



# Trails and Greenways Committee

Monday, December 13, 2021 at 6:00 pm

1. CALL TO ORDER, PRAYER AND PLEDGE
2. ROLL CALL
3. ADDITIONS/DELETIONS/CHANGES
4. CONSENT AGENDA
  - a. Approval of Minutes of 11/08/2021

Exhibit: Agenda Report Number 4a

#### Attachments:

- **Agenda Report Number 4a** (Agenda\_Report\_Number\_4a.pdf)

5. PUBLIC COMMENTS
6. ACTION ITEMS
7. DISCUSSION ITEMS:

- a. Trail, Kiosk and Firebreak Conditions
- b. Request from Committee Member Waite for Embroidered Shirts

Exhibit: Agenda Report Number 7b

#### Attachments:

- **Agenda Report Number 7b** (Agenda\_Report\_Number\_7b.pdf)

- c. EEL Program Plan to do Tree Removal/Land Clearing from Jordan and Malabar Scrub Sanctuaries.

Agenda Report Number 7c

#### Attachments:

- **Agenda Report Number 7c** (Agenda\_Report\_Number\_7c.pdf)

- d. Next Field Event - TBD

8. OLD/NEW BUSINESS
  - a. Board Member Comments
  - b. Staff Reports
  - c. Next Scheduled Meeting Date

January 10th, 2022

9. ADJOURNMENT



# TOWN OF MALABAR

## TRAILS AND GREENWAYS COMMITTEE MEETING

### AGENDA ITEM NO: 4.a

Meeting Date: December 13, 2021

Prepared By: Richard W. Kohler, Deputy Clerk/Treasurer

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**SUBJECT:** Approve Minutes of 11/08/2021

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**BACKGROUND/HISTORY:**

- a. Summary of Actions at the Trails and Greenways Committee Meeting of 11/08/2021.

**ATTACHMENTS:**

- a. Draft Minutes of T&GC Meeting of 11/08/2021

**ACTION OPTIONS:**

- a. Request Approval

**MALABAR TRAILS AND GREENWAYS COMMITTEE REGULAR MEETING  
November 8th, 2021, 6:00 PM**

This meeting of the Malabar Trails and Greenways Committee was held at Town Hall at 2725 Malabar Road.

**1. CALL TO ORDER, PRAYER AND PLEDGE:**

Meeting called to order at 6:04 P.M. Prayer and Pledge led by Chair Thompson.

**2. ROLL CALL:**

CHAIR:	DREW THOMPSON
VICE-CHAIR:	MURRAY HANN
BOARD MEMBERS:	ANNELIE HARVEY
	BOB WILBUR
	DANIEL WAITE
GRANT/VALKARIA LIASON:	CRAIG SMITH
BOARD SECRETARY:	RICHARD KOHLER

**3. APPOINT CHAIR AND VICE-CHAIR**

**VC Hann/Wilbur nominates Chair Thompson remains Chair, 5-0 Aye  
Chair Thompson/Harvey nominates VC Hann to remain VC, 5-0 Aye**

**4. ADDITIONS/DELETIONS/CHANGES**

**Chair Thompson/Hann motion to Table Agenda Item 8b until the next Trails and Greenways Committee meeting. 5-0 All Ayes**

**5. CONSENT AGENDA**

**4.a. Regular Trails and Greenways Committee Mtg Minutes of 10/11/2021  
Motion to accept by Hann/Waite**

**All Ayes: Motion Hann/Waite Carried 5-0.**

**6. PUBLIC COMMENTS: NONE**

**7. ACTION ITEMS: NONE**

**8. DISCUSSION**

**a. Trail, Kiosk, and Firebreak Conditions**

Vice-Chair Hann states the trails are in good condition. Jordan Scrub is very wet right now. T&GC has one roll of Green Mesh and Staples left to install on the trails. VC Hann suggest the green mesh near the Cameron Preserve. Liaison Smith agrees. VC Hann suggests cutting a new entrance into EELs property for equestrian users. Chair Thompson asks what the situation is with the Cogan Grass? VC Hann states there is a significant portion of North South firebreak that has this. CM Wilbur states he will go look at it. Chair Thompson asks VC Hann if he has an update on signage? VC Hann states he does not and wants to add the new GFT-TCT Connector trail to the maps. Chair Thompson suggests looking into creating a new trail going North South just West of Brook Hollow. It could utilize the Brook Hollow land, Florida Audubon Land, and the City of Palm Bay's property. VC Hann suggests starting a scouting trip in that area. Liaison Smith agrees that it would be a great spot to add some new trail. VC Hann sates he hopes to get this area to be made an official park so it can't be sold. Chair Thompson suggests getting the City of Palm Bay involved. VC Hann states he will e-

mail Susan Sherman (P.B. City Manager) and Fred Poppe (P.B. Parks Director) about this project.

**b. Firewise Communities Program – Initial Research Results**

TABLED

**c. Trail Crossing Updates**

Secretary Kohler states that today, Florida Striping installed new stop bars and double yellow lines at Marie and Malabar, as well as other key intersections around the Town. Chair Thompson thanked Town Staff for their assistance on this matter. CM Wilbur asked if there was a fatality at that intersection recently? Secretary Kohler reported that yes, unfortunately there was.

VC Hann states he is almost done with the design aspect of the Briar Creek Underpass project. He gave a brief overview of the project. Chair Thompson suggests they bring the project back for Council approval before it begins.

**d. Eagles Nest Trailhead**

Chair Thompson asks if there needs to be a drainage plan for the Trailhead? CM Wilbur states there should be a culvert up front, but other than that it is a very flat area. VC Hann suggests filling the whole property with 2 inches of fill and let it find its level. CM Wilbur suggests working from the road, hug the fence, and keep on working. VC Hann suggests hiring a grinder to regrind and bury the organics. CM Harvey suggests raising the bathrooms and kiosks on stilts.

**e. Next Field Event – T.B.D.**

BMBA has a trail maintenance day in Malabar on Saturday November 13<sup>th</sup> at 9 AM.

**9. OLD/NEW BUSINESS**

**a. Old Business:**

**b. New Business:**

- Next Regular Meeting- December 13<sup>th</sup>, 2021
- Liaison Smith stated he is hosting an event for the Grant-Valkaria T&GC on November 20<sup>th</sup>. He plans to show them the Turkey Creek Area, Sandhill Trailhead, Eagles Nest Trailhead, Swallow Tailed Kite Trailhead, and the Cameron Trail Shelter.
- Secretary Kohler thanked all involved in FallFest! It was a resounding success, and we look forward to future events.

**10. ADJOURN**

There being no further business to discuss;

MOTION HANN/WILBUR. Vote: All Ayes. The meeting adjourned 7:26 PM.

BY:

\_\_\_\_\_  
Drew Thompson Chair

12/11/2021

\_\_\_\_\_  
Date Approved: as presented:

\_\_\_\_\_  
Richard W. Kohler, Board Secretary

# TOWN OF MALABAR

## TRAILS AND GREENWAYS COMMITTEE MEETING

**AGENDA ITEM NO: 7.b**  
Meeting Date: December 13<sup>th</sup>, 2021

Prepared By: Richard W. Kohler, Deputy Clerk/Treasurer

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**SUBJECT:** Embroidered Shirts

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**BACKGROUND/HISTORY:**

- a. Committee Member Waite noted that in his past employment, he has seen Town's provide shirts with the Committee name and Member Name. Quotes have been provided below.
- b. A verbal quote was received from Al's Trophy Shop in Palm Bay. They can embroider the Town logo for \$17.00, and names/Committee names for \$6.50 each. They can perform the service on shirts brought to them, or they can provide shirts with costs beginning at \$10.00.
- c. Quotes have been requested from McGraphix of Malabar and Express Signs of West Melbourne. When these quotes have been provided, Town Staff will distribute them to the Committee.

**ATTACHMENTS:**

- a. E-mail from Committee Member Waite

**ACTION OPTIONS:**

- a. Discussion/Recommendation to Council for action.

**Re: T&GC Agenda**

Daniel Waite <vk22dj@gmail.com>

Mon 12/6/2021 3:34 PM

To: Richard Kohler <rkohler@townofmalabar.org>

Hey Richard just checking in. Really heard from anyone since the last meeting. Are we having a meeting in december? The committee to using some funds for embroidered polos. I don't think we need a logo on them I think if we just had our names and the name of our committee.

The reason being I think if we attend events whether it's the Farmers market or like tonight the tree lighting which I will be attending, we can wear our committee shirts so that way the residents would be able to identify us as a committee member at any event that we participate in for the town of Malabar.

Whether we are participating as a committee or even as a guest. We used to do this in Miami Lakes with our committees even if it was not that committee's event and a member was just attending they still wore their committee shirts just in case anyone at that event had any questions or any ideas to pitch and another way to keep embracing that committee.

Sorry for any typos I am using voice to text. I did start with the city of Palm Bay today so it is official and we can announce it out our next meeting. I don't know how quickly I would be able to start bridging the Gap between Palm Bay and our committee, but I will dig on information and anything I can that is not against any of the policies and procedures for the city of Palm Bay.

On Mon, Nov 8, 2021, 3:05 PM Richard Kohler <[rkohler@townofmalabar.org](mailto:rkohler@townofmalabar.org)> wrote:

Attached is the agenda for tonight's meeting. When the agenda is published, it should send you a notification from TownCloud (check your spam folder) with a link to the completed agenda.

Richard W. Kohler  
Town of Malabar  
Deputy Clerk/Treasurer  
321-727-7764 Ext. 109  
[RKohler@townofmalabar.org](mailto:RKohler@townofmalabar.org)

Under Florida Law, email addresses are Public Records. If you do not want your e-mail address released in response to public record requests, do not send electronic mail to this entity. Instead, contact this office by phone or in writing

# TOWN OF MALABAR

## COUNCIL MEETING

AGENDA ITEM NO: 7.C.  
Meeting Date: December 13, 2021

Prepared By: Richard W. Kohler, Deputy Town Clerk/Treasurer

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**SUBJECT: Environmentally Endangered Lands (EEL) Plan to remove trees and land clear large portions of Malabar Scrub Sanctuary – East and West**

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### BACKGROUND/HISTORY:

The ITM received an email from EEL Manager Mike Knight 2/16/2021 advising of an upcoming timber removal project in *Malabar Scrub*. ITM replied that the Council is very sensitive tree preservation and sent the necessary Code information and Tree Removal permit application. No further communication or submittal of application occurred. Emails with dates are attached.

Now we have learned that not only do they plan an extensive timber removal program in the Malabar Scrub Sanctuary and Malabar West Sanctuary (total of 568 acres) on the north side of Malabar Road, *but they have already completed a massive tree clearing within the 700-acre Jordan Scrub. Pictures are attached that were taken when it was done in May and then six months later in November 2021.*

Deputy Clerk Kohler discovered a sign visible from Briar Creek Blvd. advising users of the Malabar Scrub West trails that an upcoming *Scrub Habitat Restoration* was planned. That was on 11/23/2021 and he immediately went to the referenced website and found no information. He called the number on the sign and the person knew nothing about the plan. He started researching the EELs meeting minutes to learn more of their plans. He followed up on this Monday by assembling a timeline of the EELs meetings where major land clearing and tree removal was discussed. He put that into a memo form and provided it to ITM and me to include for background in this agenda item. One of the key points that stand out are the number of times (4) the members stated the importance of involving communication with the public, the users, and the Town and yet no public or stakeholder coordination occurred. Once more the fact that they have already completed this work within the Jordan Scrub (700 acres) without a notice to the Town.

Malabar consists of 11 square miles and 20% of that or just under two square miles is owned by the State and managed by the County's EEL program. The Preamble to the Town Charter states the importance of the rural character of the Town. We have an entire section of the Town Code covering Tree Protection. We encourage preservation of all trees except invasives. We prosecute violators of the Code. We require tree replanting for new development; but for 20% of the Town, considered "conservation and sanctuary" we have no control of the aesthetics, drainage issues and benefits to the public users of our South Brevard Linear Trail System. Malabar is one of only nine Florida municipalities to be awarded the designation of "Trail Town" from the State. All these acres of conservation land were purchased by Brevard taxpayers for the passive recreational enjoyment and preservation of natural habitats.

### ATTACHMENTS:

30 year anniversary of EEL program mission statement  
Kohler Memo of timeline of EEL meeting and key points of discussion  
Email threads mostly from the last week,  
2009 Guidelines EEL referenced as need for this *immediate* work  
Portions of the Management Plan for Malabar Scrub

### ACTION OPTIONS:

Staff requests direction on whether to oppose this activity formally through Council directive.



## Brevard County Environmentally Endangered Lands Program

### 30 Year Anniversary Report 1990 – 2020

## Brevard County Environmentally Endangered Lands Program

### Program Mission

Protecting and Preserving Biological Diversity Through Responsible Stewardship of Brevard County's Natural Resources

### Program Vision

The Environmentally Endangered Lands (EEL) Program acquires, protects and maintains environmentally endangered lands guided by scientific principles and for conservation and the best available practices for resource stewardship and ecosystem management. The EEL Program protects the rich biological diversity of Brevard County for future generations. The EEL Program provides passive recreation and environmental education opportunities to Brevard's citizens and visitors without detracting from the primary conservation goals of the program. The EEL Program encourages active citizen participation and community involvement.

