

## 13.8 FWC Agency Strategic Plan

**Florida Fish and Wildlife Conservation Commission**  
**Agency**  
**Strategic Plan**

2014 – 2019



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### **Introduction**

Commissioners and staff of the Florida Fish and Wildlife Conservation Commission (FWC) developed this strategic plan to focus the strength of the agency on the most essential conservation challenges while ensuring safe and enjoyable public access to Florida's fish and wildlife resources. Fundamental to the success of this plan are the principles that conservation is a public trust responsibility and that FWC will need and seek active involvement from the citizens of Florida more than ever. This plan contains Commission Policy Focal Areas, Strategic Initiatives, Themes, Goals and Strategies; and includes significant work already underway and new areas for development.

Commissioners identified Policy Focal Areas to serve as a framework for adapting to changing conditions in Florida over the next 20 years. In reviewing and discussing these areas, Commissioners and staff assessed current conditions, and Commissioners provided long-range policy guidance for high-priority needs and opportunities. Staff used the Policy Focal Area guidance along with elements from other planning efforts to develop Strategic Initiatives. These initiatives emphasize areas where FWC needs to make significant progress over the next five to 10 years. The Themes, Goals and Strategies define the work required to achieve our mission and provide the context in which the Strategic Initiatives will be achieved.

The collaborative journey to create this plan involved the Commissioners, stakeholders and staff from across the agency. To achieve our long-term vision, we will continue to work collaboratively within the agency and with our partners and stakeholders.

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### **Commission Policy Focal Areas**

- **Future of Fish and Wildlife Conservation** – Continued support of fish and wildlife conservation is crucial to the long-term well-being and availability of these resources for public enjoyment. Looking forward, two areas stand out for priority attention: managing adverse human/wildlife impacts; and keeping people connected to Florida’s outdoor environment.
  - **Expanding Participation in Conservation** – Connecting people with positive fish and wildlife oriented outdoor experiences lays the foundation for a lifetime of enjoyment and support for conservation.
  - **Wildlife Conflict** – Successful wildlife species conservation and population growth can put humans and wildlife in situations of conflict. Addressing these situations and keeping the public’s experiences with wildlife positive will help to maintain support for conservation.
  
- **Habitat Conservation and Management** – The future of fish and wildlife resources is dependent upon the quality and quantity of habitat available to maintain species populations and the public’s accessibility to those resources.
  - **Priorities for habitat conservation** – Given limited resources, it is important to focus future conservation measures on habitat most critical to sustaining healthy and diverse fish and wildlife populations.
  - **Management – public/private** – To ensure the long-term sustainability of fish and wildlife resources, FWC will need to actively engage on public and private lands to help adapt habitat management practices to address the new and dynamic challenges facing Florida’s fish and wildlife species.
  - **Sustainable access to fish and wildlife resources and public lands** – Providing public access to fish and wildlife resources is a crucial component of the public trust responsibilities of FWC. To accomplish this responsibility FWC will continue to work with other public land management partners to foster, support and facilitate safe and sustainable public access.
  
- **Innovative Management Tools** – Developing new and innovative ways to manage fish and wildlife resources is vital to effective conservation as pressures, threats and opportunities change in Florida. Given the pressures on marine fisheries and the importance of private lands to conservation, these two areas were chosen as initial priorities.
  - **Marine Fish Management** - Size limit, bag limits, and seasons are traditional tools used to manage marine species. Working with partners and stakeholders,

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FWC will seek innovative ways to apply traditional tools and develop new tools and techniques that achieve conservation more efficiently and effectively with less complexity and less regulatory burden for those who utilize and enjoy these resources.

- **Incentives for Private Lands** – A significant portion of Florida’s undeveloped landscape is in private ownership. Many of these private landowners have successfully managed their lands for generations in ways that support fish and wildlife and the habitat they depend upon. Development of effective conservation partnerships with and creative conservation incentives for private landowners will be essential to maintaining the state’s fish and wildlife diversity.

