



Jekyll Island Environmental Assessment Procedure (EAP):

Date of EAP Committee meeting: 2/18/2020

EAP Committee members

Ben Carswell, Director of Conservation, JIA
Yank Moore, Land Manager, JIA
Cliff Gawron, Director of Landscape and Planning, JIA
Dennis Gailey, Director of Public Safety, JIA
Terry Norton, Director and Veterinarian GSTC, JIA
Breanna Ondich, Research Specialist, JIA
Mark McClellan, Stewardship Coordinator, Georgia Forestry Commission
Jacob Thompson, Biologist, Georgia DNR – Wildlife Conservation Section
Rich van Iderstyne, Jekyll Island Resident and Business Owner
Bonnie Householder, Jekyll Island Resident

Project under consideration

Develop and implement a comprehensive fire-management program that will determine portions of Jekyll Island where fire can be used as a management tool, fire-control measures to be used, desired timing and seasonality of prescribed fire, and areas where mechanical fuel-management activities may be required. Implementation of prescribed fire and/or mechanical fuel reduction measures will be developed through stepwise advancement and refinement. This project will prioritize safety and sustainability from a maintenance standpoint. Subsequent, focal EAPs may be called for as this program is developed.

Summary assessment

The Committee broadly supports JIA undertaking this endeavor to maximize public safety, manage risk to personal property and natural resources, and seek collateral ecological benefits. This support is based upon the understanding that the program will only be advanced pending satisfactory outcomes of initial phases including a pilot burn to take place off of North Beachview Road. If early results are unsatisfactory, JIA staff will adjust recommendations for how best to proceed, and, if the conceptual approach changes significantly, additional EAP review may be called for before advancing the program.

Requirements

- ❖ The Comprehensive Fire Management Program must be developed and executed with active collaboration and partnership from the Georgia Forestry Commission (GFC). JIA staff can serve the lead role, if that is GFCs preference, but sufficient GFC staff and

equipment presence on site to maximize safety and preparedness is a necessity for implementing any burn on the island outside of the golf course area.

- ❖ The program must be implemented with phasing and scope considerations that do not exceed the capacity of JIA to maintain any new fire-control infrastructure, particularly the proposed new fire breaks.

Overarching Goals

- ❖ **Public Safety**
 - Develop and maintain a system that effectively minimizes the threat of wildfires on homes, businesses, and critical infrastructure
 - Education through the Firewise program can help homeowners reduce the threat within the leased property
- ❖ **Ecological**
 - Use appropriate methods to either restore or protect habitats from catastrophic wildfire
 - Increase plant diversity in ground cover species and limit expansion of dense understory plants that exclude diversity, such as palmetto
 - Slowly reduce the duff layer to allow native seed diversity in the system to re-establish

Procedures

- ❖ **Fire Buffers**
 - Defined as a 75' - 100' strip of land adjacent to development that has maintained reduced fuel loads (grasses and less flammable canopy trees)
 - Classified as Developed
 - Should be maintained annually or set on a rotation cycle for every other year
 - Allows maintenance by bush hog instead of costly mulching
 - Seasonally adaptive to target most effective time of year for maintenance
 - Over time it would be beneficial to remove pines from the buffer and establish an oak canopy with grass understory.
- ❖ **Service Roads**
 - Defined as dirt paths (~25' wide) that are maintained for service or access of infrastructure
 - Classified as Developed
 - Should be constantly maintained for down trees and leaning or overhanging trees
 - Road shoulders should be mulched or cut at least every other year
- ❖ **Fire Breaks**
 - Defined as dirt corridors that are only maintained and accessed for wildfire prevention or prescribed fire operations
 - Classified as undeveloped if they are not maintained as roads, access to infrastructure, or direct protection of residential areas
 - Should be maintained as needed for prescribed fire and at least every 2-3 years for wildfire protection of natural areas