Brevard County Environmentally Endangered Lands Program  
91 East Drive, Melbourne, FL 32904  
Phone: (321) 255-4466  
[www.eelbrevard.com](http://www.eelbrevard.com)

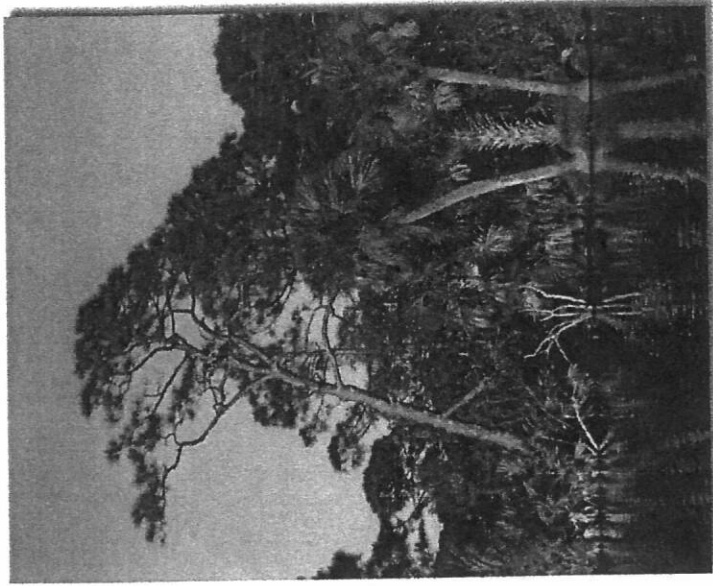


Figure 2: Image of Pine Island Conservation Area - Merritt Island

# Memo from Deputy Clerk/Treasurer Kohler with attachments

# TOWN OF MALABAR

## MEMORANDUM

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**Date:** November 30, 2021 2021-DTC/T-11

**To:** Town Clerk & ITM

**CC:** Town Council and Mayor Reilly

**From:** Richard W. Kohler, Deputy Town Clerk/Treasurer

**Ref:** Summary of multiple Environmentally Endangered Lands (EELs) Program Meeting Minutes related to Malabar Scrub tree removal plan

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### *Portion of 06/25/2021 EELs SMC Minutes*

“Mike reviewed the Florida Scrub-Jay Population Viability Analysis (PVA) joint project that was supported by NASA, the Brevard Zoo, the US Fish and Wildlife Service, and the Brevard County EEL Program that occurred in 2020. Sil Crespo mentioned the amount of road kill he observes as a result of the widening of Malabar Road and wondered how that would impact the population in Malabar. Mike responded that remains to be seen; however, the Program does not anticipate losing any habitat because of the widening of Malabar Road. Sil added the Program is not acquiring lands and noted there is a housing development adjacent to the property. Mike added this modeling considered land we currently have; although connectivity was discussed in the Grant/Valkaria region. Sil asked why connectivity is not utilized to build a case for acquisition. Tamy Dabu stated it may not be a priority for this Board. Mike stated the Program’s focus is on tree reduction and management in the South Region. Jim Burney suggested a take away to summarize this information rich slide such as “South Brevard is key to the mitigation of the extinction of the Florida Scrub-jay in Brevard County”. Leesa Souto asked why the population in the North is so disadvantaged. Mike responded there is not enough scrub habitat to support a large population long term. Mike added steps are being taken in the North and more scrub-jays are being seen at Buck Lake; however, modeling does not suggest this will support long term survival.”

*Population Viability Analysis Project requested 11/29/2021*

### *Portion of 02/11/2021 EELs SMC Minutes - Malabar Scrub Tree Reduction – Slide of page 2 attached*

“Mike introduced, Steve McGuffey, the South Region Land Management Superintendent and outlined the Program’s approach to the Tree Reduction Strategy

and ensure the Committee is supportive of the proposal. Mike shared the Malabar Scrub trail history, mitigation projects, management, Population Viability Analysis recommendations, and expected user group concern. Steve explained the work that is needed to improve and restore the scrub habitat such as pine and oak tree density reduction. Mac McLouth asked what the end result of this project. Mike responded this is to restore optimal scrub-jay habitat and reduce the number of perches for raptors that threaten scrub-jays. This presentation is available upon request. “

*Presentation requested 11/24/2021*

*Presentation provided 11/29/2021 – notation that discussion began at time stamp 1:54.*

Points of interest found at: (time markers reference section of presentation)

Yellow Highlights are Staff Observations.

Grey Highlights indicate the 4 times Public Input/Outreach were discussed.

- 1:55:00 Only one family of three scrub jays in Malabar West.
- 1:56:50 Acknowledges Bike use on the property before it was State owned. Stated they made “concessions” to the MTB Community to keep some shade, but the understanding was that they could come back and remove them.
- 2:00:00 Show map of Malabar East, detailing the extent of clearing. Heavy along properties that border Malabar Community Park, Country Cove Subdivision, and Sandhill Trailhead.
- 2:01:00 States that most pine trees (leaving 1 or 2 over 10ft. tall per acre) will be removed by the State Forestry Division, and that most Oak Trees would be removed by EELs Staff using rented equipment or independent contractors.
- 2:01:35 Notates several numbered points on the map. Explains that they are areas likely to receive large pushback from the MTB Community (*Not areas which would most benefit the Scrub Jays, or provide the most logical clearing, but areas to expect pushback because they negatively impact the MTB Community*).
- 2:04:49 Shows map of Malabar West detailing the extent of clearing. Heavy specifically along the trails, near Stillwater Preserve Subdivision and the Briar Creek Blvd ROW. Notates 7 spots that expect heavy resistance from MTB Community.
- 2:05:15 Notates that Malabar West will not be done by forestry, but by EELs Staff on rented equipment and chainsaws.
- 2:05:45 Notates Trail Spot **1 HIGH DENSITY**, just west of Malabar Woods Blvd. at the entrance from Malabar Community Park. Speaker acknowledges that this project will radically change the user experience for the MTB Community.

- 2:06:25 Speaker is asked what the end result were trying to achieve? To achieve optimal scrub jay habitat by restricting trees that raptors can perch on to hunt jays.
- 2:07:00 Notates Trail Spot **2 HIGH DENSITY**, where the trail exits the Al Tuttle Trail just North of the Sandhill Trailhead. Speaker states staff will try to physically identify trees that are not negatively impacting their goals but acknowledges that it will be minimal.
- 2:08:26 Speaker states "The right thing for us to do is to have a public Zoom meeting to let all the user groups know what our goals and approach is. It is not going to be an opportunity for the public to weigh in on the plan, as the plan is already critical. We feel if we don't take that step, we open ourselves up to some real criticism for not informing."
- 2:09:15 Speaker is asked what the impact of this project will be on the users? "The argument will be that the EELs program does not take into consideration the visitor experience of the user as much as we consider the ecological management. Our policies clearly state that passive recreation is a secondary goal."
- 2:11:45 Speaker states "There will be criticism for working to try and protect some areas and taking visitor experience into consideration, and then going back on that. We feel that unfortunately no promises were every made that the site would stay like this. It is all strictly dependent on the resource issues needed to be addressed."
- 2:12:30 Committee Member notates that there have been some nasty encounters with the public in Malabar and around the Fox Lake Project. She suggests more public outreach, having the discussion multiple times with the involved parties, and even mailing postcards with information. She stresses communication with all parties, particularly in Malabar, as one or two people can turn it into a wreck.
- 2:15:43 Steve McGuffey states the project will take a few months of Brontosaurus work, and he is unsure of the timbering, as he hasn't done a project of this size. Work likely won't start until the end of this year.
- 2:19:30 Committee Member states that one user group should not have a veto on how these lands are managed. Another Committee Member agrees, and states there are other Mountain Bike trails nearby, notably the GFT and TCT. *(TCT will be devastated by this project)*
- 2:21:00 Committee Member makes negative comments about a member of their REAC subcommittee who seriously opposed projects like this in the past. *(Clearly Murray Hann)*
- 2:21:45 Speaker states "In this location, you have the Malabar Scrub East and West and the Malabar Owned Cameron Preserve, which is a Florida Communities Trust site, which is supposed to be managed in the same context but isn't."

- 2:22:30 Notates Trail Spot 5 & 8 HIGH DENSITY where trail crosses the two water bodies in Malabar Scrub West. Stated that the area is a curtain that needs up to 90% of the trees removed. A different Committee Member stated that these areas were not parts of previous concessions, but a totally different habitat with hammocks along the trail, and now the mindset is we need to get that curtain down. The area isn't a scrub jay habitat, but it's needed to open access in between the scrub jay habitats. This is a different approach that we are very confident in.
- 2:24:15 Committee Member states "We need to have a clear enhancement value of this cutting. The public is going to object, but we need to sell this thing."
- 2:25:40 Speaker states they will have to close sections of trails and possibly the whole sanctuary to complete this project.
- 2:26:40 Notates Trail Spot 9 & 10 LOW and MEDIUM DENSITY respectively. Speaker notates that this area was heavily forested when purchased, but was thinned considerably in the past, and should be reduced completely. Most of the work here has already been completed.
- 2:27:48 Notates Trail Spot 11 LOW DENSITY. Speaker states this is a good example of where we left oak trees along the trail. These areas now need to be reduced. Speaker states the hammock area around the creek will not be disturbed.
- 2:30:10 Speaker states the next step is to reach out to the user groups and start having these conversations, including one public forum opportunity.

08/19/2020 EELs SMC Minutes - AGENDA ITEM 3

Oli Johnson transitioned the conversation to tree density reduction strategy. Mike Knight referred to the document sent to the committee. He stated he worked with Dave Breininger on the tree density reduction strategy and provided this document to Todd Mecklenborg for his review.

Todd Mecklenborg stated this document would be beneficial for site specific grant proposals. Mike Knight commented the intention is to use this document for this purpose. Mike Knight added a timbering sale proposal has been received from the Florida Forest Service. Mike Knight further stated Steve McGuffey initiated contact with the Florida Forest Service to ensure the project in Micco can be accomplished as proposed. At that time, it can be determined if this document can be expanded to include other sites or if other projects need to be treated as separate potential timber sales. If this cannot be accomplished quickly we can fine tune specifications, obtain quotes, and submit site specific proposals to The Nature Conservancy to utilize funds for contractors.

Mike Knight asked Steve McGuffey for an update on the tree density reduction project. Steve McGuffey stated the focus is on tree density reduction and scrub restoration concurrently utilizing the roller chopper in Jordan and cutting by hand with

Environmentally Endangered Lands staff. He will meet David Breininger to conduct site visits at Malabar and possibly Micco to determine if the scope of work needs modification for forestry or contractors.

Mike Knight asked the committee for input on the tree density reduction document. Paul Schmalzer stated the document looked good, asked if Dave Breininger reviewed the document, and asked Dave Breininger if he had any feedback. Dave Breininger noted since Steve McGuffey has taken over as the Land Management Superintendent in the South Region the amount of progress is tremendous at Jordan. Paul Schmalzer stated he agrees with Steve McGuffey's approach and he is pleased to hear of the progress.

*Are they looking to sell the timbers and wood from the habitat restoration?*

06/19/2020 EELs SMC Minutes - **State Land Management Review Response**  
The Land Management Review which was completed by the State of Florida in January for the Brevard Coastal Scrub Ecosystem Project had been distributed to the committee along with staff responses to each finding. Staff requested input from the committee so the responses to the findings could be returned to the State to close out the review. Paul Schmalzer stated that it was questionable as to whether or not the Malabar West site ever had a sandhill community. He recommended the program focus on higher priority areas for management rather than using current resources in this particular location.

Paul inquired about the low hydrology rating in the review. Mike clarified it was not clear why this low rating was given and that he would follow up with State staff. Paul also expressed the need to increase efforts in the south region with scrub habitat restoration.

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02/24/20 EELs SMC Minutes - **Rangeland Study Request**  
Pete Deal, Natural Resources Conservation Service (NRCS), which is part of the United States Department of Agriculture, provided information on a grazing land study and relayed that a section of the Malabar Scrub Sanctuary is listed as a location for inspection in this project which monitors changes in habitats. Clarification was provided that the data gathered would be compiled without ownership information and would in no way affect the future use or conservation category of the property. Mike noted that Evan Hall will assist the reviewers. No objections were received from the SMC. A copy of the data collected will be provided to the SMC.

10/15/19 EELs SMC Minutes - **Regional Land Management Report South Region, Malabar Scrub Sanctuary**  
Paul asked for clarification regarding the replacement of boards on the Tuttle boardwalk and noted his understanding that the EEL Program is not responsible for maintenance of the Al Tuttle Trail which is partly located on this sanctuary. Mike stated that he

recently told staff to replace a broken, rotten board, but when the need for repairs becomes significant, he will need to move the issue to someone else.

It was noted that there is a multi-year history related to the paved trail at Malabar Scrub Sanctuary. When this Management Plan was reviewed by the SMC, they originally declined the requested paved trail adjacent to Marie Street and requested that the existing concrete boulevard be used instead. Staff inserted a recommendation to the Board to place the trail on the east side in order to align with a planned Town of Malabar trailhead. The Board of County Commissioners approved the Management Plan with the paved surface adjacent to Marie Street. Since the land is in State title, approval from the Acquisition and Restoration Council (ARC) was required. ARC returned the plan without their approval due to concerns expressed by the SMC. Eventually the SMC agreed with the paved trail adjacent to Marie Street as a pilot project and with the understanding that the EEL Program would not be responsible for repairs or maintenance to the boardwalk, or asphalt. Since that time, revisions have been added to the Sanctuary Management Manual that a management plan can not be forwarded to the Board of County Commissioners unless it has the SMC's approval. Mike noted his concern that the boardwalk is not being inspected on a regular basis. The group agreed with the need to ensure that the boardwalk is safe. It was also noted that if the EEL Program takes financial responsibility for the little things, it may open the door to the thought that the Program should be responsible for all costs.