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### **Strategic Initiatives**

- **Running the Business** – Establish an internal infrastructure (team and process) that identifies the areas of business operations and practices that represent high risk, prioritize them and modify them to address risks.
- **Imperiled Species Management Plan** – Complete the Imperiled Species Management Plan and begin implementing prioritized species actions and integrated conservation strategies by the end of 2015.
- **Expand Participation in Conservation** – Increase conservation participation among youth and families representing Florida’s diverse population by expanding partnerships to implement FYCCN and other programs that promote fishing, hunting, boating, wildlife viewing, shooting sports, and conservation appreciation.
- **Conservation through Innovation** – Implement a comprehensive approach, using innovative conservation tools and strategies, focusing on incentives for private lands and marine fisheries management. Strategies may include enhancing partnerships, incentives, and streamlining regulations.
- **Conflict wildlife** – Ensure continued support and appreciation for fish and wildlife by implementing an integrated programmatic approach across FWC to minimize adverse impacts associated with native and non-native fish, wildlife and plants. Successful efforts should minimize human health and safety, environmental, social and economic impacts.
- **Boating as a Gateway to Conservation and the Outdoors** – Strengthen and promote the conservation connections of boating while protecting people and natural resources, and improving boating related opportunities.

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### **Themes, Goals, Strategies and Objectives**

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#### **Key for coding at end of Objectives**

- **[#]** – current reference number for each unique objective. (*Note – one objective appears under more than one strategy*)
  - **[o-ref #]** – indicates the original unique reference number for each objective developed by objective planning teams. (*Note – one objective appears under more than one strategy*)
  - **[n-ref #]** – indicates the unique reference number for a new objective added after the Objective Planning Teams completed their assignment.
  - **[OPT top 10]** – indicates objective was chosen by an Objective Planning Team as one of their 'top 10' objectives.
  - **[RLT rank]** – indicates the rank of the objective based on categorization, by five Regional Leadership Teams, of objective into high, medium and low. Rank ranges from 1 to 11, with 1 being the highest possible rank. 1 – all five RLTs ranked objective high. 2 – four RLT ranked the objective high and one RLT ranked it medium. 3 – three RLT ranked the objective high and two ranked it medium.... all the way down to 11 – all five RLTs ranked the objective low.
  - **[OPT #]** – Objective Planning Team that originally drafted the objective.
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#### ***Theme One – Florida's Fish and Wildlife Populations and Their Habitats***

**Goal 1: Ensure the sustainability of Florida's fish and wildlife populations.**

Strategies:

1. Manage listed species so they no longer meet Florida's endangered and threatened listing criteria.
  - a. Complete the Imperiled Species Management Plan and initiate implementation of its prioritized species actions and integrated conservation strategies by the end of 2018. **[#1]** [o-ref #1] [OPT top 10] [RLT rank 1] [OPT #1]
  - b. By the end of 2018, assess and prioritize FWC's participation in the recovery of federally listed species. **[#2]** [o-ref #2] [RLT rank 9] [OPT #1]

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2. Manage species to keep them from meeting Florida's endangered and threatened listing criteria.
  - a. By the end of 2018, all staff are aware of the State Wildlife Action Plan (SWAP), and as appropriate incorporate SWAP objectives into their work to support the integration of SWAP across FWC. **[#3]** [o-ref #4] [OPT top 10] [RLT rank 8] [OPT #1]
  - b. By the end of 2019, increase resources of Florida Wildlife Legacy Initiative by 15% (e.g., funding and staff time) to support the implementation of the current 5 goals of the State Wildlife Action Plan, which includes actions to halt or reverse species declines. **[#4]** [o-ref #3] [RLT rank 10] [OPT #1]
3. Anticipate and address fish and wildlife species' conservation needs in light of adaptation to long-term environmental changes.
  - a. By the end of 2019, identify and prioritize information gaps, and initiate development and implementation of fish, wildlife and habitat conservation plans to address changes to critical habitats from long-term environmental changes and short term changes that may result from natural or manmade catastrophic events. **[#5]** [o-ref #9] [OPT top 10] [RLT rank 9] [OPT #1]
4. Develop, acquire and apply the appropriate biological and sociological science to inform fish and wildlife conservation decisions.
  - a. By the end of 2019, 100% of appropriate staff recognize when social science data are needed and know how to obtain assistance with identifying and collecting data, and use social science data appropriately to develop management actions. **[#6]** [o-ref #18] [OPT top 10] [RLT rank 8] [OPT #1]
  - b. By the end of 2019, ensure all staff have access to all biological and sociological science relevant to their roles and responsibilities. **[#7]** [o-ref #16] [RLT rank 6] [OPT #1]
  - c. By the end of 2019, have adaptive mechanisms in place that ensure 95% of research and monitoring activities effectively address priority management needs and information is provided to decision makers in a timely manner. **[#8]** [o-ref #8] [OPT top 10] [RLT rank 3] [OPT #1]
  - d. By end of 2019, evaluate ongoing species and habitat monitoring efforts, identify threats to species and recommend enhancements to monitoring programs that improve our ability to accurately assess status of populations. **[#9]** [o-ref #5] [OPT top 10] [RLT rank 4] [OPT #1]