❖ **Mulch Rows**

- Defined as mulched paths that divide fire blocks to provide safety for firing operations
- These do not go down to bare soil and are not maintained except immediately before a scheduled prescribed fire operation

❖ **External Partners**

Consider establishing memorandums of agreement/understanding as appropriate

- Georgia Forestry Commission (Primary assistance)
- Georgia State Patrol
- Georgia DNR
- Interagency Burn Team

Proposed Management Plan

- ❖ The attached working-map (Figure 1) shows 18 areas that are habitats suitable for firing operations varying from 1 acre to 56 acres (153 acres total)
- ❖ In order to prepare these areas, approximately 7 miles of Fire Breaks will need to be cut to divide them from less suitable or priority habitats
 - These proactive/planned fire breaks are smaller and can be installed with care to ensure less damage to mature trees. This contrasts with breaks installed hastily out of necessity in the event of a wildfire, which are larger and not precisely placed resulting in greater ecological impact.
- ❖ Mulch rows are proposed in larger blocks in order to safely allow for firing operations and emergency escape routes for burners. These will also allow for a quicker stop to a burn if fire behavior/conditions become dangerous.
- ❖ The working-map is understood to be a starting point that approximates the scope of the comprehensive, long-term program that is envisioned and has been considered by this EAP review. Minor modifications to the specific burn unit delineations are expected as the program is developed. Major modifications to scoped/approach would call for additional EAP review.
- ❖ Portions of this plan will be addressed in phases, so as not to overwhelm resources and partnerships, and to allow for adjustments based on outcomes.

Recommendations

❖ **Mechanical vs Fire**

- Mechanical fuel reduction is costly, time consuming, and ecologically stressful. Dense tree cover could result in heavy equipment damage to tree trunks and roots. This method is often used in combination with herbicide treatments that could cause collateral ecological impacts. However, in areas where fuel loads are unacceptably high and fire cannot be applied without unacceptable risk, mechanical reduction should be considered. A focused EAP may be called for in such instances.

- Fire is relatively cheap and quick but inherently involves managed risk. Restoration burns can only be completed in cooler months (dormant season) under very specific weather conditions. In a worst-case scenario if a fire burns with more intensity than expected, it could result in stand altering damage with high tree mortality
- ❖ **Precautions and Potential Impacts**
 - Invasive plant establishment in new fire breaks will need to be regularly monitored and controlled.
 - Need to address tree protection and minimize impact of hardwood and priority species
 - Archaeological resources need to be accounted for and addressed during all activities. When installing fire breaks, staff need to look out for unknown or new sites. Consultation with Historic Resources is critical to ensure the protection of our past.
- ❖ **Restoration**
 - In the event of stand-altering fire (mortality approaching 50%), either wildfire or prescribed, restoration opportunities should be evaluated
 - In this scenario, there is a small window to harvest timber after a fire before it becomes unusable. Allowing a high density of standing dead timber to remain compromises forest health because it can introduce insects pests and disease that can spread to adjacent living trees.
 - Any revenue earned from harvested timber must go back into the restoration of the damaged area.
 - All native species must be used and an effort to use local ecotypes must be considered.
- ❖ **General Recommendations**
 - May be a need to further sub-divide blocks on early burns to make them more manageable.
 - This would mean the addition of additional fire breaks
 - Mulch lines would be an alternative
 - Consult with other islands and partners on parameters and prescriptions that have worked on similar habitats
 - Work with other departments and research partners to ensure other conservation priorities are not threatened by new activities
 - This plan needs to have the flexibility to prepare for the next major drought cycle
 - If a major drought is eminent, managers must make all efforts to maintain breaks, buffers, and service roads to prepare for such an event
 - There have been years where there were no resources from GFC in the area to combat a wildfire, a fact that emphasizes the importance of this effort.

Figure 1. Working draft showing scope of units under consideration for the Comprehensive Fire Management Program. Each unit will be evaluated separately, and an individual prescription will be assigned to each one. The units in this map are subject to change in shape, number, and management as the program evolves.

