

## FACT SHEET: PRESCRIBED FIRE AND THE BIG PINE KEY PRESCRIBED BURN June 2022

Prescribed fire is a form of land management in which fire is intentionally applied to vegetation.

Prescribed fires are conducted under desired conditions to meet specific objectives, such as improving ecosystem health and decreasing fire intensity during wildfires. Managers compose a detailed prescribed burn plan that clearly defines the suitable weather and fuel conditions, the desired fire behavior, and the effects needed to meet predetermined objectives. Prescribed fires can enhance community safety by reducing the buildup of dead wood and other debris that can contribute to unnaturally intense wildfires. Fire can also improve watershed conditions by thinning dense stands of trees that absorb a great deal of water and reduce the flow of springs and streams. Wildland firefighters are trained to apply prescribed fires across the landscape when it is safe and reasonable.

Public health and safety is our number one concern.

- Prescribed fires are ignited only after a thorough analysis of conditions is completed and strict procedures are followed.
- Prescribed fire will only be started when optimum wind and weather conditions are met. These optimum conditions decrease impacts from smoke. Smoke impacts to the surrounding community should be minimal, but weather can change quickly and smoke direction or amount may shift.
- Prescribed fire personnel will monitor for signs of COVID-19. Crew members will wear masks and maintain 6 feet of social distance while working with others. Crew members will wash hands and sanitize equipment as appropriate.
- Refuge Staff and fire personnel will monitor fire lines along roads. Please read electronic signs regarding closures or changes in traffic flows.
- Privately owned drones are not allowed to fly within fire location during fire activities. Drone movements could impede communication and flight pattern of Aviation Resources.
- No fire organization can guarantee that all risk is removed from prescribed fires, but the overall record of federal agencies is excellent. Only about one-half of one percent of prescribed fires become wildfires.

Prescribed fires help return landscapes to their natural balance with fire.

In many regions that historically experienced wildfires, such as the prairies and pine forests of South Florida, years of fire exclusion and suppression in the 19th and 20th centuries allowed fuels to accumulate, altering the vegetation communities now present. Prescribed fire can be used to restore those ecosystems and promote the historical conditions that were once present prior to the removal of wildfire. Additionally, many ecosystems, such as Pine Rocklands, are specifically fire-adapted—the species of plants and animals native to the ecosystems are enhanced by, or dependent on, the occurrence of fire to persist and reproduce. The use of prescribed fire in Pine Rockland can improve ecological conditions, especially in fire-suppressed areas, and promote the conservation and preservation of this ecosystem. Plant responses to fire vary widely depending on the plant ecology and the fire behavior; the ways in which plants respond can result in changes in both the species occurrence and their relative abundance.

### Prescribed fire objectives are affected by changes in fuels, weather and topography

Prescribed fire practitioners must consider multiple factors in order to successfully implement burns. One of the main considerations is the desired fire behavior—how the fire should burn to achieve the desired outcome—which generally is influenced by fuel type, weather conditions, and topography. Areas differ in the amount, type, arrangement, and combustibility of the fuels present, depending on factors such as the type of ecosystem, the season, and the amount of time since the last burn. Weather conditions, such as precipitation, temperature, relative humidity, and wind, have a strong influence on prescribed fire behavior, with dry, hot, windy conditions being the least conducive to safe burns. The primary topographic consideration for prescribed fire behavior is the slope of the terrain; fire spreads up or down a hill very differently than across flat ground. The direction and speed of a fire can be controlled based on the application of fire with respect to the direction of the wind or slope. Fires that burn with the prevailing wind or slope are called head fires and have the highest intensity and rate of spread, whereas fires that burn against the wind or slope are called backing fires and have the lowest intensity and rate of spread. Fires moving perpendicular to the wind or slope are called flanking fires and have intermediate intensity and rate of spread.

### Immediate and long-term fire effects.

Typically, the fire effects most important to managers are the amount and pattern of the fuels burned, the amount and composition of the smoke produced, and the vegetation response. Smoke composition is important to managers because its components, such as particulate matter, carbon dioxide, and ammonium, have different impacts on air quality and human health. Prescribed fires are designed to burn underbrush and small trees, which store less carbon. By clearing out the underbrush, prescribed fire can reduce the chances of subsequent high-severity wildfires, thereby protecting large trees and keeping more carbon locked up in the forest.

The following agencies will be assisting with this prescribed burn: USFWS South Florida Refuges, Florida Forest Service, National Park Service, The Nature Conservancy, and Monroe County.

### **Specific dates and times will be announced on Facebook and website:**

[http://www.fws.gov/refuge/National\\_Key\\_Deer\\_Refuge/](http://www.fws.gov/refuge/National_Key_Deer_Refuge/)

<https://www.facebook.com/floridakeysrefuges>

For more information, contact Brian Pippin at 931-260-3350; Chris Eggleston, Florida Keys National Wildlife Refuge Manager, at 305-872-2239 x209; or Erin Myers, Public Information Officer, at 239-370-6302