

Land Management Review
Hilochee Wildlife Management Area
Lease No. 4066
August 29-30, 2005

Prepared by Division of State Lands Staff

William Howell, OMC Manager
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For

Hilochee WMA Review Team

FINAL

November 4, 2005

Land Manager:	FWC
Area:	15,914 acres
County:	Lake, Polk
Mgmt. Plan Revised:	2/06/2004
Mgmt. Plan Due:	2/06/2014

Management Review Team Members

Agency Represented	Team member Appointed	Team member In attendance
DOF	Butch Mallett	Butch Mallett
DRP	Rosi Mulholland	Rosi Mulholland
FWCC	Jeff McGrady	Jeff McGrady
Private Land Manager	Tony Pederson	
Conservation Org. (TNC)	Laura Butterfield	Laura Butterfield
DEP, District	Jim Carr	Jim Carr
Lake County	John Bringard	John Bringard
Soil and Water CD	Terry Godts	Terry Godts
Observer (FNAI)	Carolyn Kindell	
Observer (SWFWMD)	David Brown	

Process for Implementing Regional Management Review Teams

Legislative Intent and Guidance:

Chapter 259.036, F. S. was enacted in 1997 to determine whether conservation, preservation, and recreation lands owned by the state Board of Trustees of the Internal Improvement Trust Fund (Board) are being managed properly. It directs the Department of Environmental Protection (DEP) to establish land management review teams to evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions, and archaeological features. The teams also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan. If a land management plan has not been adopted, the review shall consider the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices are in compliance with the management policy statement and management prospectus for that property. If the land management review team determines that reviewed lands are not being managed for the purposes for which they were acquired or in compliance with the adopted land management plan, management policy statement, or management prospectus, DEP shall provide the review findings to the Board, and the managing agency must report to the Board its reasons for managing the lands as it has. A report of the review team findings are given to the managing agency under review, the Acquisition and Restoration Council, and the Governor and Cabinet.

Review Site

The management review of Hilochee WMA considered approximately 15,914 acres in Lake and Polk Counties that are managed by the Florida Fish and Wildlife Conservation Commission (FWC). The team evaluated the extent to which current management actions are sufficient, whether the land is being managed for the purpose for which it

was acquired, and whether actual management practices, including public access, are in compliance with the management plan. The management plan update is due on February 6, 2014.

Review Team Determination

Is the land being managed for the purpose for which it was acquired?

After completing the checklist, team members were asked to answer “yes” or “no” to this question. All team members agreed Hilochee WMA is being managed for the purpose for which it was acquired.

Are actual management practices, including public access, in compliance with the management plan?

After completing the checklist, team members were asked to answer “yes” or “no” to this question. All team members agreed Hilochee WMA is in compliance with the management plan.

Commendations to the Managing Agency

- 1. The team commends the FWC for the outstanding construction and placement of low-water crossings, and participation in regional hydrology restoration efforts. (VOTE 7+, 0-)**
- 2. The team commends the FWC for the exceptional level of accomplishment of goals with limited personnel. (VOTE: 7+, 0-)**
- 3. The team commends the manager and staff for their vision, planning, and collaborating with other agencies to successfully restore the pasture areas. (VOTE: 7+, 0-)**

Exceptional Management Actions

The following items received high scores (excellent) on the review team checklist (see attachments).

- Management of the baygall hammock, oak scrub/scrubby flatwoods, basin swamp, and the wet prairie natural communities.
- Survey and protection of cultural resources.
- Roads/culverts and low water crossings.
- Boundary survey, gates and fencing, signage and law enforcement.

Recommendations and Checklist Findings

The management plan must include responses to the recommendations and checklist items that are identified below.

Recommendations

The following recommendations resulted from a discussion and vote of review team members.

- 1. The team recommends the FWC make maintenance of the intact natural areas a higher priority than restoring disturbed areas. (VOTE: 7+, 0-)**

Manager's Response:

FWC agrees that efforts to bring native plant communities on Hilochee WMA (HWMA) to a maintenance level and sustain them there are paramount. This issue will be addressed through the Objective-based Vegetation Management (OBVM) program.

