HISTORIC NATURAL COMMUNITIES AND RARE PLANT SURVEYS IN THE APALACHICOLA REGION

Amy Jenkins
Florida Natural Areas Inventory
August 2018
Collaborative Efforts on the ANF

- Historic natural communities of the ANF and the greater region
- Ecological Condition Model
- Pre-silvicultural treatment surveys
Crafting A Historic Natural Community Map

- 1937, 1952, limited 1942 aerials
- Soils maps
- LiDAR data
- Our ECM and GPS natural community points
- Rare species locations
- Tate’s Hell historic natural community map

Wet prairie

Sandhill

Mesic flatwoods
Historic Natural Communities of the Apalachicola National Forest
Titi Encroachment In Wet Prairie

1952

2013
Ecological Condition Model (ECM) Plots

- Canopy
- Midstory
- Shrubs
- Herbs

- Quantitative data taken at the canopy, midstory, shrub, and herb layers
- Qualitative condition ranking

Rapid assessment method for collecting good quantitative data across a wide spectrum of habitats and conditions
Mesic Flatwoods ECM plots by Condition

Natural Community points 2011-2013
- excellent/good
- fair
- poor
- very poor

Excellent/good

Very Poor

Poor

Fair
Ecological Condition Model
based on Desired Future Condition

Tier 1: Excellent condition
Tier 2: Good condition
Tier 3: Fair condition
Tier 4: Poor condition
Tier 5: Very Poor condition

LiDAR Data
Tier 1/excellent: 1,823 (5%)
Tier 2/good: 4,871 (14%)
Tier 3/fair: 7,461 (22%)
Tier 4/poor: 8,123 (24%)
Tier 5/very poor: 12,222 (35%)
Special Surveys in Advance of Silvicultural Projects
<table>
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<tr>
<th></th>
<th>Absent</th>
<th>High</th>
<th>Low</th>
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<td>Absent</td>
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<tr>
<td>High</td>
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<tr>
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P-values for three species:

- **Pinus elliottii**
- **Rhynchospora chapmanii**
- **Dichanthelium longiligulatum**
Thank you!

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Mapping and Modeling Ecological Conditions of Longleaf Pine Habitats in the Apalachicola National Forest

Matthew D. Trager, Jason B. Drake, Amy M. Jenkins, and Carl J. Petick

We developed a habitat-based natural community map and a spatially explicit ecological condition model (SCM) to evaluate conditions of the longleaf pine forested habitats. We identified and evaluated forestation patterns across the landscape and compared current vegetation patterns derived from USDA and national forest land cover data with the ecological condition model for the ecological condition factor. In this report, we identify areas that are critical for maintaining the ecological condition of the longleaf pine forest. The results demonstrate that the SCM is a powerful tool for identifying areas that need management attention.

Keywords: forest health, ecological condition model, SCM, longleaf pine, red-cedar wagtail

Rising, ecosecure integrity has been identified as an overarching goal for the United States Forest Service (USFS) in the Management of National Forest System lands. The increasing emphasis on restoration to maintain and restore natural vegetation patterns and functions, including establishing the ecological condition model (ECM) program in Title IV of the Omnibus Public Land Management Act of 2009, has increased the importance of identifying conditions that vary across the landscape and the importance of understanding and managing landscape heterogeneity. The purpose of the present study is to evaluate the effectiveness of the ECM in identifying areas that require management attention and to assess the potential for using the model to identify areas with similar ecological conditions.