and Highway Visibility	131
Liaison with Forest Industry	132
Aircraft Operations on Wild land Fires	132

(This page intentionally left blank)

Chapter 9B

Wild land Fire

Wild land fire in Florida is a year round problem. Florida averages 5,000 wild land fires, which consume 240,000 acres annually. The Florida Forest Service has been given statutory authority for the prevention, detection, and suppression of wild land fire. Because of the ever-growing complexity of wild land fire in the urban interface, most wild land fires require some type of unified response from fire and law enforcement agencies.

The command and general staff positions and their responsibilities are the same as any other incident. Some of these positions require specialized wild land fire behavior and suppression training, especially those positions with fire line responsibilities, such as the Incident Commander and Operations Section Chief.

Florida Emergency Services Demographics

- a. **Florida Forest Service**—Florida Forest Service has statutory authority over all wild land fire within the State. They are a full service wild land department meeting all requirements of the Wild land Fire Qualification System Guide (PMS310-1). Nearly all wild land fires in Florida will include areas where municipal Fire Departments or other agencies have some responsibility. Firefighting activities in these areas should be organized with a Unified Command Structure.
- b. **Career Departments**—Career departments in Florida range in size from one person to 13,000 personnel. All departments range in experience in wild land fire. Many departments do not have wild land engines and only do structural protection with Type 1 structural engines from

paved or improved dirt roads. Wild land Personal Protective Equipment (PPE) including shelter is not common in structural departments. Career departments that cover large rural areas will have more knowledge of wild land strategies and tactics along with wild land engines. Resource availability is through the State Emergency Response Plan administered by the State EOC, State Fire Marshal, and the Florida Fire Chiefs.

- c. **Volunteer Departments**—Volunteer departments are common in the rural counties and are interspersed amongst career departments. All departments range in experience in wild land fire. Most volunteer departments have wild land engines that range from Type VI to Type IV. Most rural counties have limited water supplies so tenders are often used. Wild land PPE is common among these departments; however, shelters and the training and use are not as common.
- d. **Cooperators (Forestry)**—The Florida Forest Service has many compacts with private landowners and timber companies that can provide wild land firefighting capabilities (heavy equipment and dozers).
- e. **State Emergency Operations Center (EOC)**—All resources ordered for fire in Florida using State resources go through the State Emergency Operations Center. Outside resource are coordinated through the Florida Interagency Coordination Center (FICC). The State EOC is the one central point of contact where Emergency Management, Florida Forest Service, State Fire Marshal, Florida Fire Chiefs, and the State Emergency Response Team coordinate efforts.
- f. **Local EOC (City/County)**—All local fire, EMS and law enforcement must order resources beyond mutual aid through the local Emergency Operations Center (EOC).

- g. **State Fire Marshall**—Is the lead fire official in Florida and is located at the State EOC and has statutory authority over all career and volunteer departments, and coordinates all mutual aid involving structural fire service resources.
- h. **Florida Fire Chiefs Association**—The Florida Fire Chiefs work with the State Fire Marshal, Florida Forest Service, and Emergency Management to move structural resources to the affected area. The resources include structural apparatus, EMS, and wild land apparatus. The State Emergency Response Plan (SERP) is designed so that resources can be acquired from around the State to assist in the response process. Departments must exhaust all their resources, mutual aid resources, and then they can request State assistance. State assistance is listed as level 1, which the State, after receiving the request from the local Emergency Manager, dispatches crews on duty from close proximity departments to respond immediately to the incident. Level 2 allows departments from unaffected regions four hours to pull crews together and respond to the incident.
- i. **Sheriff**—All Counties in Florida have a Sheriff's Office and the Sheriff is the senior ranking law enforcement Official. They can impose curfews or other crowd control measures.

Florida Fire Behavior

Many of Florida's fuel types have volatile chemicals and will actively burn even when appearing green. These volatile fuels include native plants as well as very flammable exotics species such as cogon's grass and melaleuca. Use of counter fire without significant control lines must be very carefully considered before attempting. Due to Florida's wild land fuels' heavy loading and highly flammable nature, tractor/plow units are the normal initial attack resource. Type VI engines are useful in supporting dozer operations and mopping up.

