

John A. Brubaker November 10, 2015 comment on

FRANCIS MARION NATIONAL FOREST DRAFT REVISED LAND MANAGEMENT PLAN, Berkeley and Charleston Counties, South Carolina

As proposed the FRANCIS MARION NATIONAL FOREST DRAFT REVISED LAND MANAGEMENT PLAN, Berkeley and Charleston Counties, South Carolina, could move the Francis Marion away from ongoing degradation and toward sound environmental stewardship. Detailed plan elements to achieve that goal are excellent. The need to implement the plan and the desired goal are well illustrated on p. 103, **Chapter 2. 2.4.4 Santee Zone:**

Through the ecological function of this area is still relatively intact, (and likely nearly, if not totally ecologically salvageable)¹ increased development in the rural communities surrounding the Francis Marion means the national forest land managers must consider how demand for ecosystem goods and services benefits from ecological process on the forest are likely to increase, while environmental stressors are likely to have an adverse effect on the quality and quantity of goods and services it provides. In addition to the benefits people receive from the natural environment, forest management must consider how increased development along the WUI will affect the demand for infrastructure and fire management on the Francis Marion, while identifying creative strategies to meet these growing needs in the face of shrinking appropriated budgets.

The above paragraph would drive management forest wide.

Successful implementation of this plan is the last opportunity save the Francis Marion from irreversible ecological destruction akin to that of much of Western Europe. Unfortunately, achievement of plan elements to improve ecological elements are not likely to succeed so long the actual oversight is driven by management for forest products and accommodation associated municipalities and communities.

In conjunction with Cape Romaine National Wildlife Preserve, The Santee Coastal Reserve, Hampton State Park, the Santee and other protected waterways in and around the footprint, and lands within and around the footprint protected under The Nature Conservancy (TNC) ownership and private lands protected by TNC and other covenants, the Francis Marion is part of a substantial continuum of properties protected for their ecological and archeological value. The area, officially designated as the Sewee to Santee Corridor, is the largest and most significant protected natural on the south Atlantic coast. The failure of any of the those vested shareholders listed above will unavoidably adversely affect the ecological integrity of the entire region.

By investment in the above local residents have joined the Nation and signed-on in recognition of the value of the resource and commitment to maintaining and improving the area as a natural treasure not to be compromised. Long standing area groups formed to preserve and protect the area. Other groups who share that commitment are being added with increasing frequency. The growth of the movement is in no small part driven by recognition that some area municipalities and communities noted as partners in the Draft Management Plan display an inclination to favor

development over environmental stewardship. While not necessarily the position of all municipalities, communities, and their officials, maintaining and preserving this natural heritage is the majority opinion of residents. In support of that opinion I offer the results of a petition in support of alternative 4 of the *Francis Marion National Forest Prescribed Fire Committee Report*, April 27, 1998. Volunteers canvassed door-to-door throughout the Francis Marion in the fall and winter of 1998 with a questionnaire concern prescribed burning on the forest. I mailed Dr. Jerome Thomas, Forest Supervisor, Francis Marion and Sumter National Forests, signatures of 327 forest residents on December 2, 1998, in support of alternative 4, the treatment that called for the greatest amount of burning. Other signatures, approximately 100, gathered by a Huger resident were to be sent separately, but I don't know the status of that mailing. To my knowledge no one supported any of the other alternatives, and only two (2) residents declined support. By today's population 327 is a relatively small number, but in 1998 it was certainly a statistically valid opinion of the population at that time. I am not aware of any comparable data designed to determine the will of Forest residents concerning the area's management.

Comments to specific sections of the Plan

Cover, Draft Revised Management Plan, USDA Forest Service, Region 8, Francis Marion National Forest, R8-MB 146A, August 2015.

- The 2015 photograph on this cover is more representative of the condition implementation of the proposed plan might achieve than it is of the majority of that land today, though it is a good representation of much of the core burn units throughout the Francis Marion Forest.

1.5.1 Environmental Benefits

Chapter 1. Purpose and Need for Action

c. The **fire adapted longleaf pine** ecosystem, one of the most diverse ecosystems in the United States. This ecosystem, which supports RCW and American chaffseed, is found on ridges and better drained areas throughout the forest, as well as on wet, seasonally saturated mineral soils.