- 2. The team recommends FWC explore cattle grazing in existing pastures as an interim management activity until groundcover restoration can be initiated. (VOTE: 7+, 0-)**

Manager's Response:

Within the context of OBVM, FWC may use cattle grazing as a management tool. FWC agrees to look into potential cattle grazing options on the Osprey Unit.

- 3. The team recommends that FWC continue operation of the citrus grove as an interim management activity until restoration of these areas begins. (VOTE: 7+, 0-)**

Manager's Response:

FWC agrees to consider continued contractual grove management on the Lake County portion of HWMA until such time as the restoration of sandhill communities commences under the guidance of the OBVM program.

- 4. The team recommends that FWC investigate the use of volunteers to further the goals of this WMA. (VOTE: 7+, 0-)**

Manager's Response:

FWC agrees to explore the feasibility of using volunteers to assist with tasks such as bird surveys, exotic plant surveillance, trail maintenance, etc.

- 5. The team recommends that FWC consider wider fire lines on the property boundaries to create a better defensible fire boundary to allow the ecotones to be better burned. (VOTE: 7+, 0-)**

Manager's Response:

FWC agrees there may be a few areas where having wider fire lines would facilitate the burning of ecotones.

Checklist findings

The following items received low scores on the review team checklist, which indicates that management actions, in the field, were insufficient **(f)** or that the issue was not sufficiently addressed in the management plan **(p)**. These items need to be further addressed in the management plan update.

1. Discussion in the management plan of management issues related to the mesic flatwoods.(f)

Manager's Response:

As discussed during the field review, in areas of overgrown midstory vegetation, staff plans to rollerchop and/or mow to reduce competition with herbaceous species. Flatwoods areas in the northern part of the Osprey Unit where wildfires burned through in 2001 will be rollerchopped to facilitate breaking up downed logs to reduce smoldering (see HWMA Conceptual Management Plan [CMP]). In areas where pines over-stocked, staff will work with the Division of Forestry (DOF) to thin these forests to encourage growth of herbaceous species, and improve wildlife habitat. More focus will be directed toward increased fire frequency in these areas as well. All of these activities will be conducted under the guidance of the OBVM program. An expanded discussion of these issues will be included in the updated CMP.

2. Discussion in the management plan of the desired area and frequency of prescribed fires.(f)

Manager's Response:

The frequency and scope of prescribed fire treatments will be managed under the guidance of the OBVM program. Staff will enlist additional assistance as needed from other WMA staff, and from DOF for prescribed burning treatments. An expanded discussion of OBVM and prescribed fire will be included in the updated CMP.

3. Discussion in the management plan of the efforts to restore the pastures and citrus areas.(f)

Manager's Response:

As discussed during the field review, HWMA contains several hundred acres of improved pasture with limited wildlife value. Plans are to restore sections of these pastures. Restoration will be designed to connect natural features such as cypress ponds, marshes, and swamps, and to enhance wildlife habitat and provide corridors through these open expanses. FWC has initiated groundcover restoration projects on several WMA's including HWMA, and a written plan is currently being developed. All of these activities will be guided by the OBVM program.

The citrus areas of HWMA are currently under a grove management contract. However, plans are to conduct sandhill restoration on selected areas once groves are no longer actively managed.

The Osprey Unit of HWMA has several hundred acres of pasture and approximately 170 acres of citrus trees. Thirty acres of citrus have been root-raked and windrows are to be burned. Restoration plans at Osprey Unit are focused at this time on exotic plant removal. Once these efforts have met with success, restoration efforts will focus on an open citrus area with young trees where gopher tortoise densities are highest. Pastures that would historically have favored listed species will be priorities for restoration. Restoration of this portion of HWMA will also be guided by the OBVM program.

An expanded discussion of the OBVM program and restoration activities will be included in the updated CMP.

4. Discussion in the management plan of the need to monitor ground water quantity/quality (p) and surface water quantity/quality. (p,f)

Manager's Response:

FWC staff is working closely with SJRWMD staff, SWFWMD staff (via Polk County), and USGS staff concerning monitoring of groundwater quality and quantity. FWC staff will work with the water management districts and local water districts to obtain surface water quality/quantity information and will consider enlisting the help of Lakewatch (in Lake County) and similar groups to monitor ponds and other water bodies. An expanded discussion of water monitoring efforts will be included in the updated CMP.

