

Fire Management



Fire has been a critical force in shaping the diverse landscapes of Florida for thousands of years from both natural (lightning) and human ignitions. Radiocarbon dating on soil samples from Big Pine Key reveal repeated, local fires during the past 500 years, documenting the long importance of fire in the Florida Keys pine rocklands. Historically, fire movement across the landscape was unimpeded by barriers, such as roads and canals, allowing fire to spread between plant communities. The National Key Deer Refuge has used prescribed fire since 1971 for maintaining the fire-dependent habitats to benefit wildlife and for reducing the risk of wildfire to protect human lives and property in the



urban interface. Prescribed fire is carefully planned and implemented to enhance the productivity and abundance of fire-adapted rare plants such as the Big Pine partridge pea (candidate species) as well as host plants for imperilled tropical butterfly species such as the Bartram's scrub hairstreak (candidate species), in addition to Key deer and other wildlife.

The National Key Deer Refuge fire management program consists on 1 fire-funded position, and consequently, relies on the collaboration and support from district fire resources across south Florida, including other refuges, Everglades and Big Cypress National Parks, the Florida Division of Forestry, Florida State Park Staff, Monroe County, and The Nature Conservancy



for prescribed fire implementation and wildfire suppression activities.

National Key Deer Refuge is one of the most fragmented refuges in the system with an complex matrix of wildland-urban interface combined with highly volatile Florida fuels. Currently, there are about 680 tracts managed by the refuge which range in size from 1/10 acre to approximately 1,087 acres on twenty-two of the Lower Florida Keys.

Initiatives

Partnerships and Cost Containment:

Implementation costs for project work have exceeded \$1,000/acre. To reduce these costs, the refuge has been training and developing a wide-ranging local teams of wildland fire personnel, including members of the volunteer fire departments and state parks. In 2010, up to 26% of fireline personnel were non-federal cooperators on project burns.

Strategic Prioritization of WUI Treatments:

Staff and cooperators conduct door-to-door education initiatives, including home risk assessment and FireWise principles.

The risk assessments generate point-scores which are used to identify highest risk areas and prioritize treatments.

Strategic Prioritization of Ecosystem Restoration areas:

Staff have been working with researchers, fire managers, biologists and ecologists to create a geospatial database to objectively prioritize habitat restoration projects.

Successional Planning for the Wildland Fire Community:

Staff are working with national wildland fire training units and a variety of other wildland fire entities to offer Fuels Management career development opportunities, which have been targeted as a deficiency in successional planning studies. Because of the volatile fuels, WUI, ecosystem fragility, and public scrutiny the fire program at NKDR offers an exceptional opportunity to mentor others.

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