Heavy dozers (Type I & II) are often needed in swamp fuels. Helicopters are also very effective as supporting dozer operations.

Fuels

Palmetto/Gallberry (Southern Rough)—This fuel type can result in the most dangerous and volatile fire situation that firefighters encounter in Florida. This fuel type with a dense pine over story accounts for the majority of Florida's large fire incidents. Both Palmetto and Gallberry are evergreen native shrubs that burn extremely well, even when most of plant is green. Fuel loading relates to the intensity of burning and to the difficulty of establishing control lines. This fuel type generally has a large loading of dead material (increasing with each year unburned) that adds to the fire's intensity. This fuel type also can produce volatile oils in its foliage, which increases the fire intensity, especially in spring. Spotting can be problematic in dry weather/low humidity due to the plentiful palmetto fronds that can be carried over control lines by convective lifting.

Swamp Fuels—Generally speaking swamps will not burn actively unless fire weather and the drought index have become critical. The fire situation is severe when swamps become a problem. Many swamps have lost their ability to retain water and have begun to burn more regularly. A major swamp fire will tie up firefighters for days or weeks, and may severely limit their ability to respond to new fires. In the past, many of Florida's major fires have started in swamps with every foot of the fire's perimeter becoming a threat for breakout regardless of the swamp's size.

Swamp fires are problematic due to the difficulty of heavy equipment operation, plentiful fuels, ample spotting, and falling trees due to organic soils burning.

Muck Fuels—Many areas of Florida include muck fuels. These fuels are ground fuels composed of organic material densely compacted. These fires can smolder and produce copious smoke for weeks under drought conditions. Muck fuels are often associated with dry lakebeds and swamp areas. They will burn down to sandy subsoil, or the water table. Suppression of muck fires often requires enormous amounts of water (from wells or piped in) often applied with large sprinkler systems along with plowing and disking fuels to break up hot spots or establish control lines down to mineral soil.

Spot Weather Forecasts

Spot weather forecasts are produced by the Florida Forest Service and are intended for use on prescribed fires and wildfires. These forecasts do not replace the general forecasts produced by the National Weather Service, but are intended to augment their forecasts. Forecasts provide hourly temperature, relative humidity, wind speed, and direction. Data in red indicate potentially severe fire weather conditions. The forecasts are available at:

www.floridaforestservice.com/fire_weather/spot

Smoke and Highway Visibility

Few locations in Florida are so remote that smoke from wildfires cannot reach and affect visibility on highways or other roads. The Low Visibility Occurrence Risk Index (LVORI) indicates the likelihood of fog and smoke interacting to create problems on highways.

LVORI values of 7-10 indicate a high danger of fog and smoke. LVORI forecasts can be found on Fire Weather Forecasts from the National Weather Service. A HySplit smoke model forecast is available as part of a NWS Spot Weather Forecast upon request. Law enforcement (Florida Highway Patrol [Interstates and State Roads] or Sheriff's Office) are responsible for determining if a road should be shut down due to limited visibility.

Liaison with Forest Industry

Forest Industry companies and other large landowners can offer great assistance to fire planners with some fire suppression resources, fire history, fuel break information, stand maps, contact information, and other local knowledge. It is critically important to work closely with Forest Industry and other large landowners and to include them in planning and share information with them.

Aircraft Operations on Wild land Fires

The Florida Forest Service (FFS) is statutorily responsible for all airspace over wild land fires. The FFS has fixed wing observation aircraft as well as helicopters for various missions including suppression of fires.

All state, regional, and local government agencies operating aircraft near an ongoing wildfire must operate in compliance with the applicable State Wildfire Aviation Plan. This plan is maintained at the Florida Forest Service website <http://floridaforestservice.com>. For more information about the plan and aircraft operations near wildfires, you may contact the Florida Forest Service–Forest Protection/Aircraft Section.