5. Discussion in management plan of the interpretive facility and environmental education and outreach program needs.(f)

Manager's Response:

HWMA staff is working with FWC's Office of Recreation Services staff to develop ideas and plans for outreach and recreation. An expanded discussion of environmental education and interpretive opportunities on HWMA will be included in the updated CMP.

6. Discussion in management plan of the management needs to protect the Florida mouse, pitcher plant, and cutthroat grass communities.(p)(f)

Manager's Response:

As addressed during the field review, trapping efforts have turned up one Florida mouse. This prompted oak scrub restoration to be initiated on adjacent pasture habitat. Plans are to periodically live trap to determine if Florida mice still occur at that location and to expand monitoring efforts in other potential habitat.

Pitcher plants are already benefiting from the hydrologic restoration efforts to rehydrate areas where they have been found. Prescribed burns are planned to open up adjacent habitat.

Areas of cutthroat grass are very small (< than 0.5 acres) but will be considered during prescribed burns.

The management plan contains a list of other potential listed species occurrences. These are considered when developing prescribed burn and restoration plans. Information on specific species will be added to the updated CMP.

7. Discussion in management plan of the management needs to address impacts from expanding development, sand mines, and road expansion proposals.(p)(f)

Manager's Response:

HWMA staff discussed Interstate 4 road-widening issues with Florida Department of Transportation (DOT) staff and with FWC staff of the former Office of Environmental Services. DOT was encouraged to require wildlife crossings during the widening process from four to six lanes. According to DOT, "incentives" were offered to contractors to include wildlife crossings but were declined. DOT stated that they would revisit the wildlife crossing issue when preparing for the 10-laning phase several years from now.

HWMA staff is now on the DEP Bureau of Mine Reclamation's mailing list of sand mine proposals/expansions and comments are submitted when appropriate.

An expanded discussion of these issues will be included in the updated CMP.

8. Discussion in management plan of the management needs to address invasive plant issues.(f)

Manager's Response:

As discussed during the field review, exotic plant control efforts were initiated in 1998 and are on-going by FWC staff. Additionally, a \$50,000 DEP grant (Upland Invasive Plant Program) was awarded in Fiscal Year 2004-05 and work has begun under another DEP grant of \$150,000 for Fiscal Year 2005-06.

Approximately 70 acres of cogon grass, 100 acres of lantana, 600 acres of tropical soda apple at infestation rates of 100-1,000 plants per acre, 250 Chinese tallow, and nearly 200 chinaberry trees are identified for control in the current DEP proposal. FWC staff conducts surveillance and mapping on an on-going basis as described in the CMP. Additional information on species and acreage treated may be added into the updated CMP.

9. Discussion in management plan of the impacts from altered hydro periods and water level alterations. (f)

Manager's Response:

As discussed during the field review, major hydrologic restoration efforts on the Lake County portion and adjacent Polk County portion are complete (i.e., ditch blocks, low water crossings, cooperative culvert project with Lake County Water Authority for Big Creek).

The Osprey Unit will require a detailed plan including modeled impacts of restoration on adjacent private property, roads (including Interstate 4), and native plant communities on-site. FWC will seek agency expertise and then consider hiring outside contractors to permit and construct hydrologic enhancement and restoration projects. Staff will also explore grant opportunities to help accomplish these objectives. An expanded discussion of this issue will be included in the updated CMP.

10. Discussion in management plan of the management needs to improve wildlife habitat and hunting quality. (f)

Manager's Response:

Harvests are low for most game species on HWMA, but hunting quality is high. Low quota hunt numbers result in fewer animals harvested but provide for higher hunter satisfaction. Increased prescribed burning efforts will enhance wildlife habitat. Upland restoration efforts in pastures will provide more cover and forage for game and non-game species. Hydrologic restoration efforts have already enhanced wetland foraging habitat. Thinning in pine plantations has already enhanced wildlife habitat for deer, turkey, and gopher tortoises based on qualitative observations.

11. Discussion in management plan of the need for additional staff and funding. (f)

Manager's Response:

Requests for additional staffing may be made in future budget cycles, but are contingent on legislative appropriations.

