

Appendix D

Principles for Forest and Wildlife Management of Mitigation Banks and Conservation Units within the Regional General Permit Area and Ecosystem Management Area

Prepared by:

Kevin Smith, Steve Shea and Jim Moyers
St. Joe Timberland Company



Purpose

To provide an outline for forest and wildlife management within the Breakfast Point and Devil's Swamp Mitigation Banks (BPMB and DSMB) and Conservation Units (CUs) included in the West Bay to East Walton Regional Regional General Permit and Ecosystem Management Agreement (RGP/EMA) areas. This document provides a general framework that will guide the development of future land management plans for the banks and CUs.

Methodology

Using the Revised Land and Resource Management Plan for National Forests in Florida and the Cecil Field Timber Management Plan as a framework, the guidelines will prescribe forest and wildlife management strategies that enhance conservation, habitat restoration, and ecological functions within the banks and CUs.

History

The primary land management goal for most of the RGP/EMA area historically has been the production of forest products. Intensive silvicultural management of slash pine (*Pinus elliottii*) and sand pine (*P. clausa*) plantations has occurred on the CUs for the past 30 to 40 years. Silvicultural practices implemented on the area include clear-cutting, roller chopping, site-preparation burning, bedding, planting, and fertilization. Most stands within the RGP/EMA area have been through one or more rotations of planted pine. While forest management practices have degraded the natural habitats of many uplands and wetlands, some wetlands within the CUs have experienced little or no silvicultural impacts.

Prescribed Management

The primary forest management objective for this area is to prescribe management activities that will restore and enhance the vegetative communities and function of historic ecosystems. Restoration forestry practices will replace historical intensive silvicultural practices within the banks and CUs. Harvest operations, controlled burning and other restoration prescriptions will be used to convert the existing even-aged pine monoculture to an uneven-aged management regime. Proposed objectives, suggested management prescriptions and benefits are summarized below. Management prescriptions support the long term vision of ecological restoration, management and vitality of native Coastal Plain Ecosystem habitats.

I. Forest Management

1. **Objective**-To implement harvest, planting, and management operations that restore and maintain the vegetative species composition, stem density, basal area, understory, hydrology, wildlife species diversity and ecological functions of historically naturally occurring ecosystems.
2. **Prescription**
 - All forest management operations will adhere to the *Silviculture Best Management Practices* (BMPs) outlined by the Florida Division of Forestry.
 - In CUs, slash pine plantations will be thinned to 28-112 trees per acre with an overall goal of 30-60 BA. Replanting of longleaf will be limited to no more than 400 trees per acre. Some small patch clear-cuts will be established in areas where longleaf pine (*P. palustris*) establishment is prescribed.
 - In the BPMB or DSMB, tree harvesting will be according to Attachment A-1 or B-1, respectively.
 - Clear-cut size will be limited to 50 acres. However, series of clear-cuts may be connected by narrow skid-row corridors. Clear-cuts may

exceed 50 acres in areas where tree mortality (i.e., wind, fire, insect damage) necessitate larger reforestation patches. Clear-cut size limitations do not apply to the Cypress and Wet Pine Flats CU, where a larger timber harvest may be required to facilitate County water treatment objectives.

- In the CUs, thinning operations are not economically feasible until stands reach merchantable age. Therefore, harvest prescriptions will not be implemented until stands attain minimum volume specifications.
- Harvest activities in all wet pine flatwoods and other jurisdictional wetlands will adhere to Wetland BMPs.
- Silvicultural activities deemed detrimental to ecosystem functioning (herbicide application, fertilization, bedding, roller-chopping, row planting) will be excluded except where appropriate to meet restoration objectives.
- Patch clear-cutting combined with longleaf reestablishment will be used to convert some even-aged slash and sand pine stands to uneven-aged longleaf stands over time.
- Longleaf pine reestablishment sites will be selected by evaluating the vegetative communities, soils and hydrology of prospective restoration areas.
- Uneven-aged management of naturally regenerated slash pine stands can be difficult due to high mortality rates of young pines when regularly burned. Therefore, the establishment of a diverse juxtaposition of small even-aged stands will be used to create the same effect as uneven-aged management.
- Limited use of herbicides also may be used to complement burning to create uneven-aged slash pine stands.