Significant discussion ensued regarding options for moving forward with inspections and clarification of financial responsibilities including but not limited to, paying for all needed repairs and maintenance since the trail is on EEL Program property and closing off access to any unsafe areas until a funding source outside the EEL Program can be arranged. The boardwalk is estimated at 15 feet in elevation and 100 feet in length. The paved trail is 14 feet wide and a mile long.

Mike will have a preliminary discussion with the Director of Parks and Recreation.

Additional discussion will be scheduled for a future meeting. Staff will provide a recap of the history prior to the next meeting.

8/23/19 EELs SMC Minutes - **Malabar and Jordan Scrub Sanctuaries:** It was noted that this management plan has been in Step 7, Staff Review of Draft Management Plan, since March. Chris O'Hara, South Region Land Management Superintendent, stated he has been focusing his time on the Crane Creek Management Plan.



# TOWN OF MALABAR

## MEMORANDUM

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**Date:** December 3, 2021 2021-DTC/T-12

**To:** Town Clerk & ITM

**CC:** Town Council and Mayor Reilly

**From:** Richard W. Kohler, Deputy Town Clerk/Treasurer

**Ref:** Summary of Brevard County Commission Meeting of 12/02/2021 Agenda Item L.5.

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*At the December 2<sup>nd</sup> Brevard County Commission Meeting, the Town of Malabar and the Malabar Scrub Sanctuary were discussed under Agenda Item L.5, Commissioner Reports for District 3 Commissioner John Tobia. I highly recommend watching the portion of the meeting, which begins at 1:56:50 of the video recording. A link has been provided below:*

[https://brevardfl.granicus.com/player/clip/224?view\\_id=1&redirect=true](https://brevardfl.granicus.com/player/clip/224?view_id=1&redirect=true)

*Points of interest can be found at:*

- (1:56:55) Commissioner Tobia states that he has been inundated with numerous emails about the Malabar Scrub Sanctuary. He acknowledges that Malabar and its residents are very interested in the management of the Sanctuary, though it is managed and funded by the County. When speaking to the County Manager's office, he learned that the land is on a 50-year management agreement from the state that the County abides by. He believes the County Staff did a good and possibly too good a job in informing involved parties about plans for the property. In light of the Scrub Sanctuary being on the Town of Malabar's Council Agenda, he proposed to have County Staff begin the process of transferring the Malabar Scrub Sanctuary to the Town of Malabar. He acknowledges it would require approval from the State and from Malabar but believes Malabar will be interested.
- (1:59:05) Commissioner Lober, District 2, states he does not want to enter anything binding. He would be interested in allowing Staff to research the possibility but acknowledges that before this discussion the thought had not crossed his mind.
- (1:59:48) Commissioner Tobia states that the Town may not want to accept, as it will have to follow the management plan agreed to by the State and County. He

believes that if Malabar wants to dictate what happens in the Sanctuary, they may want to pay for it.

- (2:00:54) Commissioner Smith, District 4, Vice Chair states it is a novel idea, but maybe not a good idea. He then gave a brief history of the property. He states he is curious to see if the Town will be willing to take on the cost, but would not be willing to sell it to them,
- (2:01:53) County Manager Abbate reminds Commissioner Smith that the land is leased from the State and cannot be sold.
- (2:02:20) Commissioner Pritchett, District 1 states if Commissioner Tobia can convince the Town to give them money and take the property she would support it.
- (2:02:30) Commissioner Zonka, District 5, Chair, states she received contacts from Malabar citizens well known for their work in the community. The common theme from the contacts was that all the stake holders were not involved.
- (2:03:15) EELs Program Manager Mike Knight offered a deeper history of the property and the conflicts had in the past with user groups. He includes that the EELs program moved a family of Scrub Jays to the land. He states that when the EELs Selection Management Committee (SMC) voted to approve the plan, the agreed to host a Zoom meeting after work began, but before they affected the trails. He acknowledges that it was not a good plan and that they should have gotten more public engagement. He states the permit issued by the Town has expired, and that they are in the process of applying for a new one.
- (2:05:39) Commissioner Zonka states that a large complaint was that the user groups wanted more involvement than a Zoom meeting. She acknowledges that the EELs program obviously want to maintain and protect the lands, but if it's paid for by tax payers, they should be able to enjoy them. She believes there is more compromise or at least discussion to be had.
- (2:06:45) Deputy County Manager Jim Lisenfelt states that Mr. Knight has been invited to speak to the January 3<sup>rd</sup> Malabar Town Council Meeting and spoke with Town Staff on December 2<sup>nd</sup>.
- (2:09:40) Commissioner Lober offers to second Commissioner Tobia's motion to begin the transfer, if it will come back before the Commission for a vote before it is finalized.
- (2:10:30) Motion Passes 3-2 with votes as follows:
  - District 1 Commissioner Pritchett – Aye
  - District 2 Commissioner Lober – Aye
  - District 3 Commissioner Tobia – Aye
  - Vice-Chair District 4 Commissioner Smith – Nay
  - Chair District 5 Commissioner Zonka – Nay

# TOWN OF MALABAR

## MEMORANDUM

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**Date:** December 3, 2021 2021-DTC/T-13  
**To:** Town Clerk & ITM  
**CC:** Town Council and Mayor Reilly  
**From:** Richard W. Kohler, Deputy Town Clerk/Treasurer  
**Ref:** Council Member Scardino's Public Records Request

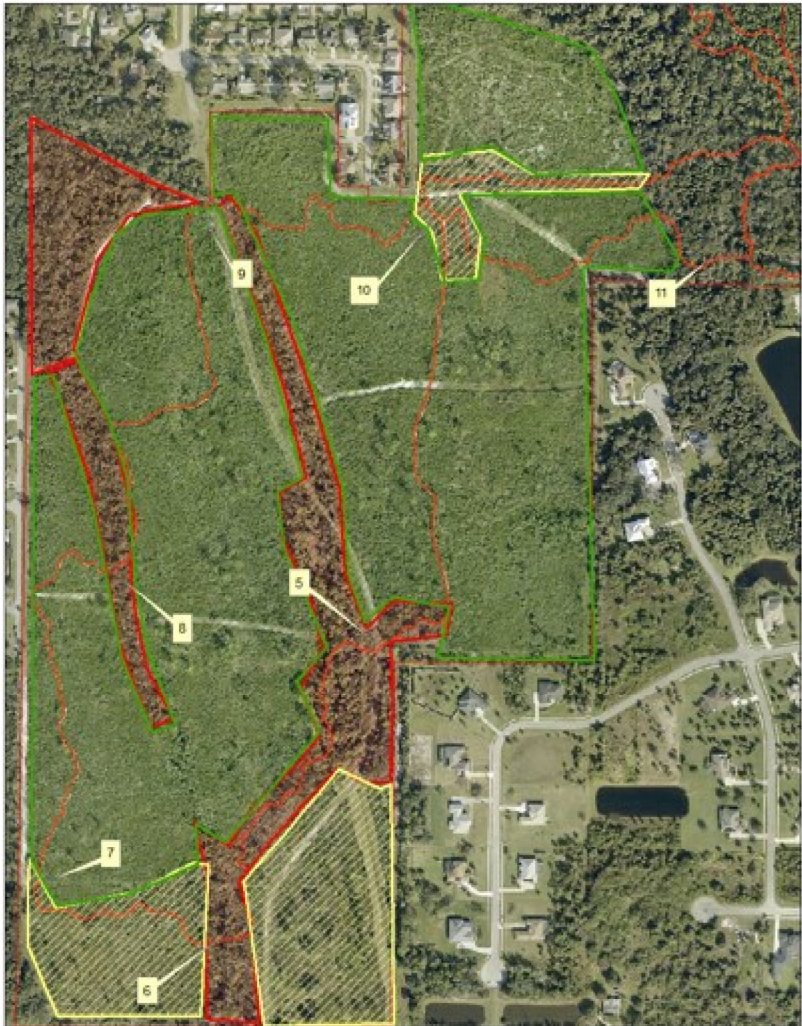
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*On December 7<sup>th</sup>, 2021, Council Member Scardino, District 4 asked Town Staff to request the following records from the Brevard County Environmentally Endangered Lands Program (EELs) project on the Jordan Scrub Sanctuary:*

- All Permits for the Jordan Scrub Sanctuary Tree Removal Project
- All Ecological reports on the Project
  - Emphasis on environmental reports of how the project affected species other than the Florida Scrub Jay (i.e., Gopher Tortoise)
- Surveys of the property
- Number of trees removed from the property
- Logging Reports/Sales Records related to the project
- Stormwater mitigation reports
- Measures used for erosion control

Thank you for your prompt response to this request.

# Malabar West Tree Density Areas



**GREEN = LOW TREE DENSITY**  
Very few trees need thinning < 5% coverage of large oaks and pines

**YELLOW = MEDIUM TREE DENSITY**  
Moderate thinning needed 5% to 25% coverage of large oaks and pines

**RED = HIGH TREE DENSITY**  
Extensive tree thinning needed > 25% coverage of large oaks and pines

## Malabar East Tree Density Areas



**GREEN = LOW TREE DENSITY**

Very few trees need thinning < 5% coverage of large oaks and pines

**YELLOW = MEDIUM TREE DENSITY**

Moderate thinning needed 5% to 25% coverage of large oaks and pines

**RED = HIGH TREE DENSITY**

Extensive tree thinning needed > 25% coverage of large oaks and pines

# Emails

From: Knight, Michael A <Mike.Knight@brevardfl.gov>

Sent: Tuesday, February 16, 2021 11:29 AM

To: Lisa Morrell <LMorrell@townofmalabar.org>

Subject: Malabar Scrub timer project

Hi Lisa,

Hope all is well. I just wanted to touch base with you about an upcoming timber removal project we have planned for Malabar Scrub Sanctuary. We are working the Florida Forest Service to thin the pine tree density on the property to further enhance the Florida Scrub Jay habitat. We have had a recent expansion of the jay population at the site and need to make further habitat improvements. The work will be overseen by the Florida Forest service and will involve logging trucks removing the timber from the site. I wanted to be sure the Town was aware in advance of the project. The town ordinance related to tree removal seems to be designed around a development project and not habitat improvement. But I wanted to run it by you to be sure there were no unforeseen ordinance conflicts.

We did the initial tree density reduction in there a number of years ago, but did not maximize the enhancement because we were waiting to see how the jay population would respond to the work. It now seems clear that the previous work has positively impact the population and now we need to complete the work to maximize the potential jay territories on the property. We also recently completed a Florida Scrub Jay Population Viability Analysis throughout Brevard County and it has become clear that south Brevard is the last chance for the long-term survival of the scrub jay. The tree density reduction is critical to this long term effort.

Let me know if you want to set up a Teams meeting to discuss in more detail.

Thanks

Mike

Mike Knight  
Program Manager  
Environmentally Endangered Lands Program  
Brevard County Board of County Commissioners  
321-255-4466

From: Lisa Morrell

Sent: Friday, March 12, 2021 4:27:11 PM

To: Knight, Michael A <Mike.Knight@brevardfl.gov>

Cc: Debby Franklin <townclerk@townofmalabar.org>

Subject: RE: Malabar Scrub timer project

Mike,

Absent of agreements that are applicable for this activity, I appreciate your open communication with the Town in your advisement of the activity. I believe I have enough information to provide you with a waiver/permit memo for a type IV permit – thinning.

The Town code delegates to either the bldg. official/town manager:

D.Type IV permit.

1.

Submittal: Tree removal requiring a Type IV permit shall submit two copies of the following to the Town Administrator, or his designee:

a.

Permit application demonstrating compliance with one (1) or more of the criteria below.

b.

A sketch showing location and a general description of tree(s) ten (10) inches dbh and larger (five (5) inches dbh and larger for non single-family).

c.

Tree plan if applicable.

2.

Review and determination process: The tree removal permit shall only be granted where at least one of the following criteria is met:

a.

Use. Reasonable effort has been made to minimize tree removal such as design modification and requests for variances, e.g., variances in lot width or set back requirements, where the tree(s) proposed for removal is ten (10) inches dbh and larger, however, the location of the tree(s) prohibits the use of the site for the intended and desired purpose.

b.

Proximity to structures. The tree or its root system is determined to be detrimental to the integrity of the structure's foundation.

c.

Thinning. The removal of such tree is beneficial to the enhanced growth of other trees on site.

I will state the Town Council Members are very sensitive to Trees of Significance – Large Oaks that are “historic” for preservation.

Please consider the following town code:

See 1-15.12

(next page)



Section 1-15.12. - Trees of special significance.