- The coastal plain longleaf ecosystem is **fire dependant**. Longleaf pine, the principal element of interest to foresters, and some ecosystems in and around the longleaf ecosystem are fire-adapted. Essential botanical elements that characterize the longleaf system are as dependent upon frequent fire as are humans dependent upon the essential polyamines. Downgrading the importance of fire from “dependant” to “adapted” is contradicted by peer review literature on the subject, and can only be regarded as an attempt to excuse inadequate burning on the Francis Marion for nearly two decades.
- A few days ago two (2) of the three (3) Witherby area populations of American chafseed were destroyed, apparently SC or Berkeley Co. DOT. As I write this the USDAFS wonders whether-or-not it has jurisdiction over activities on the affected forest roadside.

1.5.2 Social Benefits

- Somewhat alluded to under item 3, the number 1 outdoor activity, **passive contact with nature** should be included as a stand-alone item.
- In reality the Santee Experimental Forest is a badly degraded land in the heart of the Forest. It should be eliminated, and that land put under a quality management strategy including prescribed fire. Any qualifying research projects could be carried-out on appropriate sites within the Forest under special use permit.

p.7. 1. It is noteworthy that visitors are international.

1.5.3 Economic Benefits

- Admittedly, insuring the availability of high quality forest products was the principal reason given in the argument to acquire the Marion. I disagree that today “The forest also is an important source of high-quality wood products for local and regional economies...” A principal shortcoming to the Marion’s failure to meet overall agricultural goals are caused by competing regulations that virtually assure low profitability timber sales. Perhaps in consideration of that bygone idea, continued emphasis of filling upper management positions with foresters remains the rule. That bias stifles the potential of a multidisciplinary team capable of grasping and achieving today’s diverse goals. Assuming a modest \$ 2,000/acre for the Marion, its 259,625 acres are worth in excess of 500 Billion dollars. Because of the uniqueness of the irreplaceable natural treasure and, to a lesser degree, a multiplicity of likely amenities, including many of those noted in this document, the Forest is a bargain for us, the owners. The paltry income from timber sales may cover some ongoing expenses, but is justified by neither impact on the resource nor current staffing priorities. Management for forest products warrants complete revision.

Existing management, including proposed, leave virtually all Francis Marion acreage under some degree of forest management. Management for forest products compromises management for ecosystems throughout the longleaf system. Requirement that all timber product harvest protocol take into account practices to safe guard environmental and archeological elements compromises the value of the timber product. The whole process becomes a cycle of "reasons" why environmental protection fails and profits are non competitive. My argument is to work toward a solution. I propose that the two be segregated, with neither variable dependent upon the other. That would promote best possible preservation and restoration of ecological elements, and allow the Forest Service to fulfill its fiduciary obligation.

- Through 1936 purchase of initial parcels within the Francis Marion footprint, Federal dollars, money from US citizens across the board, were used to bail-out this area from economic collapse. Today the area prospers. The need for further cash flow through the USDA FS cannot be justified. Any tax revenue that Charleston and Berkeley Counties may argue they are owed due to the land the Forest occupies would better be considered greed than need. Neither contributes to forest infrastructure or maintenance. The residents of both counties benefit immensely through access to the forest at no cost to those adjacent governments. In fact Berkeley and Charleston receive actual payment, an agreed upon fee for hosting the amenity. In 2014 that amounted to \$426,041.50. Both counties are today emptily prosperous. It is time both

considered the value of the Forest to that prosperity, and forgave the fee, which could much better be applied to monitoring and other unfunded needs of the forest.

1.6.1 Emerging Themes

Theme 1: Maintain or restore the Francis Marion's unique landscapes and features.

1b) Maintain or restore recreational settings, wilderness, and cultural landscapes or sites. Some settings, areas, and sites have been impacted by recreation use; historical exclusion of fires; non-native invasive plants and animals; **air pollution**; aquatic habitat degradation; illegal use; and climate change.

