



## Florida Partnership Enables Landscape-Level Prescribed Burn

**The National Cohesive Wildland Fire Management Strategy** is a national collaborative effort to bring a broad cross-section of stakeholders together to address wildland fire management challenges. The Strategy directs wildland fire planning activities and has three primary goals: restore and maintain landscapes, develop Fire-Adapted Communities, and improve wildfire response.

Activity	Impact
# acres burned	1,333
# partners in Gulf Coastal Plain Ecosystem Partnership	15

### Project Overview

On March 2, 2018, a large prescribed burn occurred at the Yellow River Water Management Area in Santa Rosa County, Florida, which is managed by the Northwest Florida Water Management District. Weather and atmospheric conditions were ideal and resources were available for the Florida Forest Service to approve the burn permit. Aerial ignition via helicopter started the fire systematically across the landscape. Ground firing and monitoring crews, consisting of 15 personnel were stationed at the tract perimeter as ground support during the burn.

The significance of such a large, or landscape-level burn, is the potential to burn a large area in a short amount of time. The burn was unique due to the number of acres burned in a day, encompassing 1,333 total acres. A burn at this scale would require careful planning, a crew with significant training and experience, sufficient equipment, and aerial ignition of the burn by helicopter. This landscape-scale burn was made possible through the Gulf Coastal Plain Ecosystem Partnership

(GCPEP), a partnership formed to share resources and manage land at the landscape scale, and a grant by the Florida Forest Service, which paid to hire the helicopter.

The objective of the burn was to reduce vegetative fuels on the Ward Basin Tract of the Yellow River Water Management Area and bring this tract into the regular 3-year burn rotation that occurred on the rest of the Yellow River property. The large tract was bordered on the south by the Yellow River, which forms a boundary between the property and the Eglin Air Force Base, and to the north and west by Wildland Urban Interface (WUI) area. The tract contains a floodplain, pine flatwoods, pine islands (slightly higher elevation with hardwoods and pines), and a 22-year old planted slash pine stand established to replicate a natural slash pine flatwood. After planting slash pine, land managers typically wait approximately 14-20 years or more before introducing fire into the stand- slash pine is susceptible to fire damage at earlier ages. As a result, this part of the tract was ready to be burned, along with other ecosystems in the tract.

Success stories highlight regional wildland fire accomplishments that support implementation of the National Cohesive Wildland Fire Management Strategy in the Southeast. The stories demonstrate how the Southeast is improving its "fire resiliency" through technology, education and outreach, forest management, collaboration, and more. Success stories also serve as a model for other communities to follow.

The Ward Basin Tract had not been burned in over two decades and contained a thick pine straw duff layer on the forest floor in several parts of the tract. For the initial burn of the tract, burn managers sought only to burn the upper portion of the needle layer because burning too deeply could lead to duff smoldering for days. Fortunately, the lower part of the duff layer was very moist and would not easily burn.

Aerial burning of the Ward Basin Tract had additional advantages. The tract contains dense vegetation that would be difficult to access on the ground, so aerial burning enabled access to these areas. Also, the intensity of the fire could be controlled by the quantity and spacing of ignition balls dropped from the helicopter. On the flood plain, dropping balls at wider spacing allowed for sufficient fire intensity in the lower density vegetation, whereas more balls could be dropped in higher flammability vegetation areas.

The GCPEP land management partnership formed in 1996, beginning with six partners in 1996 and growing to fifteen partners today. Partners include private landowners and public agency land managers, who together manage a total of 1.3 million acres. Partners include the Department of Defense (Eglin Air Force Base, Naval Air Station – Pensacola, Naval Air Station Whiting Field), Florida Forest Service, Northwest Florida Water Management District, United States Forest Service, Florida Department of Environmental Protection, Nokuse Plantation, National Park Service, Gulf Power, The Nature Conservancy, Florida Fish and Wildlife Conservation Commission, Westervelt Ecological Services, Resource Management Service, Escambia County, FL, National Wild Turkey Federation, and The Longleaf Alliance. The GCPEP partners have become very experienced with aerial burns over the last 20 years. As a result, many agencies send new employees to GCPEP burns to get burn experience. Seven of the GCPEP partners participated in the burn.



*Helicopter used to ignite the prescribed burn using a Red Dragon Aerial Ignition Device at the Yellow River Water Management area in Santa Rosa County, Florida. Credit: Steve Brown, Northwest Florida Water Management District*



*Aerial view of the prescribed burn. Credit: Steve Brown, Northwest Florida Water Management District*

Without help from the GCPEP or similar partnerships, landscape-level prescribed burns like the one at Yellow River would not have occurred.