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- e. By the end of 2018, investigate, develop and implement techniques to foster innovation that will improve our ability to achieve species conservation. **[#10]** [o-ref #17] [RLT rank 11] [OPT #1]
  - f. By the end of 2019, develop and implement science-based risk assessments that consider stakeholder input, and have them embedded in management decision protocols to guide and prioritize management actions. **[#11]** [o-ref #19] [RLT rank 7] [OPT #1]
  - g. By the end of 2019, ensure that 100% of appropriate staff will understand the relevance of data standards and management, know when to involve the data standard and advisory implementation group in their projects and programs, and know of and how to access existing active databases that can inform conservation actions including monitoring, management decision making, stakeholder collaboration, and outreach. **[#12]** [n-ref #39] (Note – new objective, not ranked)
  - h. By the end of 2018 ensure that 100% of appropriate FWC employees are aware of biostatistical support services, recognize when those services are necessary, and know how to obtain assistance so that their research and monitoring informs conservation actions appropriately. **[#13]** [n-ref #40] (Note – new objective, not ranked)
  - i. By the end of 2019, 100% of appropriate staff will recognize when geographic information system (GIS) data and analyses are needed and how to obtain assistance with identifying and locating, collecting and entering, analyzing, and displaying GIS data appropriately to inform conservation actions including management decision making, stakeholder collaboration, and outreach. **[#14]** [n-ref #41] (Note – new objective, not ranked)
5. Inform and guide partners regarding how their regulations, policies, procedures and other actions affect fish and wildlife conservation.
- a. By the end of 2018, develop and implement an adaptive protocol to engage, assist and influence other regulatory agencies and other partners to ensure they consider how their regulations, rules, policies, procedures and other actions impact fish and wildlife conservation. **[#15]** [o-ref #26] [OPT top 10] [RLT rank 2] [OPT #2 & #3]
6. Protect fish and wildlife species through effective outreach and enforcement.

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- a. By the end of 2019, develop patrol expectations for FWC Law Enforcement staff that includes outreach and responsive enforcement to promote compliance of state and federal regulations for fish, wildlife and protected species. **[#16]** [n-ref #95] (Note – new objective, not ranked)
- b. By the end of 2019, develop initiatives to enhance habitat and the protection of state lands through interagency cooperation and law enforcement activities. **[#17]** [n-ref #96] (Note – new objective, not ranked)
- c. By the end of 2019, enhance intelligence and investigative capabilities to more effectively address resource protection needs and trends. **[#18]** [n-ref #97] (Note – new objective, not ranked)
- d. By the end of 2019, work with landowners to develop and improve responsive resource and cultural protection for private lands. **[#19]** [n-ref #98] (Note – new objective, not ranked)

### **Goal 2: Ensure sufficient habitats exist to support healthy and diverse fish and wildlife populations.**

#### Strategies:

1. Use science to determine quantity, quality and location of the habitats most critical to sustain healthy and diverse fish and wildlife populations.
  - a. By the end of 2017, review and synthesize all available land-cover (aquatic and terrestrial) assessments (e.g., Conservation Blueprint); identify and prioritize for conservation and management, those areas that are most critical to sustaining healthy fish and wildlife populations in Florida. **[#20]** [o-ref #10] [OPT top 10] [RLT rank 4] [OPT #1]
  - b. By the end of 2018, identify habitat conditions necessary to sustain healthy and diverse populations of fish and wildlife in areas most critical to sustaining those populations. **[#21]** [o-ref #11] [RLT rank 8] [OPT #1]
2. Protect lands and waters critical to sustaining healthy and diverse fish and wildlife populations through diverse incentive programs.
  - a. By the end of 2019, develop and initiate adaptive plans to secure and maintain lands and waters critical (considering acreage, distribution and connectivity) to sustaining healthy fish and wildlife populations in Florida through fee-simple or less-than-fee-simple acquisition, incentive-based conservation or other measures. **[#22]** [o-ref #6] [OPT top 10] [RLT rank 1] [OPT #1]