A. Designation. Trees of special significance are those trees or grouping of trees designated as such by a resolution of the Town Council. Designations can only be initiated by the property owner(s) of such tree(s) or on Town owned property by Town staff. After initiated, designation shall be reviewed by Town staff and those trees meeting the requirements of this section shall be presented to the Town Council who shall decide whether to designate a tree(s) as a tree of special significance. Trees designated as trees of special significance shall have a preservation easement, prepared by the owner(s) of the tree(s), created around them extending a minimum of fifteen (15) feet in all directions from the trunk and such preservation easement shall be recorded, by the owner(s) of the tree(s), in the public records of the Town of Malabar. Trees may be so designated if one of the following criteria applies: 1. It is a historic tree, which is a tree of notable historical interest and value to the Town because of its location or historical association with the community. 2. It is a specimen or grand tree, which is a tree of high value to the community because of its type, size, age, exceptional characteristics or other relevant criteria. See Schedule A and B. 3. It is a champion tree, which is a tree that has been identified by the Florida Division of Forestry as being the largest of its species within the State of Florida or by the American Forestry Association as being the largest of its species in the United States or the world. B. Protection. A variance of the required minimum front, rear, and side yard setbacks may be granted to allow the preservation of trees of special significance. Topping of trees of special significance shall be subject to all penalties and fines as provided by this ordinance. The removal of any designated tree of special significance requires; a Type IV permit; a site inspection and written evaluation by a certified arborist demonstrating that removal is deemed necessary to avoid an immediate peril to life and/or the condition of the tree warrants removal; removal is approved by the Town Council; and the replacement shall be as determined by the Town Council.

Thank you,

Lisa Morrell  
Interim Town Manager  
Town of Malabar  
321-727-7764

[www.townofmalabar.org](http://www.townofmalabar.org)

# Fwd: URGENT: EEL Program "restoration" of Malabar West and East Scrub Sanctuaries

Richard Kohler <rkohler@townofmalabar.org>

Wed 12/1/2021 8:18 AM

To: Debby Franklin <townclerk@townofmalabar.org>

Pg 1 of 4

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**From:** Murray.Hann@L3Harris.com <Murray.Hann@L3Harris.com>

**Sent:** Tuesday, November 30, 2021 5:57:01 PM

**To:** D3.Commissioner@BrevardFL.gov <D3.Commissioner@BrevardFL.gov>

**Cc:** murray.hann@lcloud.com <murray.hann@lcloud.com>; g\_dunnam@msn.com <g\_dunnam@msn.com>;

Frank.Abbate@brevardfl.gov <Frank.Abbate@brevardfl.gov>; drew.thompson@prosolent.com

<drew.thompson@prosolent.com>; Richard Kohler <rkohler@townofmalabar.org>; Lisa Morrell

<LMorrell@townofmalabar.org>; suzanne.sherman@palmbayflorida.org

<suzanne.sherman@palmbayflorida.org>; maryellen.donner@brevardfl.gov <maryellen.donner@brevardfl.gov>;

jim.liesenfelt@brevardfl.gov <jim.liesenfelt@brevardfl.gov>; D5.Commissioner@BrevardFL.gov

<D5.Commissioner@BrevardFL.gov>

**Subject:** URGENT: EEL Program "restoration" of Malabar West and East Scrub Sanctuaries

Dear Commissioner Tobia,

I hope you had a great Thanksgiving, and I sincerely apologize for bringing you a problem that I hope you can help me resolve. This issue is so serious that the Town of Malabar Council has scrambled to add this to their agenda for this coming Monday. If you wish to skip all the long discussion below, please skip down to "what do we want", toward the bottom. I think it is reasonable.

My name is Murray Hann. I am an engineer at Harris Corp, and in my spare time a trail advocate. In particular, I love off road biking through the amazing Florida single-trac trails. I also help Manage the Brevard Mountain Biking Association. Our club manages the Grapefruit Trail for the City of Palm Bay (at no public cost). You may have seen recently that our club constructed, within the Turkey Creek Sanctuary, several boardwalks to allow us to connect the Grapefruit Trail to the Turkey Creek Trails. This amazing project was built with 28,000 dollars of dock quality pressure treated wood, and was completely funded and constructed by the BMBA, for the City of Palm Bay. This beautiful new trail is used every day by trail walkers, runners, and mountain bikers, at zero investment of public funds. In short, I believe that the BMBA has established that we are a good, responsible user group with the public interest in mind.

I write to you today about the Turkey Creek Trails. This is a beautiful trail area just south of Port Malabar Blvd, mostly in the Town of Malabar. It is broken into 2 different EEL properties. Malabar East, and Malabar West, with the Town of Malabar's own "Cameron Preserve" in between.

These properties form the core of what is, by far, the best hiking and biking trails in Brevard County. They are a statewide attraction. The BMBA often refers visitors to local hotels and favorite restaurants. The EEL program did a count in 2016, showing that approximately 18,000 visitors used this trail system per year, making it one of the most popular EEL properties. Since COVID started, it has been estimated by Turkey Creek Sanctuary that trail visitation is up significantly, possibly 100%.

This place is really special to me. I have worked on these trails well before there ever was an EEL program. I selected my home to be immersed in these trails, and I have worked tirelessly for 30 years to keep them open and

as safe as possible.

pg 2 of 4

Now, this trail system is planned for total "restoration", meaning removal of every tree along the trails, roller chopping the entire property, and burning it, ... leaving 1 or 2 trees per acre. So, hundreds to thousands of trees will be cut. All Cabbage palms around the lakes removed. A vast and unrecoverable change to the trails we all love.

I attached two pictures. The first (Jordan Restoration) was taken about a 2 weeks after the roller chopping and burning. The second photo is in about the same area taken 7 months later. It is just a vast plane of sparse low Palmetto, and sand, and some grasses. I rode this entire property looking for Scrub Jays. Not surprisingly, they are gone. They are living next door on scrub that has not been burned in 20 years.

Now this is planned for Turkey Creek Trails. A few points:

- There has been ZERO user input, and very little consultation with the Town of Malabar. The EEL program owns about 12% of the Town of Malabar, but has stated that they do not need any permits for work from the Town. 20%
- The Town of Malabar has not been consulted to their satisfaction (there has been some discussion of tree permits, but the EEL program stated they do not have to comply with Malabar's tree removal rules).
- Malabar is a designated Florida Trail Town with the State of Florida – meeting special criteria for an intense concentration on outdoor passive recreation. We got there by focusing a lot of energy on trails.
- The town has a well-known Greenways and Trails committee – unaware and not consulted on this restoration
- The town has a Parks and Rec Board – also not consulted
- This affects over 500 acres in this very small town
- This also affects the City of Palm Bay as the trail system is immediacy adjacent to Palm Bay's trail system, and affects other residents of Brevard County.
- The signage refers the user to their website, but there is no information on the plans on the website, and the number they refer the user to the lady has no information on the plan – so the sign is not right.
- The EEL program has a long history of not seeking user input, or disregarding it: Generally putting the recreational component of their mission last. They plan to start December 1<sup>st</sup> with ZERO public or Town of Malabar input, ... but the public webinar is being held December 9<sup>th</sup>

An email below from Mike Knight, director of the EEL program, written to my wife. Please see highlights below. It states that they are starting work December 1<sup>st</sup> (tomorrow), but have arranged to have a public webinar on December 9<sup>th</sup>. Once again, the EEL program is not interested in user input. Why does this public entity not have to perform normal public and user involvement and notification steps, like every other public entity?

\* **What do we want?** We want this project stopped until the EELp seeks input from the Malabar Town Council, the Malabar Trails and Greenways Committee, and the Brevard Mountain Biking Association. We will make best efforts to seek compromise that will further the environmental mission of the EELp, while still maintaining an adequate trail system for users. If this requires them to delay for a year, then so be it. The programs lack of planning on this project is not our fault. \*

What voters voted on many years ago, in endorsing the creation of the EELp, was 1) Land for Passive recreation and 2) land to promote biodiversity and preserve scrub habitat. Unfortunately, in execution of the program, somewhere along the way it became 99% preserving scrub habitat, and 1% passive recreation. That is just not right, and not what people voted for.

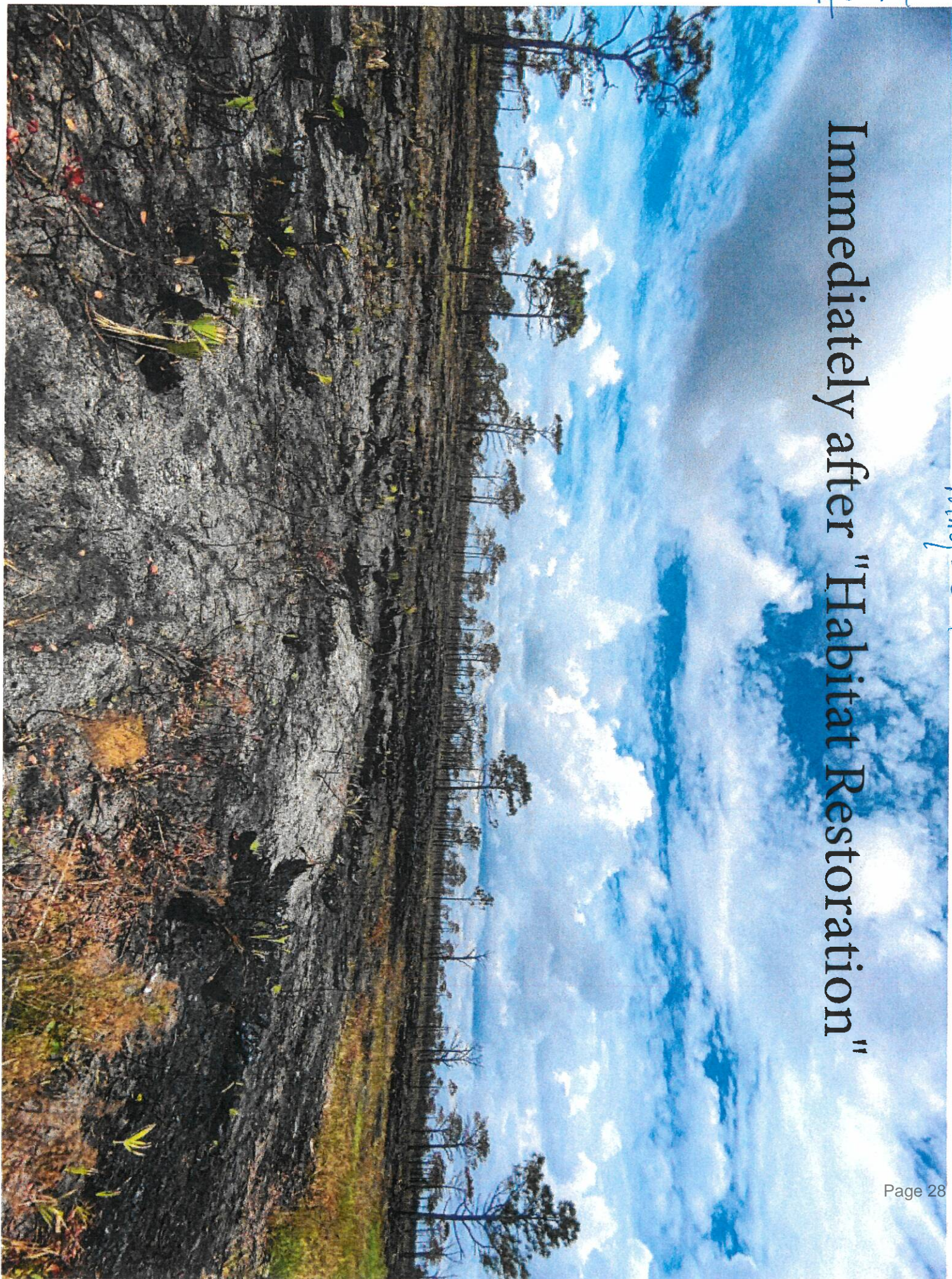
Thank you for your attention to this issue,  
Murray Hann

TRAIL TOWN designation by State  
MALABAR is one of only nine in the  
state.