### Lessons Learned

- *Burn during ideal weather and atmospheric conditions on large burns, especially near WUI areas.* This burn occurred during a cold front that had stable and predictable wind patterns. The Ward Basin Tract occurs near large water bodies so there is always a concern about sea breezes shifting the wind direction. Fortunately, the cold front negated this concern. Also, for these types of burns, weather parameters need to be very specific to manage smoke.



Aerial view of the prescribed burn. Credit: Steve Brown, Northwest Florida Water Management District



Helicopter GPS displays where ignition balls were dropped. Credit: Steve Brown, Northwest Florida Water Management District

- *Take advantage of natural landscape features to maximize use of ground support.* The Ward Basin Tract contained numerous natural and man-made fire breaks, including a river and other natural barriers. As a result, only two parts of the fire line had personnel stationed.
- *Work with multiple partners, sharing resources, to accomplish larger burns.* Working with partners enabled this burn to occur; the Yellow River staff capacity was insufficient to accomplish this scale of burn on their own. Eighteen people participated in the burn, with six from the Northwest Florida Water Management District. Partner equipment enabled the burn to occur safely, including use of three type 6 engines from the National Park Service, GCPEP Ecosystem Support Team and Northwest Florida Water Management District and three UTVs and four ATVs from GCPEP partners.
- *Work closely with local information officers and emergency management staff to alert the public about the burn.* Organizers of this burn worked with local law enforcement and the Department of Transportation to alert the public about the burn and support safety on transportation corridors, including posting signs on roads. Press releases were developed to inform the public about the burn and the burn organizers worked with the Florida Forest Service public information officer to ensure they publicized the burn to a large amount of people. Though not carried out for this burn, reverse 911 could be utilized to send residents a message about the burn the morning of the burn.
- *Work with adjacent landowners, if possible.* For this burn, one landowner adjacent to the burn site was alerted to the burn and allowed the helicopter to land on their property.
- *Be cautious on initial burns.* The Yellow River burn was the first burn, or initial burn, to occur on the tract in some time. It also contained variable vegetative groundcover. As a result, the burn could be less predictable compared to subsequent, regular burns. There are risks associated with initial burns because they contain more fuel on the ground. As well, having good ground fuel moisture is recommended on initial burns so the amount of fuel burning can be controlled.
- *Financial assistance enables more acres to be burned.* Financial assistance from the Florida Forest Service, awarded to promote more prescribed fire use, enabled this burn to occur.
- *Excellent crew communication is essential on large and aerial burns.* Typically, a burn manager is in the helicopter determining where ignitions will occur, communicating burn progress from the air to ground contacts that relay information to the crew. Everyone on the ground has radios. Communications should be laid out in the pre-burn briefing.
- *Tremendous planning and coordination goes into an aerial burn.* GCPEP partners communicate with each other months in advance if large tracts need to be burned, with communication occurring more frequently as ideal weather conditions become available.

If the helicopter is notified within 24 hours of a proposed burn it must be paid for whether the burn occurs or not, so planning and experience in reading weather conditions is essential.

### Support of the Cohesive Fire Strategy

The Yellow River Water Management Area prescribed fire supports the national Cohesive Fire Strategy goals of Maintaining and Promoting Resilient Landscapes (by conducting landscape-level burns). This success story also supports the Southeast Regional Cohesive Fire Strategy Action Plan by:

- Developing and sustaining capability and capacity required to plan and carry out landscape treatments, including prescribed fire (O.B.3);
- Increasing public awareness to ensure public acceptance and active participation in achieving landscape objectives (O.C.3)
- Supporting efforts to increase prescribed burning for ecosystem restoration (1.1.7); and
- Promoting and using fire to emulate natural disturbance patterns to maintain and improve ecological systems, balancing social, cultural, and economic needs, especially over large contiguous landscapes (1.1.1).



*Monitoring smoke dispersion from the road. Credit: Mark Nicholas, National Park Service*

#### Additional Resources:

Gulf Coastal Plain Ecosystem Partnership website: <https://www.longleafalliance.org/gcpep>

Northwest Florida Water Management District: <https://www.nwfwater.com/>

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**Partners:** Gulf Coastal Plain Ecosystem Partnership: Department of Defense (Eglin Air Force Base, Naval Air Station – Pensacola, Naval Air Station Whiting Field), Florida Forest Service, Northwest Florida Water Management District, USDA Forest Service, Florida Department of Environmental Protection, Nokuse Plantation, National Park Service, Gulf Power, The Nature Conservancy, Florida Fish and Wildlife Conservation Commission, Westervelt Ecological Services, Resource Management Service, Escambia County, FL, National Wild Turkey Federation, The Longleaf Alliance, local Department of Transportation



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