Team Member's Comments

Natural Communities: protection and maintenance: (I.A)

- Descriptions of natural communities are fairly broad and contain few specifics over the state of the community at Hilochee. Few of the objectives address specific communities. In general I had a very difficult time knowing what the base condition was for each community.
- The plan only gave a description of the community; it did not address protection or management goals. Continue to maintain natural communities management before putting all resources into restoration.
- Blocking- backfilling is only 10% complete. Pizimeter-wells to monitor ground water and surface water elevation in wetlands. Some type of hydrologic study.

Listed Species: protection and preservation (I.B1, I.B.2)

- Only managing for know species, need to broaden view for more possible species.
- Did not see a specific plan for each animal. They are just expecting the wildlife to recover as a result of reintroduction of fire.
- Again noted the species present but didn't go into detail with protection techniques.
- Plan seems vague as to what management measures will be used for each listed species. Need more specifics about this WMA's listed species. Make lists to be only species verified not potential species.

Cultural Resources: (II.A; II.B)

- No details regarding protection measures.

Prescribed Fire (Natural Community Maintenance): (III.A)

- Lots of info about forest management. Actual burning appears to be lacking. Many areas thick with gall berry and palmetto.
- Shorten the burn intervals- put more resource into burning natural community than pasture.
- In the Rx fire plan addendum. In the field the natural better areas are not being given the highest priority for burning. Need to keep the few natural areas on the ideal rotation. Need to burn more.

Restoration of Disturbed Natural Communities: (III.B)

- Plan identifies that areas will need restoration but does not get into specifics of how to accomplish. Some discussion in the timber plan.
- Great start-good concept and positive attitude towards restoration.
- Need to look at SOD sales in conjunction with restoration.
- Have initiated ground cover restoration in pastures.
- For sand hill areas-(proposed) actual-citrus-pine-only thinning of existing pine.

Wildlife Management (WMA's only): (III.C)

- Docks-dove plots-fishing licenses-boat ramps.
- People are satisfied with the hunting and fishing quality there are just not many users. Not really sure how wildlife habitat and fishing quality will be maintained because much of plan is very vague with few specifics about the individual site. Lots of habitat is open pasture and not good wildlife habitat.

Non-native Invasive and Problem Species: (III.D)

- Most coverage is vague some specifics in objectives but have no real sense of how severe the problem is. In the field saw work on plants. Hog removal is low averaging only 20 hogs per year, with limited staff resources handling what they can.
- Realize there is a problem- keep up with monitoring and spraying.
- How are the feral hogs being managed?

Hydrologic/Geologic Function (III.E)

- Need to monitor on south end; possibly more berm (ditch filling) removal?
- Stuff about hydrologic monitoring, but where and how? Need baseline and continuing data for possible water quality and quantity problems, for future reference.
- Do existing or proposed roads affect sheet flow or redirect water?
- Low water roads are amazing- good job!
- Discussions need to be expanded detailing more of on-site conditions and what measures should be taken. Agency needs a hydrologist to assist with projects at many WMA's.
- Continue to encourage cooperative agreements with the WMA.
- Look in to getting baseline information.

Resource Protection (III.F)

- Updates from last unit plan include progress in these areas.

Adjacent Property Concerns: (III.G)

- Road expansion and utility expansion within current easements could be long-term problems with wildlife management and hydrology.
- Need more information in unit plan about adjacent impacts. Water resources would benefit from baseline.

Public Access and Education: (IV.1; IV.2; IV.3; IV.4)

- Plan does not give good sense of needs in any of these areas. There is past work in some of these areas and future objectives but not a good description of where the unit stands now.
- Develop more trails (biking & hiking) and parking. Maybe coordinate with local bike and hiking trails to work on trail network.
- Need more access to the interior areas for fishing etc... also need addition of more trails for hiking/biking.

Management Resources: (V.2. V.3; V.4)

- Trails other than roads do not currently exist and would appear to be acceptable provided they do not interfere with the WMA goals of the site.