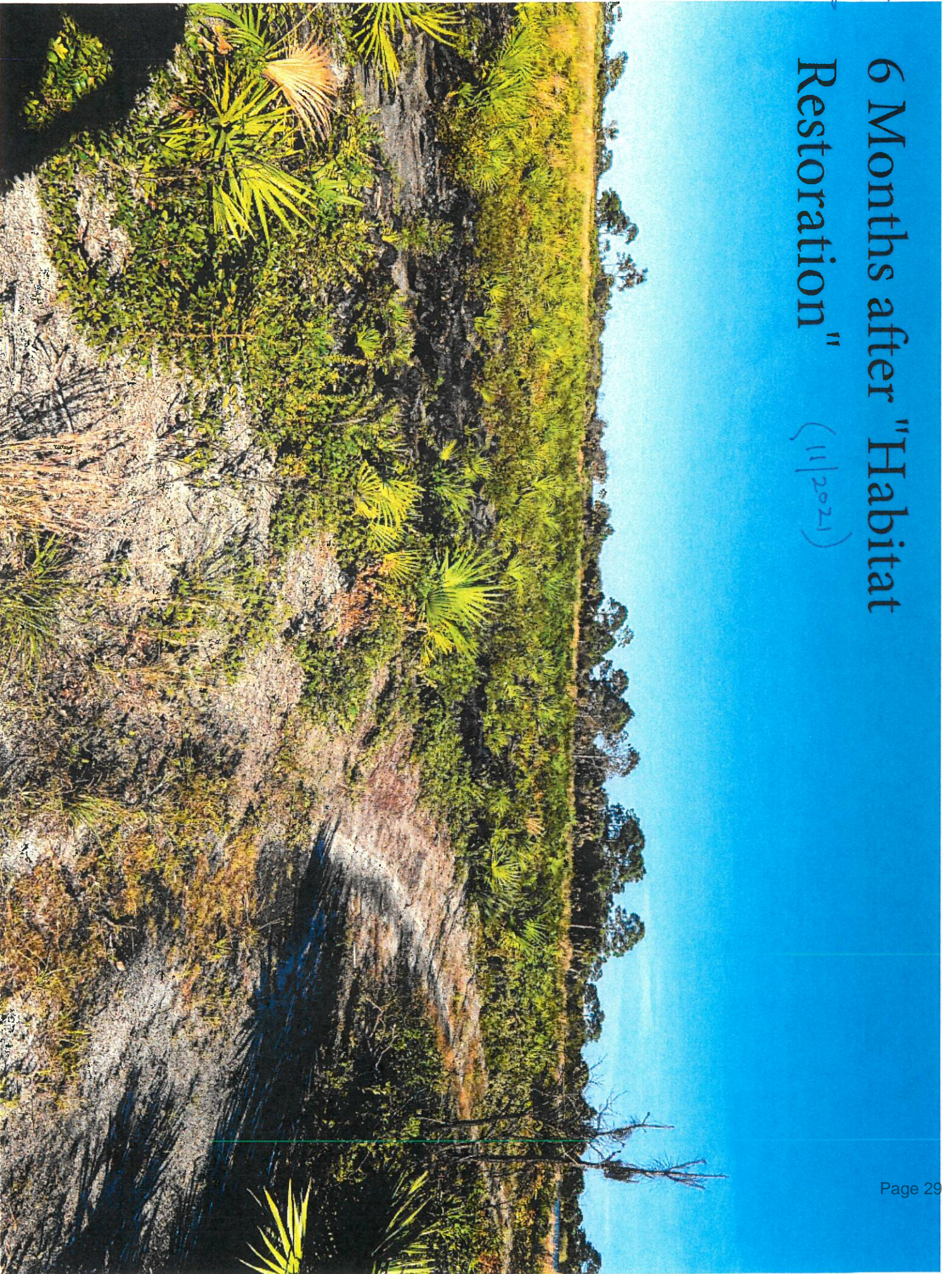
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10/19/2021

# Immediately after "Habitat Restoration"



5 4 9 5  
6 Months after "Habitat  
Restoration" (11/2021)



On Mon, Nov 29, 2021 at 8:30 PM Susan Hann <[susanhannpe@gmail.com](mailto:susanhannpe@gmail.com)> wrote:

Hi Jim - This evening I received a copy of a response that was sent to a citizen from Commissioner Tobia's office regarding the project (see below).

While I have many concerns, the primary one at this point is that the work appears to be starting next week (assuming this email was written today and not last week!). There's been no opportunity to engage user groups, the Town of Malabar, the Brook Hollow HOA, City of Palm Bay, etc. There is no information posted on the web site.

Anyway - I believe this issue is on the Town Council agenda for next Monday evening. Malabar has a Greenways and Trails Committee that has not been informed nor consulted. The Brevard Mountain Bike Association has not been contacted either even though the area is heavily used by bikers, hikers and walkers. While the project is not in Palm Bay, the project is adjacent to Palm Bay and will affect their citizens and their roads. I haven't had a chance to touch base with Ms. Sherman yet, so I don't know whether they have been consulted.

Can you please let me know if this can at least be deferred until there is some community engagement? I realize there are different perspectives on this project, but once the trees are gone, they are gone, so we would appreciate a chance to discuss before the trees are destroyed.

Even if the decision is ultimately to do the restoration, it certainly would be appreciated if the project can be delayed until summer as right now is the nicest time of the year to be outside!

My cell is 321-508-9774. Hopefully we can chat sometime on Tuesday.

Thank you!

Sue

Fwd: EELs issue @ sanctuary adjacent to Briar Creek Boulevard - URGENT

1 of 2

Richard Kohler <rkohler@townofmalabar.org>

Wed 12/1/2021 8:19 AM

To: Debby Franklin <townclerk@townofmalabar.org>

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**From:** Susan Hann <susanhannpe@gmail.com>

**Sent:** Wednesday, December 1, 2021 8:08:56 AM

**To:** Knight, Michael A <Mike.Knight@brevardfl.gov>

**Cc:** Kimball, Steven <steven.kimball@brevardfl.gov>; Donner, Mary Ellen <MaryEllen.Donner@brevardfl.gov>; Liesenfelt, Jim <Jim.Liesenfelt@brevardfl.gov>; Murray Hann <mhann@harris.com>; Murray Hann <mhann2010@cfl.rr.com>; g\_dunnam@msn.com <g\_dunnam@msn.com>; drew.thompson@prosolent.com <drew.thompson@prosolent.com>; Suzanne Sherman <Suzanne.Sherman@palmbayflorida.org>; Lisa Morrell <LMorrell@townofmalabar.org>; Richard Kohler <rkohler@townofmalabar.org>; D3.commissioner@brevardfl.gov <D3.commissioner@brevardfl.gov>; D5.commissioner@brevardfl.gov <D5.commissioner@brevardfl.gov>

**Subject:** Re: EELs issue @ sanctuary adjacent to Briar Creek Boulevard - URGENT

Good Morning, Mike - Thank you for your email. However, what I am requesting is a collaborative approach to the project that involves user groups and stakeholders, not a webinar on scrub jay habitat a week after the project starts. Your own records (and my personal experience) indicates that you are well aware of the user groups, the popularity of this area as a destination for mountain bikers, hikers and runners and the interest of the Town of Malabar in being an active and collaborative partner in how properties in the Town are managed. Consequently, the fact that you did not engage any of these stakeholders in any way (including your own Recreation and Education Advisory Committee) before starting the project is extremely concerning. You made the choice to delay stakeholder engagement until after the project started with full knowledge of scrub jay nesting season as well as the likely intensity of stakeholder interest. You had full control over how and when to engage stakeholders, so I do not believe that the urgency of the project due to scrub jay nesting is a reason to obliterate the trees without any collaborative work with your stakeholders.

The information that was finally posted on your website yesterday explains the potential intensity of the tree reduction which is why I used the phrase "obliterate the trees." Your website states that "optimal Florida scrub-jay habitat contains less than one tree greater than 15 feet per acre and maintain a 1,000 foot non-forested (<1 tree per acre) buffer between scrub jay territories and forest edges." Land clearing for development purposes leaves more trees than what is contemplated under your guidelines. When I spoke with the Town of Malabar, I understood that you do not have, nor do you intend to get, a tree clearing permit that any other property developer with this level of land clearing would have to obtain. While not a biologist, I am a licensed civil engineer and this level of clearing near Turkey Creek and its tributaries is also concerning. A developer doing this activity would need to provide erosion control for such significant clearing. Your planned project could also be considered a logging operation such that impacts on local roads would need to be considered.

In summary, all I am asking for is true stakeholder collaboration before work starts that irreparably damages the tree canopy. Waiting a few months to start work does not seem unreasonable given the

complete lack of collaboration with known stakeholders. It is possible that scrub-jay preservation interests may outweigh passive recreation interests through the collaborative process, but you need to recall that the referendum language creating the environmentally endangered lands program specifically addressed conserving property for both purposes. Giving consideration to passive recreation is a part of the program that its management needs to acknowledge.

I hope you will understand why we will continue to engage stakeholders in addressing County Management and County Commissioners in at least delaying this project until a proper public engagement and stakeholder collaboration processes can be executed.

Sue



pg 1 of 2

Fwd: Request Temporary Halt To EEL Program Restoration Efforts at Malabar Scrub Sanctuaries (East & West)

From: drew.thompson@prosolent.com <drew.thompson@prosolent.com>

Sent: Wednesday, December 1, 2021 12:39:12 AM

To: 'John Tobia' <D3.Commissioner@brevardcounty.us>

Cc: 'Kristine Zonka' <D5.Commissioner@BrevardFL.gov>; Murray.Hann@L3Harris.com

Subject: Request Temporary Halt To EEL Program Restoration Efforts at Malabar Scrub Sanctuaries (East & West)

Dear Commissioner Tobia,

I am writing to you to convey an urgent plea requesting a temporary halt to EEL Program restoration efforts at Malabar Scrub Sanctuaries (East & West).

I am a long-time Brevard County citizen who has been, and still is, quite active in supporting the preservation of greenways, development of the Malabar Trail System, and the building of property values in my Brook Hollow development in Malabar. I think that a great trail system is key to developing ecotourism in Brevard County.

The current lack of public meetings, lack of details on the EEL Program website, and the resulting lack of citizen input is about to morph into a public outcry once the smoke dissipates and the bulldozers leave. The people who actively visit and enjoy the targeted area, along with those who purchased their forest proximity homes, may feel that a big part of where they live was subject to an unimaginable attack without warning, all too similar to a certain infamous day in a December years ago - but never to be forgotten.

A sign posted at a trailhead does not equate to sufficiently informing the public of the magnitude of irreversible change about to be implemented. As the few in the public who just learned about this scramble to collect minimally available information, the "restoration" seems to move forward. Based on recent results of the Jordan Scrub Sanctuary "Restoration", a similar "restoration" effort would significantly damage the greenway south of Port Malabar Blvd., especially impacting people associated with:

- Brevard Mountain Bike Association (BMBA)
- Brook Hollow Community Association (BHCA)
- Glenbrook at Palm Bay (ALF)
- Country Cove Homeowners Association (CCHA)
- Stillwater Preserve Homeowners Association (SPHA)
- Turkey Creek Sanctuary (City of Palm Bay)
- Town of Malabar (an official State of Florida Trail Town)

The EEL Program was established by Brevard County citizens "to protect the natural habitats of Brevard County by acquiring environmentally sensitive lands for conservation, passive recreation, and environmental education." Accordingly, intentional devastation of active recreational area forests, transforming them into burned-out fields in the name of "habitat restoration for scrub jays" may help scrub jays. However, it completely disregards any consideration of passive recreation or even the harmful impact to other species (fauna and flora) now living in the forest.

With a temporary halt, followed by public meetings with concerned citizens and plan revision details being available to the public, a revised restoration plan undoubtedly could be developed. A new plan, protecting trails, could result in improved habitat for scrub jays, and reduced fuel threat for wildfires and yet allow for contiguous areas of forest, critical for a greater variety of greenway species to survive.

Again, I ask that you please consider this urgent plea requesting a temporary halt to EEL Program restoration efforts at Malabar Scrub Sanctuaries (East & West). I appreciate you considering my request.

Thank you,

Drew Thompson  
Brook Hollow Community Association (BHCA), President  
Town of Malabar Trails & Greenways Committee (T&GC), Chair  
Space Coast TPO - Bicycle, Pedestrian & Trails Advisory Committee, member  
Brevard Mountain Bike Association (BMBA), member

**Contact Information:**

Office – 321.215.4865  
Mobile – 772.584.9040  
Email - [drew.thompson@prosolent.com](mailto:drew.thompson@prosolent.com)  
Web - [[www.prosolent.com](http://www.prosolent.com)][www.prosolent.com](http://www.prosolent.com)

From: Michael Schoolfield <mikeschoolfield@gmail.com>

Sent: Wednesday, December 1, 2021 10:29 AM

pg 1 of 2

To: D3.Commissioner@brevardcounty.us <D3.Commissioner@brevardcounty.us>

Cc: Murray.Hann@l3harris.com <Murray.Hann@L3Harris.com>; susanhannpe@gmail.com

<susanhannpe@gmail.com>; D5.Commissioner@brevardfl.gov <D5.Commissioner@BrevardFL.gov>;

g\_dunnam@msn.com <g\_dunnam@msn.com>; Frank.Abbate@brevardfl.gov <Frank.Abbate@brevardfl.gov>;

Richard Kohler <rkohler@townofmalabar.org>; Lisa Morrell <LMorrell@townofmalabar.org>;

suzanne.sherman@palmbayflorida.org <suzanne.sherman@palmbayflorida.org>;

maryellen.donner@brevardfl.gov <maryellen.donner@brevardfl.gov>; jim.liesenfelt@brevardfl.gov

<jim.liesenfelt@brevardfl.gov>; don.lafontaine.nx@gr.reneasas.com <don.lafontaine.nx@gr.reneasas.com>

**Subject:** Request for a Halt To EEL Program Restoration Efforts at Malabar Scrub Sanctuaries (East & West)

Dear Commissioner Tobia,

I am writing to you to convey an urgent plea requesting a temporary halt to EEL Program restoration efforts at Malabar Scrub Sanctuaries (East & West).

My wife and I are retired and for ten years have lived on Pemberton Trail in Malabar in a home that is directly adjacent to Malabar Scrub Sanctuary West. We are active in using the Malabar Trail System for our health and well being and support preservation of the greenways as well as indigenous wildlife and the building of property values in our Brook Hollow development in Malabar. We also think that a great trail system is key to developing ecotourism in Brevard County. We just had a neighbor move here from California and they are excited about using the trail system and enjoying the sanctuary and all it has to offer.