- I suspect that air pollution refers to carbon emissions from prescribed fire. That is a matter caught-up in the larger battle over mainly Midwestern power plant emissions and northeastern automobile emissions. The accuracy by which woods fire emissions are generated are a matter of debate. Regardless, most of the smoke near the ground is from particles too large to cause disease in humans and other higher mammals. The smaller particles are nearly all carried far aloft as prescribed fires are carried out on prescription days with adequate carrying winds. The welfare of our precious forest should not be compromised to satisfy the larger, political, feud.

Theme 3: Respond to challenges.

3a) Maintaining fire-adapted natural systems in the face of severe prescribed fire restrictions in areas adjacent to development.

- Should recognize **Fire Dependence** of the longleaf community.
- Refer to comments in last paragraph of opening statement and **1 b)** above.

3d) Controlling effects of insects and disease. Native insects and diseases have generally remained at endemic levels and not caused significant problems over the last few years. Southern pine beetle populations have generally been low, with the exception of a small outbreak during 2002.

- Insect invasion is inevitably caused by tree stress. In the beginning primarily a problem in overly dense loblolly plantations, it is now noted occasionally in overly dense longleaf plantations. Conversion to the appropriate tree here, longleaf, is a positive step. Exchange of one overly dense species for another is of little value. 200 longleaf is max. over much of the Forest. Too high for some, including savannas.

3f) Increasing pressures for recreation opportunities in challenging economic times. As the populations of Charleston and Berkeley Counties increase, the backlog maintenance for recreation infrastructure, currently estimated at \$450,000, exceeds current funding capabilities.

- The cost of overdevelopment may be insolvable, especially the presently employed pyramid process that is dependent upon some future, larger, population to satisfy the debts of current decision makers. Those shortfalls should not influence National Forest management.

- THE GREATEST THREAT TO THE FRANCIS MARION COMES FROM SURROUNDING POPULATION CENTERS!
- Charleston and Berkeley must appreciate the value of the close proximity afforded by this National asset, The Francis Marion National Forest. Nearby counties and associated municipalities should do all possible to facilitate best management of the resource by:
 - ✓ On properties adjacent to the Forest adopt building codes that insure that structures and other developments are compatible with practices, especially fire, necessary to maintaining a healthy forest.
 - ✓ Limit infrastructure intrusion into the Forest footprint, in particular street and roads.
 - ✓ Recognize and publicize the value of the amenity, and keep citizens informed of actions essential to the Forest's well being.

Theme 4: Share operational and planning resources among partners; keep ongoing collaborative efforts vibrant and develop new ones.

- **STRONGLY AGREE!**

Theme 6: Integrate and coordinate resource management.

6b) Determine suitability of land for various resource use. Suitability determinations for mineral operations, timber production, outdoor recreation, special uses, etc. are made in the forest plan.

- A number of resources uses should be addressed now. Specifically:
 - ✓ Motorcycle and ATV trails should be relocated away from the sensitive area they now traverse to property closer to the population centers from which the users come. The trails should be located on land problematical for best forest management practices, i.e., fire.
 - ✓ Timber efficiency should be increased so that fewer acres are required to produce the same income. 194,023 acres of timber at the minimal 6% rate of comparable private timber production should net \$22,500,000/year. Ideally, all loblolly would be eliminated, but, if not, those and other harvestable stands would be relocated to sites of lowest biological significance and most problematical for best forest management practices, i.e., fire.
 - ✓ Mature longleaf are so scarce over the range that **none** should be harvested. In the short term the same should apply to 100 yr + loblolly.

2.2.2 Species Diversity (also known as Diversity of Plant and Animal Communities)

DC-F-1(k).Wildlife Species Sensitive to Road Use.

Supporting Information:

- Add spotted turtle

DC-F-1(u). Forest Opening Associates.

- Delete desirable non-native. Target game species did well prior to the introduction. Using those exotics on the Francis Marion only pollutes that environment.

2.2.3 Social and Economic Sustainability

DC-F-2(d). Developed Recreation Sites (Facilities and Infrastructure).

- The focus should be for passive recreational facilities. Development of any active facilities should receive the most exhaustive scrutiny and serve a vital need that cannot be achieved elsewhere.

DC-F-2(k). Wood Products.