Exceptional Management Actions

- Restoration and maintenance actions are done well with the amount of money and staff assigned to this site. Taking into consideration the amount of acreage that needs to be restored.
- Low water crossing are a great idea and seem to be working fine.
- For the staff and funding a good job is being done.
- With very little staff management is progressing.
- Hydrological restoration work throughout the area has greatly improved the site.
- Hydrologic restoration work is very good.

- Having the property for a relatively short period of time the work done with little resources is good. Positive attitude is seen and wiliness to take on more is greatly noted-keep up the good work.
- The team commends FWC for outstanding hydrologic restoration in placement and construction of low water crossing and participation in regional hydrologic restoration.

Areas of insufficient management:

- More exotic control and burns are needed.
- Fire program behind schedule.

Recommendations for Improving Management of this Site:

- Additional staff and funds are needed in order to accomplish restoration goals.
- Need to the addition of volunteer forces that can be used for planting etc. There is a large population of seniors that needs to be tapped.
- Need to look at the use of cattle to keep things in check, also sodding should be looked at in restoration areas.
- Work at a way for revenue generated at the site to be returned directly to the site for restoration projects.
- Focus on burning the remnant patches of quality habitat at a higher priority than more disturbed areas.
- Might consider creating fire breaks on boundaries with swamps and marshes to facilitate burning into eco-edges.

Low water crossings	III.E.1c								
Ground Water Monitoring (III.E.2)									
Quality	III.E.2a	0	0	0	0	0	1	1	0.29
Quantity	III.E.2b	0	0	0	0	0	1	1	0.29
Surface Water Monitoring (III.E.3)									
Quality	III.E.3a	0	0	0	0	0	0	1	0.14
Quantity	III.E.3b	0	0	0	1	0	0	1	0.29
Resource Protection (III.F)									
Boundary Survey	III.F.1	1	1	1	1	1	1	1	1.00
Gates & Fencing	III.F.2	1	1	1	1	1	1	1	1.00
Signage	III.F.3	1	1	1	1	1	1	1	1.00
Law Enforcement Presence	III.F.4	1	1	1	1	1	1	1	1.00
Adjacent Property Concerns (III.G)									
Land Use									
Expanding Development	III.G.1a	0	0	1	0	1	0	1	0.43
Sand mines	III.G.1b	0	0	0	0	0	0	1	0.14
Road/Utility expansion	III.G.1c	0	0	0	0		0	1	0.17
Water Resources									
Hydro-period Alteration	III.G.2a	0	0	0	0	0	0	1	0.14
Water Level alteration	III.G.2b	0	0	0	0	0	0	1	0.14
Inholdings/additions	III.G.3	1	1	0	1	1	1	1	0.86
Public Access & Education									
Public Access-Maintenance									
Roads	IV.1.a	0	0	1	0	1	1	1	0.57
Parking	IV.1.b	0	0	1	0	1	1	1	0.57
Recreational Opportunities	IV.2	0	0	0	1	1	1	1	0.57
Mgmt. of visitor impacts	IV.3	0	0	1	0	1	1	1	0.57
Interpretive facilities & signs	IV.4	0	1	1	1	1	1	1	0.86
Environmental education/outreach	IV.5	0	1	1	0	1	0	1	0.57
Managed Area Uses									
Existing Uses									
Recreational Trails	VI.A.1	1	1	1	1	1	1	1	1
Hunting	VI.A.2	1	1	1	1	1	1	1	1
Fishing	VI.A.3	1	1	1	1	1	1	1	1
Uses Proposed in Mgmt. Plan									
Equestrian Trails	VI.B.1	1	1	1	1	1	1	1	1
Hiking Trails	VI.B.2	1	1		1	1	1	1	1