Several years ago the EEL's Program burned off the 13 acres behind our house and removed all the sand pine trees, stating it was to extend scrub jay habitat from the east. After that destruction here is what we have seen and not seen. We have never seen a scrub jay over on this side and we now rarely see the number of songbirds and small mammals we saw years ago before the burning. Also, we have not seen a deer, bobcat or raccoon since the burn off. What we see now is 13 acres with no cover for animals from predators. We have watched hawks sit in the tall long leaf pines that are left picking off song birds and small mammals so easily because they have no cover. Of course, the hawks must feed, but do we have to make it so easy for them that it is akin to "shooting fish in a barrel"? NONE OF THIS MAKES SENSE.

It seems that the EEL's Program is working off a flawed model of management. There are certainly other scientific models for this type of land management that does not incorporate wholesale burning off and destruction of our precious wooded areas we use so much for recreation and enjoyment of the flora and fauna. Why do we have to sacrifice the habitat of so many animals for one, i.e. the scrub jay? 2 of 2

If what was done in Jordan Scrub earlier this year, that honestly looks more like a war zone than a wildlife sanctuary, is allowed to go forward in Malabar Scrub it will have a huge negative impact on usage of the trail system (who wants to bike and/or hike through an area that is burned off and smells like ashes) and ecotourism that had been on the rise here.

I thought that the EEL Program was established by Brevard County citizens "to protect the natural habitats of Brevard County by acquiring environmentally sensitive lands for conservation, passive recreation, and environmental education."

Again, I ask that you please consider this urgent plea requesting a temporary halt to EEL Program restoration efforts at Malabar Scrub Sanctuaries (East & West). Thank you for considering my request.

Sincerely,

Mike Schoolfield  
Malabar, FL

RE: EELs issue @ sanctuary adjacent to Briar Creek Boulevard - URGENT

Knight, Michael A <Mike.Knight@brevardfl.gov>

EEL PROGRAM Mgr

1 of 2 plus  
10 pg guide lines

Wed 12/1/2021 10:06 AM

To: Susan Hann <susanhannpe@gmail.com>

Cc: Kimball, Steven <steven.kimball@brevardfl.gov>; Donner, Mary Ellen <MaryEllen.Donner@brevardfl.gov>; Liesenfelt, Jim <Jim.Liesenfelt@brevardfl.gov>; Murray Hann <mhann@harris.com>; Murray Hann <mhann2010@cfl.rr.com>; g\_dunnam@msn.com <g\_dunnam@msn.com>; drew.thompson@prosolent.com <drew.thompson@prosolent.com>; Suzanne Sherman <Suzanne.Sherman@palmbayflorida.org>; Lisa Morrell <LMorrell@townofmalabar.org>; Richard Kohler <rkohler@townofmalabar.org>; Commissioner, D3 <d3.commissioner@brevardfl.gov>; Commissioner, D5 <D5.Commissioner@brevardfl.gov>

Good Morning Sue,

As you know, the EEL Program made significant effort during the last phase of restoration to minimize the impact to vegetation and trees along the trails in Malabar Scrub at the request of the mt. biking community. These compromises at the time were somewhat contrary to the State's Scrub Management Guidelines. We implemented this limited restoration to assess whether or not it would actually have a positive impact on the Scrub Jay population which was rapidly declining due to poor habitat quality. This work was done with the open understanding that more work may be needed in the future in the event the resulting work was successful in increasing Scrub Jay family territory distribution. We had also hoped that we could achieve both the needed scrub habitat improvements and protect the shaded trail experience created by this overgrown scrub vegetation. Ongoing scrub jay monitoring and a relocation of a scrub jay family to the property has made it clear that more work is needed and the specifications need to be consistent with the State's Scrub Management Guidelines. We certainly understand how visitors who are unfamiliar with scrub habitat management and scrub jay population dynamics will view the work as destructive but the EEL Program has had much success with other similar projects in Brevard County.

It is important to keep in mind that the Malabar Scrub Sanctuary was acquired for the primary purpose of protecting scrub habitat and the its dependent plant and animal species. To not manage the habitat in accordance with the scrub guidelines would not only be contrary to the original reason for its preservation but it would be in violation of our lease agreement with the State of Florida which dictates that the property must be managed in a manner that is consistent with the reason for which it was protected and acquired. Please understand that the existing trail system will remain in place, any impacts from the restoration work will be repaired and there is no plan to alter any of the allowable passive recreation uses on the property.

Management progress reviews by the State of Florida happen every 5 years. The sanctuary's habitat quality status has consistently come up as a significant point of discussion with State staff expressing concern over our efforts to minimize the needed restoration in an effort to maximize shade opportunities for visitors. In addition, the Florida Scrub Jay Population Viability Analysis conducted in 2020, a joint effort between EEL, NASA, Bob Lacey with the Chicago Zoological Society and the Brevard Zoo, made it very clear that the last hope for the long-term protection of the Florida Scrub Jay in mainland Brevard County will require that all EEL scrub sites in south Brevard be restored and managed in an optimal condition to support the Florida Scrub Jay and other scrub species.

In regards to your comments related to permits and erosion control, we did obtain a land clearing permit from the Town of Malabar for this project even though the work will not involve any significant soil disturbance or actual removal of understory vegetation. The work is essentially a mowing project with the selective removal (cutting) of oak and pine species.

I would hope that you will encourage others with similar concerns to participate in the December 9<sup>th</sup> webinar to learn more about the project.

Mike

Attached

Begin forwarded message:

2 of 2

**From:** "Knight, Michael A" <Mike.Knight@brevardfl.gov>  
**Date:** November 30, 2021 at 11:05:22 AM EST  
**To:** Susan Hann <susanhannpe@gmail.com>  
**Cc:** "Kimball, Steven" <steven.kimball@brevardfl.gov>, "Donner, Mary Ellen" <MaryEllen.Donner@brevardfl.gov>, "Liesenfelt, Jim" <Jim.Liesenfelt@brevardfl.gov>  
**Subject:** RE: EELs issue @ sanctuary adjacent to Briar Creek Boulevard - URGENT

Sue,

The work is due to start on December 1<sup>st</sup>, but the initial work prior to December 13<sup>th</sup> will NOT be along the trails areas. This initial work will focus on the more remote locations on the east side of the Malabar east tract. Deferring the project is not an option mainly because we need to get as much done as we can in the jay nesting areas prior to scrub jay nesting season. There will be two components to this project which will include the initial scrub oak and palm reduction by staff and a timber project managed by the Florida Forest Service that will focus specifically on pine tree density reduction.

We apologize for the delay in getting information up on our website about the project. We are anticipating it will be up today along with a notification of a public informational Zoom webinar about the project on the evening of December 9. We also plan to have a Facebook notification go out today or tomorrow to highlight the project and the webinar.

Staff has been working closely with the our local scrub jay scientist at NASA to evaluate the site restoration needs and in particular how the work will need to alter the current overgrown habitat conditions along the trail system. Staff has worked hard over the years to minimize the alteration of scrub vegetation along the trails with the understanding that future work may be needed if scrub jays began to respond positively to the initial work completed some years ago. Monitoring of the jays has confirmed that the limited restoration completed some years ago has created a positive response. In addition, the recent Scrub Jay Population Viability Analysis completed in 2020 has made it very clear that unless all the scrub sites in southern Brevard County are properly restored and managed as close as possible to an optimal condition, we will lose the last opportunity to save the Florida Scrub Jay population on mainland Brevard County.

We will do our best to minimize the temporary closure of trails in certain areas while the work progresses around the site.

Please let me know if you have further questions.

Mike

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Florida Natural Areas Inventory, Florida State University  
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Title: **Scrub Management Guidelines for Peninsular Florida:  
Using the Scrub-Jay as an Umbrella Species**

D.O.: Division of Habitat and Species Conservation

Date: June 2009

Note: This document is subject to update after further review.

see pg 3

**SUMMARY:**

This document provides management guidelines using Florida scrub-jay habitat requirements as the basis for the restoration and management of scrub habitats in the Florida peninsula (defined as the mainland south of an imaginary line from Cedar Key on the Gulf Coast to Jacksonville on the Atlantic Coast). The Florida scrub-jay can serve as an umbrella species (see Appendix 1) for Florida’s peninsular scrub because the scrub-jay’s habitat requirements encompass those of a majority of scrub-specialized plants and animals, which require a patchy mosaic of low vegetation heights and open patches of bare sand. If followed, these guidelines should benefit most scrub plant and animal species. Many scrub habitats in Florida have experienced fire exclusion or unnaturally infrequent fire regimes. Restoration of scrub habitats to a condition most beneficial to scrub-jays and most other scrub plants and animals will require re-establishment of the historical fire regime.

**FULL TEXT:**

These guidelines for the management of scrub habitats in peninsular Florida use the Florida scrub-jay (*Aphelocoma coerulescens*) as an umbrella species. Management actions that create the low, open structure of scrub favorable for scrub-jays likely benefit most other scrub-associate species such as the Florida scrub lizard (*Sceloporus woodi*), the threatened southeastern beach mouse (*Peromyscus polionotus niveiventris*; Suazo et al. in press; US Fish and Wildlife Service, 1989) more than 100 species of arthropods (Mark Deyrup, pers. comm.), and many species of plants (Menges 2007). These recommendations also will benefit more widely distributed species such as gopher tortoises (*Gopherus polyphemus*; Diemer 1986, Breininger, et. al 1994, Ashton and Ashton 2008), white-tailed deer (*Odocoileus virginianus*; FWC 2007), wild turkey (*Meleagris gallopavo*; David Nicholson, Florida Fish and Wildlife Conservation Commission [FWC], pers. comm., Brian Zielinski, National Wild Turkey Federation, pers. comm.), and various declining bird species (MacAllister and Harper 1998, FWC 2005). In the absence of compelling reasons to do otherwise such as alternative management objectives, we

recommend that managers of scrub habitats in peninsular Florida aim to create conditions that meet general requirements for the Florida scrub-jay, even if scrub-jays are absent from a property.

These guidelines provide general information for planning and goal-setting. Though management for scrub-jays creates the low, open habitat suitable for a majority of scrub species, these guidelines are not intended to replace local knowledge of other effective management strategies or to override management for other rare species or native habitats. Managing for pyrodiversity (defined in Appendix 1) provides a bet-hedging strategy to ensure benefits for the maximum number of species (Menges 2007). Given regional variation in scrub habitats, we recommend that land managers network and discuss management experiences, particularly with regard to specific requirements of rare plants and methods for restoring long-unburned scrub. Regional working groups provide one forum for addressing these topics with neighboring land managers and other experts.

### **Types of Scrub**

There are various types of scrub habitats in peninsular Florida, including oak scrub, yellow sand (or oak-hickory) scrub, sand pine scrub, coastal scrub, and rosemary scrub (FNAI 2008). However, all of these scrubs usually contain one or more species of shrubby oaks, including sand live (*Quercus geminata*), myrtle (*Q. myrtifolia*), Chapman's (*Q. chapmanii*), and on the central ridge, scrub oak (*Q. inopina*; Woolfenden and Fitzpatrick 1996).

## **USING POTENTIAL SCRUB-JAY TERRITORIES TO GUIDE MANAGEMENT**

We recommend that, in the absence of other ecologically justified conservation goals such as the maintenance of red-cockaded woodpecker (*Picoides borealis*) clusters, vegetation be managed to promote optimal (see Table 1) scrub-jay habitat within potential scrub-jay territories (see Appendix 1), regardless of whether the birds currently occupy those areas. These conditions replicate what was most likely the historical condition of the landscape and provide good habitat for the majority of other scrub-adapted species.

Scrub-jays maintain territories averaging 25 acres in optimal habitat (Breininger 2004). In addition to scrub habitats, optimal scrub-jay territories often incorporate a variety of other habitats including scrubby flatwoods, sandhills (high pine), prairie, wetland margins, and open mesic flatwoods. Scrubby flatwoods, which may constitute all or the majority of scrub-jay territories in some areas, usually contain a higher percentage of saw palmetto (*Serenoa repens*), fetterbush (*Lyonia lucida*), and wiregrass (*Aristida stricta*) and often have a sparse overstory of slash (*Pinus elliotii*) or longleaf pine (*P. palustris*). Scrub-jays may occur in areas that completely lack scrub or scrubby flatwoods, but scrub-jays are unlikely to persist long term in these areas without immigration from habitat that contains at least some scrub or scrubby flatwoods (Breininger 2004).

Visualizing a grid overlay of 25-acre cells is a useful way to estimate the number of potential territories at a site. On a given property, the goal would be to maintain 70% of these potential territories in optimal condition (see Table 1). The remaining 30% would be too short (i.e., average shrub height < 4ft and < 1 acre of optimal height shrubs) due to recent management or slightly too tall (i.e., average shrub height slightly above 5.5 feet). We recognize that especially on some larger properties it may not be feasible to achieve this 70% to 30% ratio of optimal versus suboptimal territories due to the size of burn units and other management constraints; every site is unique.



**Optimal Florida Scrub-Jay Habitat Overview**

Optimal scrub-jay habitat is that in which scrub-jays achieve maximum demographic performance, in other words, maximum combined survivorship of adults, juveniles, nestlings, and eggs. This habitat consists of mostly treeless open expanses of low shrubs interspersed with bare sandy patches. Oaks and other shrubs are generally low enough that a person approximately 6 feet tall can see over most of the landscape (Figure 1). Table 1 describes these habitat conditions in more detail. The vegetation characteristics outlined in Table 1 benefit the maximum number of scrub-endemic plant and animal species, as well as many widespread species. We acknowledge that more research is necessary to determine many Florida scrub-jay habitat specifics such as maximum number of snags per territory and maximum number and size of tall scrub oak patches.