3. **Benefits**

- Reduction in stand density will promote the restoration and establishment of a naturally occurring understory vegetative community and restoration of natural hydrology.
- Harvest, planting and burning operations will promote and maintain longleaf pine restoration within the banks and CUs.
- Thinning will reduce tree density and promote canopy development, restoration and establishment of a naturally occurring under-story vegetative community and increase the aesthetics and natural beauty of the banks and CUs.
- Thinning operations also will reduce mid-story fuel levels and improve conditions for the use of prescribed fire.

II. **Prescribed Fire**

1. **Objective**-To establish a prescribed fire regime that restores and maintains the ecological functions of naturally occurring upland and wetland communities in the banks and CUs.
2. **Prescription**
 - Remove existing fire-lines around wetlands to enhance hydrologic function and ensure inclusion of fire into formerly fire-suppressed areas.
 - After burning, reclaim and disk all new fire lines to minimize impacts to hydrology.
 - Implement dormant-season fire in all fire-dependent upland and wetland ecosystems to reduce fuel loads. In the CUs, dormant-season fire will be implemented on a 2-5-year rotation for two rotations.
 - In the CUs, implement growing-season fire on a 2- to 3-year rotation after fuel reduction is accomplished.

- Fire prescriptions for each bank are detailed in Attachments A-1 and B-1.
- Use site-preparation fire before reestablishing longleaf pine.

3. **Benefits**

- Fire inclusion in wetlands will reduce woody vegetation and restore and maintain the natural under-story and ground cover plant communities.
- Dormant-season fire will reduce fuel loads, the risk of catastrophic fire and prepare sites for implementation of growing-season fire.
- Growing-season prescriptions will mimic natural fire regimes which will enhance and maintain fire-dependent ecosystems, understory, and ground cover.
- Growing-season fire will improve habitat for many species of wildlife and rare plants.
- Prescribed fire will promote successful natural regeneration of longleaf pine, prepare sites for restoration planting and control noxious vegetation.
- Prescribed fire will promote and enhance the aesthetic value and outdoor recreational opportunities in CUs.

III. **Wildlife Management**

1. **Objective**-To prescribe and implement wildlife habitat and population management strategies that enhance species diversity and population levels.
2. **Prescription**
 - Determine the presence, location, and population status of threatened, endangered and other protected species.
 - Monitor and evaluate responses of protected species to habitat management activities.
 - Identify and implement habitat and population management measures that improve the recovery and status of protected species.
 - Promote and develop inter-agency partnerships that will enhance the management of protected species in the banks and CUs.
 - Identify, promote and establish protocol for public recreational consumptive and non-consumptive uses of wildlife species in the CUs.
 - Promote and establish educational and public outreach opportunities related to wildlife species in the CUs.
3. **Benefits**
 - Species monitoring will help ensure permit compliance, increase public outreach opportunities and assist in evaluating management efforts.
 - Species-specific management prescriptions and development of partnerships will promote population growth and recovery of protected species and improve communication and relationships with regulators.
 - Promotion of recreational opportunities in the CUs will encourage public participation and improve attitudes about and acceptance of land management objectives.
 - Restoration efforts will create and maintain diverse and healthy biotic communities that will serve as keystone ecosystems for evaluating future management decisions.

IV. **Exotic Vegetation**

1. **Objective**-To identify, control and eradicate exotic and nuisance plant and animal species.
2. **Prescription**
 - Conduct vegetation and wildlife surveys in the CUs to identify the occurrence, location and severity of exotic plant and animal infestations.

- For the CUs, develop and implement an exotic plant control and eradication plan. Exotic and nuisance plant control plans for the banks are described in Attachment s A-1 and B-1.
- Implement herbicide, fire, and other management prescriptions to meet eradication objectives.
- Implement lethal and non-lethal measures to control exotic animals. In the banks, see Attachments A-13 and B-13.
- Monitor infestation sites (none in the banks) and evaluate the success of control measures to determine ecological lift.

3. Benefits

- Control of exotic plants will improve habitat quality and reduce competition with native species.
- Control of exotic wildlife species will reduce habitat degradation and competition with native wildlife species.