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- b. Beginning in 2017, and each year thereafter, maintain and enhance existing and build new partnerships and agreements with government agencies and Non-Governmental Organizations that facilitate collaborative efforts in providing fish and wildlife habitats. **[#23]** [o-ref #15] [RLT rank 5] [OPT #1]
  - c. By January 2018, identify, develop and assess incentives, assurances and other methods for private landowners to enhance sustainable conservation through revenue generation and conservation value on their lands. **[#24]** [o-ref #14] [RLT rank 10] [OPT #1]
3. Manage habitats to sustain healthy and diverse fish and wildlife populations.
- a. By the end of 2019, identify lands and waters in need of enhanced management that are necessary to sustain healthy and diverse populations of fish and wildlife, and develop and initiate adaptive plans to meet those needs. **[#25]** [o-ref #12] [OPT top 10] [RLT rank 1] [OPT #1]
  - b. By the end of 2019, through outreach, technical assistance and incentives increase by 10% the number of public and private landowners managing and enhancing their lands for fish and wildlife conservation. **[#26]** [o-ref #13] [OPT top 10] [RLT rank 6] [OPT #1]

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### ***Theme Two – Interactions with Fish and Wildlife, including Fishing, Hunting, Boating and Wildlife Viewing Opportunities***

**Goal 1: Provide residents and visitors with quality fishing, hunting, boating and wildlife viewing opportunities that meet their needs and expectations while providing for the sustainability of those natural resources.**

**Strategies:**

1. Manage fish and wildlife populations to provide sustainable fishing, hunting and wildlife viewing opportunities.
  - a. By the end of 2019, establish key metrics for focal species, critical habitats and user-related activities that will be used to evaluate, guide, and refine management efforts to sustain fishing, hunting and wildlife viewing opportunities. **[#27]** [o-ref #21] [OPT top 10] [RLT rank 7] [OPT #2]
2. Develop and maintain widely available, diverse and accessible fishing, hunting, boating and wildlife viewing opportunities that meet the needs and expectations of residents and visitors while providing for the sustainability of those resources and emphasizing partnerships with both public and private landowners.
  - a. By the end of 2018, develop and implement an adaptive protocol to engage, assist and influence other regulatory agencies and other partners to ensure they consider how their regulations, rules, policies, procedures and other actions impact fishing, hunting, boating and wildlife viewing. **[#28]** [n-ref #99] (Note – new objective, not ranked)
  - b. By the end of 2019, develop and implement an adaptive process to coordinate with partners on FWC management actions concerning fishing, hunting, boating and wildlife viewing. **[#29]** [o-ref #55] [RLT rank 10] [OPT #3]
  - c. By the end of 2019, based on understanding the attitudes and motivations of public and private landowners, establish, maintain or enhance incentives and other programs in collaboration with other agencies that result in manageable, sustainable and widely available fishing, hunting, boating and wildlife viewing opportunities that meet the expectations of user groups and eliminate duplicative or ineffective FWC programs. **[#30]** [o-ref #22] [OPT top 10] [RLT rank 3] [OPT #2]
  - d. By the end of 2017, ensure user conflicts are minimized when designing fishing, hunting, boating and wildlife viewing opportunities. **[#31]** [o-ref #43] [RLT rank 10] [OPT #2]