Figure 1: Optimal scrub at Savannas Preserve State Park. Note low structure, sandy openings and sparse tree cover (photo by Chris Vandello).

See this website for more habitat photos:

<http://share2.myfwc.com/scrubjay/Habitat%20Photos/Forms/AllItems.aspx>

Table 1. Optimal Florida scrub-jay habitat characteristics per territory. Adapted from Breininger (2004), Breininger et al. (1998) and, Burgman et al. (2001).

Vegetation height	At least 10% of each potential scrub-jay territory (25 acre unit) should have shrubs that average 4 to 5.5 feet high to provide cover and produce acorns. The rest of the vegetation should be shorter, with no more than 1 acre of vegetation taller than 5.5 feet per unit.
Tree (>15 foot tall) overstory	If present at all, less than 1 tree per acre.
Distance to forest edge	Maintain a 1,000 foot non-forested (<1 tree per acre) buffer between a scrub-jay territory and forest (Burgman et al. 2001).
Open ground	10-50% bare sand or sparse herbaceous vegetation

### **Vegetation Heights**

Vegetation height within a territory is one of the most important factors influencing demographic success of scrub-jays (Breininger and Carter 2003, Breininger and Oddy 2004, Breininger et al. 2006). The optimal average height of the shrub layer for scrub-jays is 4 to 5.5 feet (Breininger and Carter 2003). This average shrub height also provides appropriate habitat for the majority of other scrub-adapted species. Scrub-jay numbers, as well as numbers of scrub-endemic plants, quickly decline in areas where the shrub layer averages taller than 5.5 feet (Breininger et al. 1998). When average vegetation height becomes too tall, managers can reduce the height of the shrub layer using fire or a combination of mechanical means and fire. Ideally, all jay territories will have access to some optimal scrub, even when portions of their territory have been burned or mechanically treated. Options include treating only a portion of each jay territory or leaving small patches of oaks (4 to 5.5 feet tall) within each territory that can provide escape and roosting cover, nesting sites, and acorns. Given that the ecological role of taller scrub (taller than 5.5 feet) is not well understood, it may be beneficial to leave a small percentage of taller scrub (see Table 1) on the landscape (Kevin Enge, FWC, pers. comm.). Historic fire shadows (Appendix 1), for example, provide an opportunity to maintain some taller patches on a property.

### **Tree Overstory**

Scrub-jays generally avoid heavily forested areas and do best in areas with no more than one tree per acre (Breininger 2004). A thick overstory also results in less light reaching the ground, resulting in reduced habitat suitability for most scrub-adapted species. In areas managed for scrub-jays and other scrub associate species, thinning of dense pine through frequent burning and mechanical removal may be necessary to restore scrub. Moreover, thinning in adjacent non-scrub habitats maximizes available space for scrub-jays, which incorporate seasonal wetlands and pine flatwoods into their territories provided these habitats have a sparse pine canopy. Most dense stands of pine today occur in areas where fires have been unnaturally excluded for decades.

For scrub-jay territories that occur entirely in non-scrub habitats and for non-scrub lands within the 1,000 foot buffer (Table 1), the amount of tree thinning is ultimately at the discretion of the land manager. Managers must weigh the benefits to scrub-jay population survival at a site against the habitat needs of other species in non-scrub areas considered for thinning.

### **Distance of Scrub-Jay Territory from Forest Edge**

Areas of otherwise suitable habitat within 1,000 feet of a forest may constitute lower quality habitat for Florida scrub-jays (Burgman et al. 2001, D. R. Breininger, Dynamac Corporation, pers. comm.). For example, scrub-jay daily nest survival rates showed a declining trend as far as 800 yards from dense forests during a 20 year period at a study site on Merritt Island in Brevard County (G. C. Carter, Dynamac Corporation, unpublished data). Scrub-jays may avoid these 'tree shadows' (see Appendix 1) because potential predators such as hawks pose a threat in these areas. Thinning of patches of pinelands to <1 tree per acre within 1000 feet of scrub patches will maintain maximum habitat suitability for scrub-jays within these areas (Burgman et al. 2001). However, we do not recommend the compromise of natural non-scrub habitat of other rare species.

In some cases, the ability of scrub-jays to disperse across a landscape (the 'permeability' of the landscape – see Appendix 1) may be enhanced by thinning trees to produce a more open forest (i.e., to pre-fire exclusion tree densities). Scrub-jays may be reluctant to disperse through thick, tall forest (tree curtains – see Appendix 1) as narrow as 100 yards wide (D. R. Breininger, Dynamac Corporation, pers. comm.). Isolated optimal habitat patches surrounded by dense upland forests may remain unoccupied permanently, especially in areas with low numbers of dispersing scrub-jays. We recommend managers

view their site's scrub-jay population within a regional context and coordinate with their neighbors to maximize permeability of the upland landscape.

### **Open Ground**

Many scrub plant and animal species depend on maintenance of open areas where sunlight reaches the ground (Campbell and Christman 1982, Hawkes and Menges 1996, Menges and Kimmich 1996). Optimal scrub-jay habitat contains 10% to 50% open ground with either bare sand or grass  $\leq 6$  inches tall (Breininger 2004). Scrub-jays use these open areas to cache acorns and search for insects; individual scrub-jays buried an average of 6,500 to 8,000 acorns during one fall in a study at Archbold Biological Station (DeGange et al. 1989). Endemic scrub herbs, especially in the Lake Wales Ridge scrub, and other scrub associate species (e.g., lichens and sand skinks) also require bare sand patches.

## **APPROACHES TO SCRUB MANAGEMENT**

### **Fire**

Historically, scrub habitats were maintained in conditions suitable for scrub associate species by low frequency, high intensity fires occurring under extreme burning conditions with high wind, low humidity, and low fuel moisture (Myers 1990). Repeated applications of lower intensity fires (such as many winter burns) may not achieve the same ecological function as a more natural burn regime. Whenever possible, we recommend the application of growing season burns, the season when most fires naturally occurred. However, low intensity fires are better than none at all; when weather conditions prohibit a planned growing season burn, it may be beneficial to conduct a winter burn rather than waiting for optimal conditions during subsequent growing seasons. Varying the season, frequency, and spatial extent of burns helps to create diverse landscapes that benefit a large number of species. While mechanical treatments do not have the same ecological effect as fire (Menges and Gordon in preparation, Suazo et al. in press, Weekley et al. 2008), they could be used in combination with fire to manipulate vegetation stature and create a similar structural effect as fire.

We recommend managers use vegetation height to determine when to burn. To maintain a low, open scrub structure, fires must be frequent enough to keep average shrub height generally below 5.5 ft, but leave vegetation heights variable enough to allow continuous acorn production within a territory. Scrub oaks generally begin producing acorns three years after being top-killed by a severe burn (Fitzpatrick et al. 1991), but this may vary among sites. Allowing prescribed fires in adjacent flatwoods or sandhills or other habitats to burn into scrub may achieve this desired mosaic (see Appendix 1) if fires burn into the scrub far enough to create openings and low vegetation, but not so severely that all vegetation at optimal height is lost (Breininger et al. 2002). However, if a site is severely fire-suppressed and unsuitable for most scrub-associate species, managers may wish to use extensive 'restoration' burns (see Appendix 1) to restore the entire area as quickly as possible.

We do not recommend a fixed prescribed fire return interval because of the high degree of variation in scrub types and site conditions, including an individual site's burn history. For example, fire return intervals between 8 and 15 years have been recommended as optimal for maintaining Florida scrub-jay populations in *Quercus inopina*-dominated scrub (Woolfenden and Fitzpatrick 1996). An 8 to 15 year fire return interval may be too long on central Florida's Atlantic coast, where openings in scrub disappear within 3 to 5 years (Schmalzer 2003, Schmalzer and Hinkle 1992, Breininger et al. 2002). Menges (2007) recommended a 5 to 12 year fire return interval for oak-hickory scrubs for scrub plants, and he notes that some scrubby flatwoods and oak-hickory scrubs may be ready to burn as soon as 3 years post fire. By contrast, rosemary scrub has a minimum fire return interval of 15 years (Menges 2007). Some species associated with rosemary scrub, such as Florida rosemary (*Ceratiola ericoides*)

and some invertebrates, respond poorly to frequent fire. Therefore, patches of rosemary scrub may need special consideration during management activities. Even when burned infrequently, rosemary scrub maintains the low structure optimal for scrub-jays.

Scrubby flatwoods burn more readily than scrub and may recover more quickly as a result of a higher vegetation density (USFWS 1999). Long unburned scrub may resprout with great vigor and require more frequent burning in the initial stages of restoration to maintain optimal conditions (Schmalzer and Hinkle 1992, Schmalzer et al. 1999, Schmalzer and Adrian 2001).

### **Burning Occupied Scrub-Jay Habitat**

The strategy for burning in occupied scrub-jay habitat will depend on the size of the area and how many occupied territories it contains. If the property is large and contains many occupied territories, an entire territory may be burned at once. On smaller properties with limited habitat, care should be taken to avoid burning entire territories at once. Conducting a mosaic burn in an occupied territory should ensure that some optimal habitat remains for resident scrub-jays. However, in some instances, it may be logistically desirable, necessary, or unavoidable to burn entire territories that are occupied. Ideally, in these instances, adjacent lands should offer suitable habitat to which birds can relocate.

### **Mechanical treatments (see Appendix 2)**

While the goal of management should be to restore fire to scrub habitats, mechanical treatments prior to burning may be useful to speed up restoration, create ignition strips, reduce fuel height to maintain prescribed fire safety, or maintain fuel height in areas where fire is not possible. However, mechanical treatments do not provide an ecological substitute for fire and should be followed by prescribed fire if possible (Menges and Gordon in preparation, Suazo et al. in press, Weekley et al. 2008). Mechanical treatments are usually more expensive than burning alone and often involve heavy equipment that may result in soil disturbance and ecological damage such as harming fossorial animals and introducing exotic plant material. Mechanical equipment and tools that have minimal soil disturbance are preferable. Examples of those types of equipment include chainsaws, track vehicles, and single pass empty roller drums.

If mechanical treatments use heavy equipment to prepare a site for fire, we recommend management techniques and operating methods that minimize soil disturbance and foster mosaic burns. The use of 'sloppy' (see Appendix 1) methods of treatment produce an uneven and more natural landscape after fire (J. Hinchee, U.S. Forest Service, pers. comm., Kevin Enge, FWC, pers. comm.). Alternatively, treating strips through a unit may achieve a more complete but still mosaic burn. The use of tracked vehicles usually results in less soil disturbance than using vehicles of a similar weight that have tires (Stefanie M. Nagid, City of Gainesville Nature Operations Division, pers. comm.). An empty roller drum pulled by a track vehicle in a single pass method will push vegetation down instead of digging into the soil. If the goal is to create the desired safety conditions for a burn, it may be possible to mechanically treat only the perimeter of a unit (Doren et al. 1987). These methods can reduce the potential negative impacts of mechanical treatments while providing enhanced opportunity to control prescribed burns.

Effects of mechanical treatments on lichens, soil crusts, and many focal species have not been adequately studied. If gopher tortoises are present, mark and avoid burrows during mechanical treatments where possible, and consider treating areas during winter, when animals are most likely to be underground and out of harm's way, then following up with a spring/summer burn. Consider the effects on rare plants and other localized special features in the mechanical treatment footprint.

Managers using mechanical treatments have reported the possibility that these treatments caused infestations of invasive plants, such as Natal grass (*Rhynchelytrum repens*). These infestations may result from neighboring exotic plant populations spreading into areas with disturbed soil, from severe fires in deep mulch created by mechanical methods (E. Egensteiner, Florida Park Service, pers. comm., K. Main, Archbold Biological Station, pers. comm.), or from seed brought in on equipment. To minimize the chance of spreading invasive seeds, wash equipment (or ensure contractors have washed equipment) before and after each use. Treatment of nuisance and exotic vegetation within a manager's control surrounding the area prior to mechanical restoration may reduce the possibility of wind blown seeds dispersing into the restoration area.

While mechanical treatments are often useful to restore vegetation, these areas should still be burned, preferably less than three months following treatment. Beyond six months, the mulch layer starts breaking down and the increasing shrub height retards wind and creates shade, all of which decrease the flammability. Mechanically treated scrub may not carry fire well after more than a year without a follow-up burn (S. Morrison, The Nature Conservancy, pers. comm., Weekley et al. 2008). There is no ecological substitute for fire – it is essential for the maintenance of plant species richness in scrub habitat and likely has other benefits as well (Menges and Gordon in preparation, Weekley et al. 2008, Williges et al. 2006). Mechanical treatments are best used sparingly, preferably only initially to start the prescribed burning cycle or as one component of the burn process. The results of mechanical treatments should be monitored.

### **Assess Results**

These guidelines should improve the structure of scrub on a given property, thereby benefiting rare species such as the Florida scrub-jay and other scrub associate plants and animals. However, only by monitoring the responses of native and rare species will a manager know whether or not the treatments are beneficial. Habitat management is the first step in the stewardship of Florida's scrub resources; monitoring of target species can provide the appropriate feedback to land managers as to the success of their program.

