

Land Management at DuPuis

Protecting the public's investment in environmentally sensitive lands requires a cadre of management techniques to restore, maintain and protect the natural resources. Among these are the control of exotic, invasive plants, prescribed burning and other techniques to open up the natural landscapes to their pristine condition, and finally, hydrologic restoration.

Exotic Control



Lygodium or "Old World Climbing Fern" is the greatest exotic plant threat to DuPuis.

The biggest ticket item in land management is the control of exotic vegetation.

Over the years, melaleuca, brazilian pepper and australian pine were the most serious concern in the world of exotic plants in south Florida. Now, Lygodium or "Old World Climbing Fern" has the dubious honor of being in first place.

Lygodium is extremely pervasive and a challenge to monitor. Land managers spend a good deal of time searching for it on foot because it gets into hidden places in hammocks and cypress domes when it first infests. It can be impossible to spot from the air, that is, until it reaches epidemic proportions, like it has in the Loxahatchee National Wildlife Refuge. We try to nip it in the bud, but it's tedious, and spreads quickly. The control of lygodium requires constant maintenance and monitoring.

Prescribed Burning

In addition to exotics control, conducting prescribed burns is one of the basic land management activities for a south Florida natural areas manager. Basic, but critical to the ecosystem. Fire acts like nature's spring cleaning and many species of wildlife depend on it for their very survival.

Conducting a prescribed burn is physically rigorous and challenging work. Frequently, when conditions are right, the land managers might work a 14-hour day, or longer, to manage a prescribed burn in hot suits, around smoke and fire.

There are many steps involved with conducting a prescribed burn, and they begin as much as a year in advance of the burn. The land must be fully inventoried for habitat conditions to determine where burns will have the greatest benefit. The information goes into developing comprehensive burn management plans which provide a roadmap for prescribed fire.

As the plans are put into action, the area is prepped by disking a fire line months before the burn.



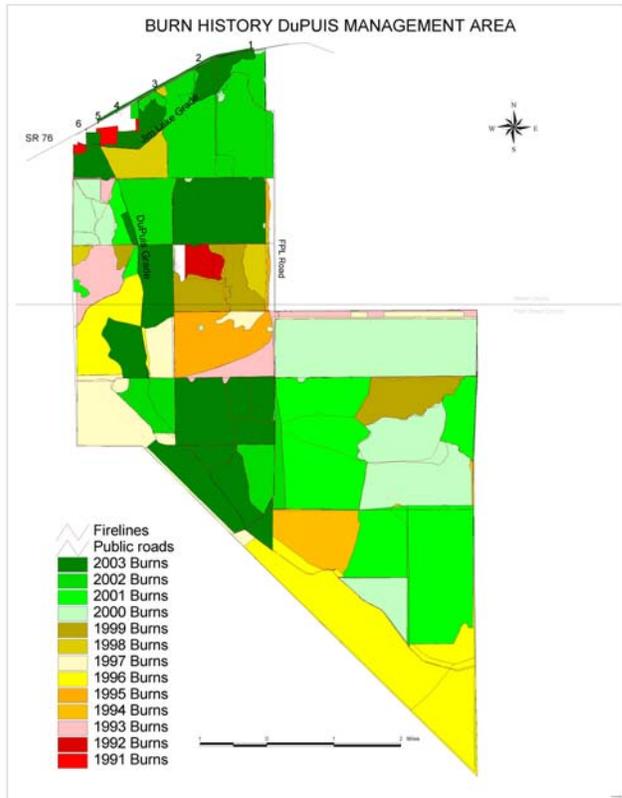
Conducting a prescribed burn is physically challenging and demanding work.

A prescription that details what the weather conditions must be on the day of the burn is written to get a permit from the Division of Forestry. Then, on the morning of the burn, and during the burn, weather conditions are closely monitored to ensure they fit the prescription. If they do not, the burn cannot proceed.



A fire line is prepped months before the burn to mark the boundary and greatly reduce the chances of the fire spreading.

Once the burn is over, there is still more work to do. Land managers use the sophisticated technology of global positioning systems and GIS digitizing to create map coverages of the burn and monitor the effects long after.



This GIS map shows the burn history at DuPuis at a glance.

In some areas where there has been no fire for many years, the vegetation becomes so thick that a prescribed fire would devastate the area and wildfire would endanger nearby homes. Other measures must be taken to thin the area. This is where mechanical grinding comes in. It is designed to get the fuel load down to a safe level so land managers can go back later and burn to get even greater benefits.



Mechanical grinding reduces the fuel level so land managers can burn more safely later on.

Red Cockaded Woodpecker Management

Land managers hope to make conditions right for the establishment of the endangered Red

Cockaded Woodpecker. In addition to prescribed burns and mechanical shredding of vegetation, experts have built nesting cavities in selected pine trees so that once permission is granted from the U.S. Fish and Wildlife Service to introduce breeding pairs, the birds can have a good chance to thrive at DuPuis.



Red Cockaded Woodpecker

Hydrologic Restoration

In addition to ongoing plant community restoration achieved through the control of exotic plants and prescribed burning, the District began a three-phase restoration program in the late 1980s to reverse the effect of overdrainage on the property's wetlands. The goal is to re-flood the marshes and sloughs and restore feeding areas for wading birds.

In the first phase, land managers plugged interior drainage ditches to return water to 5,000 acres of former wetlands.

The circle in the middle of the first photo is a drained wetland. After the ditches that lead from the wetland are plugged, water returns. Note the water on the edge of the marsh in the second photo.



In the mid-'90s, engineers added a new eight-mile levee and several water control structures to restore water to 2,500 acres of historic Everglades marsh.

Finally, in 2001, the District facilitated historic water flow into DuPuis from the adjacent J. W. Corbett Wildlife Management Area through a series of culverts and water control structures.