- High quality trees, in particular loblolly and longleaf 100+ yrs. are important to the forest ecosystem and should be available for harvest only after careful review and special circumstances.

DC-F-2(m). Clean Air and Public Drinking Water.

- The value of buffering area residents from runoff during high rain events and serving as a reservoir to recharge area aquifers is not appropriately emphasized here. The phenomenon should be in particular brought to the attention of area leaders and administrators.

DC-F-3(b). Non-Native Invasive Species Management.

- Bahia grass is an exotic invasive of special concern. It seems to persist as a desirable roadside groundcover by DOT. Frequent growing season roadside mowing favors Bahia grass so that it dominates the natural native ground cover. Desirable native grasses will outcompete and extirpate Bahia grass in the absence of mowing and annual burning. I can demonstrate that on my property.

DC-F-3(e). Respond to Population Growth and Development.

- The Francis Marion continues to yield too much to increasing area population explosion. As a direct result ecosystems throughout are degraded and more and more land loses its national forest character. It's past time to reverse that degradation and put the burden of infrastructure development on the population centers who welcome it. The intrusion is neither in harmony with the natural setting nor fragile ecosystems. I have already noted the recent extirpation of American chafseed on Witherby. I could easily list dozens of other infractions.

2.2.4 Objectives that Apply to Desired Conditions at the Forestwide Scale

OBJ-F-1(b). Future Old Growth.

- I admit to confusion over this item. I argue that all 100+ pines should be retained. RCW would nest over whatever range provides suitable food, cover, and nesting trees.

2.2.6 Objectives that Apply to Desired Conditions for Social and Economic Sustainability

OBJ-F-2(b) Sustainable Recreation.

- Management of exotic invasive species in recreational areas is difficult. The repeated introduction of undesirable species is one of a list of reasons the limit other than passive

recreational facilities. Those are one of a very few sites where I could support chemical control as a management tool.

My comment on the proposed Steed Creek Road Forest Office cautioned that the introduction of invasive exotics would result was reputed by the reviewing forester. Subsequently exotics now dominate the site.

- I consider 675 acres a blight on the landscape and a conduit to the introduction of undesirable exotic species. They seem to be working very well for wild hogs.
- Not mentioned here are “temporary” openings disked throughout the forest by a SC DNR operator who seems to operate at will. A few years back the operator disked a mature native grass and forb savanna in a SCE&G ROW through the forest near my home. After approximately a decade the site is still recovering.

OBJ-F-2(o). Provide Wood Products.

- Please refer to my opening statement for my objections to this item.

2.3 Desired Conditions of Management Areas

- I agree in concept to the Management Area 1 and 2 strategies. There are, however, a number of important and unique to the forest ecosystems, a number of which are fire dependant. Those should be identified and placed under indicated management plans. It should also be noted that a number of property owners who manage their property with prescribed are severely handicapped and pay extraordinary burn fees because of dangerous fuel accumulations on adjacent USDAFS land. I happen to be among those.
- Chemicals, including herbicides, should not be used as a vegetation management tool anywhere on the Francis Marion.

2.3.1 Desired Conditions for Management Area 1, Ecosystems

DC-MA1-1. Upland Longleaf Ecosystems and Loblolly Pine Woodlands

- I agree with the conservation of open loblolly pine stands in the short term. It is important, however, to note that loblolly and longleaf are two very different trees. Loblolly has comparatively dense and wide compared to longleaf. Loblolly needles are rapidly decomposing soil builders and do not carry fire as rapidly as the silicon laden longleaf. One would not expect a high quality longleaf groundcover under a loblolly.

DC-MA1-3. Depressional Wetlands and Carolina Bay Ecosystems

- ***Landscape Structure and Connectivity*** does not address tree encroachment which in many cases is loblolly. Most depressional wetlands are so overgrown with moisture and light robbing woodies that fire alone will not restore them. Hand thinning w/o chemicals is required.

2.3.2 Objectives that Apply to Management Area 1

OBJ-MA1(a). Prescribed Fire for Ecosystem Maintenance or Restoration

- Improvements in fire ignition techniques are required. Fire balls thrown from helicopters are acceptable, but not as they are customarily used to ignite everything within a large area. Refuge for game animals, especially quail, and wildlife must be left intact within the burn area.
- Safe methods to use torch ignition from ATVs should be developed and employed.