**AUTHORS:** *Please contact the authors if you have comments about these guidelines.*

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#### **Appendix 1: Terminology used in this paper**

**Fire shadow:** An area that remains unburned for long periods of time while the surrounding landscape is burned. Usually due to fire behavior associated with a landscape feature such as a wetland.

**Mosaic burn:** A burn that results in a landscape of variable burn intensities and vegetation heights, with some patches left unburned.

**Permeability:** Used to describe the degree to which a scrub-jay may pass through a landscape.

**Pyrodiversity:** The temporal and spatial variation of fire on a landscape that results in fires of different intensities and burn areas and maintains optimal habitat requirement for a large variety of species. Managers can increase pyrodiversity on a property by varying seasonal ignition times, time since fire, and methods of ignition while conducting mosaic burns.

**Tree curtains:** Heavily forested landscapes surrounding more open habitats. Tree curtains may decrease permeability and provide cover for predators such as raptors.

**Tree shadow:** An area of reduced survival or reproductive success adjacent to a forested area in otherwise suitable habitat. Alternatively, an area of otherwise suitable habitat that remains unoccupied due to proximity to a forest edge.

**Scrub-jay territory:** The area defended by a scrub-jay family group. Scrub-jay family groups defend areas that average 25 acres, but the size of any one territory is highly variable and depends on site characteristics and each individual territory's history. In areas with a low density of scrub-jays, individual scrub-jay families may defend very large areas

**'Sloppy' treatment:** a means of mechanically treating an area in which some small patches are left untreated to give the resulting landscape a diversity of shrub heights. Sometimes referred to as the sloppy chop if a rollerchopper is involved.

**Restoration burn:** An intense, complete burn across the entire area of unoccupied habitat, or of occupied habitat provided there is ample optimal unoccupied habitat nearby. A restoration burn is often necessary in long unburned areas.

**Umbrella species:** A species whose habitat requirements are also requirements of a wide range of other species; managing for an umbrella species will create habitat conditions that will also benefit many other species.

## **Appendix 2: Mechanical methods for vegetation reduction**

For all of mechanical methods, minimize soil disturbance and opportunities for invasive plant intrusion, and maximize the mosaic burn effect by utilizing 'sloppy' cuts. The goal of all these treatments should be, when possible, to return fire to the landscape ideally from 3 months to a year after the mechanical treatment.

**Chain Saw:** The least damaging method to reduce vegetation due to minimal soil disturbance and chance of invasion by exotic plants. Trees and/or tall shrubs should be cut at or near ground level to reduce the chance of vehicles getting caught on stumps. Piling felled trees creates hotspots during subsequent burns and can be used to promote openings.

**Cutting/Chopping/Grinding:** Used to reduce shrubs and trees by various methods of cutting, chopping, or grinding vegetation. Examples include the Brown Tree Cutter, Gyro-Trac, Kershaw Klearway, Fecon Bull Hog, and Brontosaurus. Using a coarse cut or only cutting the tops of vegetation will reduce the amount of mulch generated and create more desirable conditions for burning. Finer fuels may be hard to burn or may burn too severely due to long smoldering time.

**Roller Chopping:** The number of drums, number of passes, and weight of drums will vary between sites, but the most appropriate selection will include only the minimum needed to reduce vegetation height while causing the least amount of soil disturbance. Vehicles towing drums should avoid sharp turns that create rutting.

**Root Raking:** Causes substantial soil disturbance and should only be used where there are no other vegetative reduction methods available due to the possibility of invasive plant introduction and other potentially negative consequences of soil disturbance.

**Timber Harvest:** May be a suitable management approach for reducing or eliminating some canopy trees.



# Portions of Sanctuary Management Manual 1997

# *Environmentally Endangered Lands Program*

## **Sanctuary Management Manual**

For information pertaining to the contents of this manual, or to receive copies of the manual or of any pages herein, please contact:

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*\** **Adopted by the Board of County Commissioners  
on September 23, 1997**

**The contents of this manual was prepared by**

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**Long-term resource protection shall form the foundation for all decisions regarding public access and use on EEL sanctuary sites.**

### *1.2.1 Land Conservation*

Conservation is focused on the protection of Brevard's outstanding biological diversity, natural communities, and rare, threatened, endangered or endemic species. Long-term resource protection shall form the foundation for all decisions regarding public access and use on EEL sanctuary sites. The EEL Program shall maintain all EEL Sanctuaries as conservation areas with public access. Each EEL Program project represents a coordinated effort to establish a regional sanctuary network in Brevard County that complements the state and federal conservation network. EEL Program staff shall acquire and protect the lands proposed by the EEL Selection and Management Committee through the implementation of effective conservation practices, innovative partnerships and outside grants or contracts to extend EEL Program funds.

### *1.2.2 Capital Development and Sanctuary Maintenance*

Site improvements shall be made, as needed, to provide property boundary protection, capital improvements for public use, enhanced site access, and restoration of disturbed natural communities. Site improvements shall be located and planned based on program objectives outlined in the SMM and in site-specific management plans, as approved by the Board of County Commissioners. Site design and capital improvements should contribute to environmental and cultural interpretation on-site. Long-term operations and maintenance are essential to achieve site protection and long-term stewardship goals. The SMM recommends a financial approach to ensure stable funding for the recurring costs of operations and management of the EEL sanctuary network.

### *1.2.3 Public Access and Passive Recreation*

Finding a balance between public-use impacts and natural resource protection is a key challenge to implementing effective land protection and stewardship. The term "passive recreation" has a variety of definitions which can be confusing to land managers and the general public. The term does not adequately address types of use, levels of use and synergistic impacts of multiple use. Therefore, there is a need to clarify a definition of "passive recreation" within the EEL Program.

As a general guideline for EEL Program management decisions, passive recreation is defined as:

*"a recreational type of use, level of use and combination of uses that do not individually, or collectively, degrade the resource values, biological diversity, and aesthetic or environmental qualities of a site."*

The EEL Program shall provide a range of public use opportunities that are consistent with the conservation and protection goals of the voter-approved referendum. Public use of EEL sanctuary sites shall be consistent with the passive recreation definition provided above.

Public recreation uses such as hiking, nature observation, nature photography, canoeing, kayaking, bicycling, horseback riding, primitive camping, fishing, or hunting may be acceptable at selected sites after thorough site impact analyses. At all sanctuary sites, monitoring of natural resources and visitor impact analyses will be used to evaluate trends in resource quality and quality of visitor experiences.

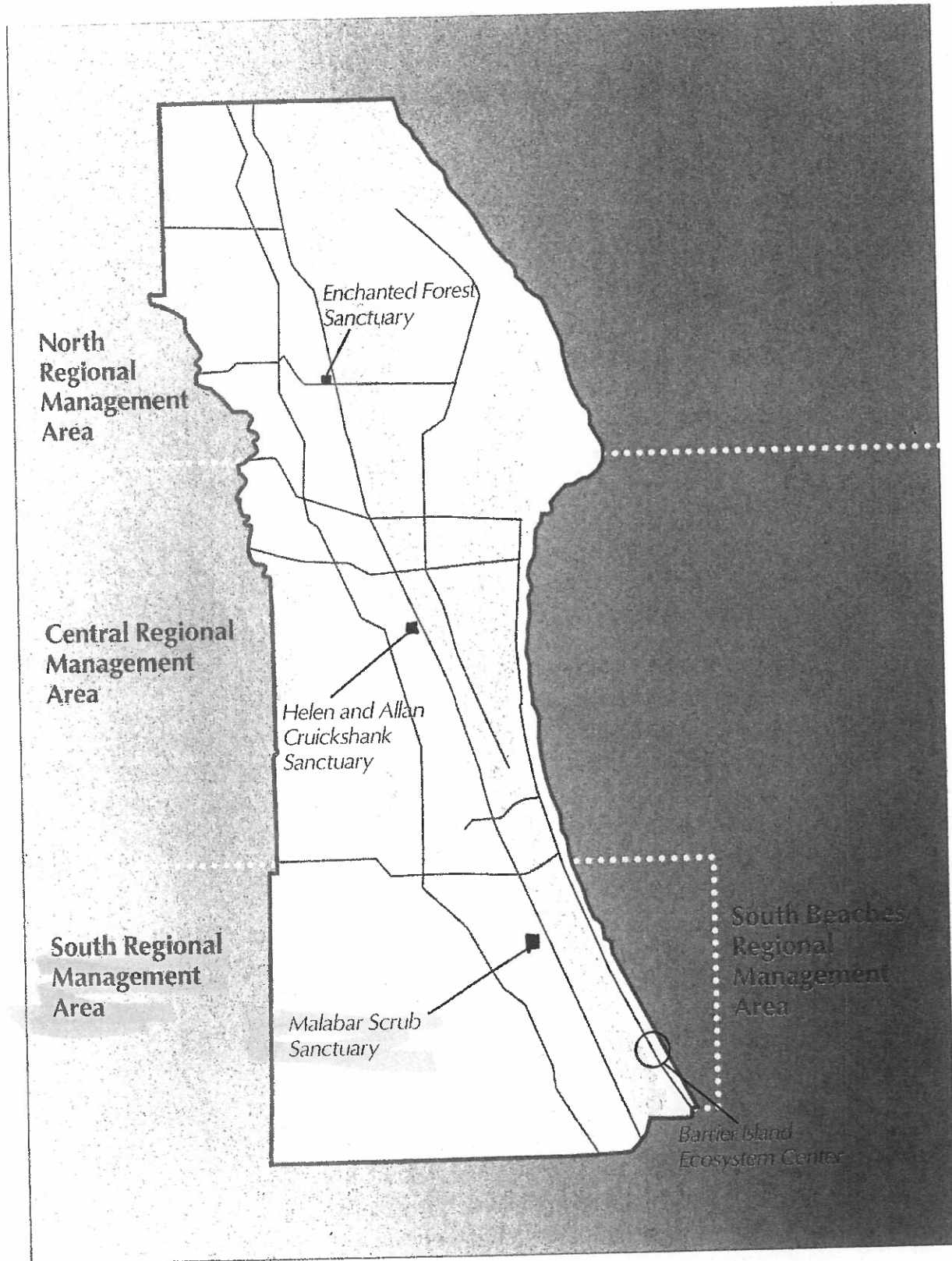
Nature-based tourism represents an expanding market for Florida tourism. The rapid growth of nature-based tourism (or ecotourism) represents both an opportunity for enhanced conservation and a challenge to maintain natural resource quality with expanding public use.

#### ***1.2.4 Environmental Education***

Environmental education contributes to public knowledge and awareness of the natural, historical and archaeological resource values of Brevard County. Implementation of the educational component of the EEL Program is essential to provide quality nature-based experiences for residents and visitors. The EEL Program shall:

1. implement environmental education programs;
2. encourage other agencies to implement environmental education programs; and
3. form partnerships, through formal agreements as approved by the Board of County Commissioners, with existing environmental education programs to

***The EEL Program shall provide a range of public use opportunities that are consistent with the goals of the voter-approved referendum.***



**Figure -1.1 Centers for Regional Management and Regional Management Areas**

excessive capital improvements and with minimal permanent staff. A map of the acquired and proposed EEL Sanctuary Network is provided in Figure 4.2.

Public-use levels are characterized by three descriptive categories that broadly define levels of public-use and sanctuary development. Site categorization may change based on opportunities and needs for provision of natural resource conservation and public use. Sanctuary categories are defined at three levels of use: Category 1 - Center for Regional Management; Category 2- Intermediate Use Area; and Category 3 - Primary Conservation and Research Area.

A regional approach to EEL Program sanctuary management provides opportunities to streamline sanctuary management, enhance the implementation of ecosystem management principles and decrease the need to provide full facilities and full-time staff on every site within the EEL sanctuary network.

## 4.2 Levels of Use

### 4.2.1 Category 1 Sites—Centers for Regional Management

The EEL Selection and Management Committee proposes four Category 1 Sites. Each site was chosen for its accessibility, suitability for environmental education center development, proximity to residential areas of the county and marketability for capital program campaigns to secure financial support from the private sector, foundations and outside grants. Collectively, the sites represent excellent examples of Brevard's rich biological diversity and are geographically located to serve the entire county.

These sites are proposed for extensive public access and development of active environmental education/land management centers. Category 1 Sites will be ADA accessible, will have nature trails with interpretive signs, will sponsor significant environmental education programs and will have extensive volunteer programs. Category 1 Sites will be staffed by a full-time sanctuary manager, who will coordinate all management, education and volunteer efforts on-site and for all EEL sanctuaries within the designated regional management area. The four Category 1 Sites are proposed as *Centers for Regional Management*. Category 1 Sites will be open to the public during daytime hours.

The four Category 1 Sites that will function as centers for regional management for the EEL Program are:

#### *Regional Management Center for North Mainland*

Enchanted Forest Sanctuary—Location: S.R. 405, south of Titusville.

#### *Regional Management Center for Central Mainland*

Helen & Allan Cruickshank Nature Sanctuary—Location: North of Barnes Blvd., Rockledge.

#### *Regional Management Center for South Mainland*

Malabar Scrub Sanctuary—Location: Malabar Road, Malabar.

#### *Regional Management Center for South Beaches*

Barrier Island Ecosystem Center (within the Archie Carr National Wildlife Refuge)—Location: South Melbourne Beach.

Figure 4.3 EEL Sanctuary Network Stewardship Responsibilities