FIELD REVIEW		1	2	3	4	5	6	7	AVERAGE
Natural Communities (I.A)									
Baygall/Hydric Hammock	I.A.1	4	4	4	3	3	5	4	3.86
Mesic Flatwoods	I.A.2	2	2	3	2	3	3	2	2.43
Depression Marshes	I.A.3	2	2	3	3	4	4	3	3.00
Oak Scrub/Scrubby Flatwoods	I.A.4	3	3	4	4	4	4	3	3.57
Basin Swamp/Marsh	I.A.5	4	4	4	4	4	4	4	4.00
Wet Prairie	I.A.6	4	3	4	4	4	5	3	3.86
Listed species: Protection & Preservation (I.B)									
Animals									
Gopher Tortoise	I.B.1a		3	1	4	3	4	3	3.00
Florida Mouse	I.B.1b		3	1	3	3	4		2.80
Plants									
Pitcher Plant	I.B.2a		3	2	3	3	3	3	2.83
Cutthroat grass	I.B.2b		3	2	2	3	3		2.60
Cultural Resources (Archeological & Historic sites) (II.A,II.B)									
Survey	II.A	3	4	5	4	4	3	5	4.00
Protection & Preservation	II.B	3	3		4	4	3	5	3.67
Resource Management, Prescribed Fire (III.A)									
Area being burned	III.A.1	2	2	2	2	2	2	1	1.86
Frequency	III.A.2	1	2	1	1	2	2	1	1.43
Quality	III.A.3	4	3	3	4	2		3	3.17
Restoration of Ruderal Areas (III.B)									
Pastures-Flatwoods	III.B.1	1	1	1	1	1	1	1	1
Sandhill-Plantation/Citrus	III.B.2	2	2	2	2	2	2	2	2.00
Wildlife Management (for WMA's only)									
Wildlife Habitat	III.C.1	2	3	1	2	2	2	2	2.00
Hunting/Fishing Quality	III.C.2	3	2	1	3	2	2	2	2.14
Non-Invasive & Problem Species (III.D)									
Animals	III.D.1	3	3	1	2	2	4	3	2.57
Plants	III.D.2	3	3	1	1	1	2	3	2.00
Hydrologic/Geologic function Hydro-Alteration (III.E.1)									
Roads/culverts	III.E.1a	4	4	4	4	2	4	4	3.71

Ditches	III.E.1b	3	4	3	4	2	4	4	3.43
Low water crossings	III.E.1c	4	5		5		4	4	4.40
Ground Water Monitoring (III.E.2)									
Quality	III.E.2a	3	3	3	X	1	2	4	2.67
Quantity	III.E.2b	3	3	3	X	1	2	4	2.67
Surface Water Monitoring (III.E.3)									
Quality	III.E.3a	1	2	1	1	1		3	1.50
Quantity	III.E.3b	1	2	1	1	1		3	1.50
Resource Protection (III.F)									
Boundary Survey	III.F.1	3	4	5	4	4	5	4	4.14
Gates & Fencing	III.F.2	3	4	4	4	4	5	4	4.00
Signage	III.F.3	3	3	4	4	4	5	4	3.86
Law Enforcement Presence	III.F.4	3	3	3	3	4	4	3	3.29
Adjacent Property Concerns (III.G)									
Land Use									
Expanding Development	III.G.1a	2	2	2	1	2	2	3	2.00
Sand mines	III.G.1b	2	2	2	1	2	2	3	2.00
Road/Utility expansion	III.G.1c	2	2	1	1	2	2	4	2.00
Water Resources									
Hydro-period Alteration	III.G.2a	1	3	1	1				1.50
Water Level alteration	III.G.2b	1	3	1	1				1.50
Inholdings/additions	III.G.3	3	3	1	3	2		3	2.50
Public Access & Education									
Public Access-Maintenance									
Roads/culverts	IV.1.a	3	4	2	3	4	3	3	3.14
Parking	IV.1.b	3	3	2	3	4	3	3	3.00
Recreational Opportunities	IV.2	3	4	2	4	2	4	3	3.14
Mgmt. of visitor impacts	IV.3	3	4	4	3	2	4	3	3.29
Interpretive facilities & signs	IV.4	1	2	1	1	1	2	2	1.43
Environmental education/outreach	IV.5	1	2	1	1	2	1	2	1.43
Management Resources									
Maintenance									
Waste disposal	V.1.a	3	3	2	3	1	2	4	2.57
Sanitary facilities	V.1.b	3	3	3	3	1	2	4	2.71
Infrastructure									
Buildings	V.2.a	3	3	3	3	1	3	4	2.86
Equipment	V.2.b	3	3	4	4	1	4	4	3.29
Staff	V.3	1	2	1	1	1	5	3	2.00

Funding	V.4	1	2	2	1	1	1	3	1.57
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