OBJ-MA1(b). Upland Longleaf and Wet Pine Savanna and Flatwoods Ecosystems

- BMP is not appropriate as a protocol for timber management on the Francis Marion. The reference is appropriate for harvests on private forests where environmental integrity is not a consideration as it is throughout the Francis Marion.

2.3.3 Desired Conditions for Management Area 2

Emphases in Management Area 2

- Please refer to the paragraph on resident support for fire on the Francis Marion. That is not to say that burning in this urbanized area is not w/o issue, but those do not rise to the level that warrants treating the area differently than any other.

2.3.4 Objectives that Apply to Management Area 2

OBJ-MA2 (a). Hazardous Fuels

- Drum chopping and the use of chemicals here is not acceptable. Much of Management Area 2 quickly drains into waterways.

2.4.3 Wambaw Zone

Sustainable Recreation Opportunities.

- As originally laid out decades ago by the Family Riders Cycle Club the Wambaw Cycle Trail was reasonably compatible. As management standards have risen, and far larger cycling groups with significantly different interest and behavior have emerged, conflict has resulted. The fragile ecosystems cannot relocate. The cyclists need more room for longer trails. This management plan should address relocating the cycle trail, ideally onto the fringe area of the forest where management is more challenging and there is room for a longer trails.

Wood Products.

- I object to timber harvest proposed on the Wambaw. I do not agree with statements here that the harvest benefits wildlife.

DC-Z-Wambaw-S-2. Wambaw Semi-Primitive Areas.

- I argue that Wildlife openings here do more to benefit wild hogs than anything else. Rare plant communities are compromised by ground disturbance and the introduction of alien species. Those important natural components do not benefit from the plots.

DC-Z-Santee-0. Desired Conditions for Santee RIZ

DC-Z-Santee-S-1. Santee Experimental Forest.

The Santee Experimental Forest is a degraded site in the heart of the Francis Marion. I propose that the area be put into a management compatible with surrounding forest.

Chapter 3. Design Criteria

3.2.1 Guidelines

Guidelines for Vegetation Management

- Proposed tree restocking will result in overstocking.

Guidelines for Prescribed Burning and Wildfire Suppression

G13

- A tiller could give better results than either a blade or disk.

Guidelines for Soil and Water and Aquatic Habitats

G18

- Best Management Practices provides for minimal safe guards. It is a suitable reference for commercial private forest, but management of the Francis Marion should be conducted under much stricter standards.

G21

- Any planting of firelines is contradicted. Further, non-local genotypes should not be introduced on the Francis Marion.

3.2.2 Standards

Standards for Pesticide Use

- The use of chemicals, including pesticides, should not be permitted on the Francis Marion.

Chapter 4. Monitoring and Adaptive Management

4.1 Introduction

The monitoring program was developed and will be implemented using the following criteria:

2. Use **best available scientific information** to develop the plan monitoring program.

- There ought to be no allusions or misunderstandings about what constitutes the best available scientific information. A team of academicians well published in the field under consideration should be convened and charged with developing the plan.
- Forest staff involved in the monitoring process should be familiar with relevant literature, including that noted in the attached BIBLIOGRAPHY. References authored by Dr. Richard D. Porcher are particularly relevant.

4.5 Determination of Best Available Science

- The forest would be well served should Southwest Research scientists consult with the team of academicians noted above under item 2 above in making final decisions.

Notes, prescribed fire:

Fire must be initiated on restoration sites as often as the site will burn, usually once/year.

A two year burn cycle is required to maintain quality longleaf communities throughout the Francis Marion. That fire frequency for this area has been well established on Dale Wade's Tiger Corner fire plots. To date, burn plans on the Forest have not been met. Safeguards must be put in place, and prescriptions must be modified, so that burn goals are achieved.

It is my understanding that Forest Service Fire Emissions Production Simulator (FEPS) used for prescribed burns is a western states model. Additionally, a critical base number included in the formula is hypothetical, may be too high, and may skew projected emissions to be higher than they are. Can something be done to increase the confidence in this projected number?

Respectfully submitted by

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