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3. Recruit and manage sustainable levels of resident and visitor participation in fishing, hunting, boating and wildlife viewing.
  - a. By the end of 2019, develop, implement and evaluate a promotional and marketing strategy that highlights sustainable fishing, hunting, boating and wildlife viewing opportunities unique to Florida to increase the demographic diversity of users and to either maintain or increase participation of current and new users per category based on State and National Surveys (e.g., the U.S. Fish and Wildlife Service's 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation). **[#32]** [o-ref #42] [OPT top 10] [RLT rank 6] [OPT #2]
4. Provide targeted fishing, hunting, boating and wildlife viewing programs for youth, the disabled and veterans.
  - a. By the end of 2018, develop and implement standardized youth conservation curricula designed to provide enjoyable experiences that create a conservation stewardship ethic while teaching safe fishing, hunting, boating and wildlife viewing skills. **[#33]** [o-ref #30] [OPT top 10] [RLT rank 2] [OPT #2 & #3]
  - b. By the end of 2018, develop or maintain partnerships with state or nationally recognized youth organizations for the development of programs that foster youth interest in fishing, hunting, boating or wildlife viewing. **[#34]** [o-ref #44] [RLT rank 10] [OPT #2]
  - c. By the end of 2019, provide and promote fishing, hunting, boating and wildlife viewing programs for veterans and the disabled. **[#35]** [n-ref #56] (Note – new objective, not ranked)
5. Develop, acquire and use the appropriate biological and sociological science necessary to provide sustainable fishing, hunting, boating and wildlife viewing opportunities that meet the needs and expectations of user groups while providing for the sustainability of those resources.
  - a. By the end of 2019, use the social sciences to better understand attitudes, values and motivations that influence the types of experiences anglers, hunters, boaters and wildlife viewers prefer, and verify if we are meeting their expectations while safeguarding the resources. **[#36]** [o-ref #37] [OPT top 10] [RLT rank 3] [OPT #2]
  - b. By the end of 2019, assess public and private landowners' attitudes and motivations for enrolling their lands in the Wildlife Management Area system, and refine and promote incentive programs that strengthen partnerships and contribute to either an increase in or no net loss of acreage open to residents

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and visitors for fishing, hunting, boating and wildlife viewing. **[#37]** [o-ref #38] [RLT rank 11] [OPT #2]

- c. By the end of 2019, develop and implement an adaptive process to incorporate biological and sociological information in management decisions involving fishing, hunting, boating and wildlife viewing activities. **[#38]** [o-ref #20] [OPT top 10] [RLT rank 4] [OPT #2]

### **Goal 2: Enhance the safety and outdoor experience of those who hunt, fish, boat and view wildlife.**

1. Provide and promote opportunities for residents and visitors to learn safety practices for fishing, hunting, boating and wildlife viewing.
  - a. By the end of 2019, create, enhance and maintain courses that incorporate how to effectively and safely participate in fishing, hunting, boating and wildlife viewing opportunities in Florida. **[#39]** [o-ref #29] [RLT rank 8] [OPT #2]
  - b. By the end of 2018, develop and implement standardized youth conservation curricula designed to provide enjoyable experiences that create a conservation stewardship ethic while teaching safe fishing, hunting, boating and wildlife viewing skills. **[#33]** [o-ref #30] [OPT top 10] [RLT rank 2] [OPT #2 & #3]
  - c. By the end of 2019, develop and implement an education and outreach campaign to communicate to residents and visitors how fishing, hunting, boating and wildlife viewing can be safe and compatible with each other. **[#40]** [o-ref #31] [RLT rank 11] [OPT #2]
2. Enhance the boating safety and waterway experience of residents and visitors through improved access, management, education and enforcement.
  - a. By the end of 2016, and annually thereafter, update boating education programs and boating safety material with information learned from boating accident statistics and effectively provide this information to residents and visitors. **[#41]** [o-ref #34] [RLT rank 10] [OPT #2]
  - b. By the end of 2016, and annually thereafter, create or enhance at least 10 boating access points and track public boating access improvements. **[#42]** [o-ref #32] [RLT rank 9] [OPT #2]
  - c. By the end of 2019, and every year thereafter, review at least 10% of all state-established restricted access zones and associated markers to determine which are still needed and applicable for waterway management and recommend

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removal for those that are no longer needed. **[#43]** [o-ref #33] [RLT rank 10] [OPT #2]

- d. By the end of 2017, improve Florida’s boating waterway experience and safety by creating and implementing a plan for prioritized removal of derelict vessels that are designated an immediate public safety or navigation hazard. **[#44]** [o-ref #35] [RLT rank 9] [OPT #2]
3. Promote Florida’s outdoor environment as a safe and healthy recreational option for residents and visitors.
    - a. By the end of 2019, develop and implement a promotional campaign to encourage residents and visitors to explore Florida’s natural resources as a safe and healthy recreational option. **[#45]** [n-ref #60] (Note – new objective, not ranked)
    - b. By the end of 2019, determine the types of outdoor opportunities that appeal to the wide variety of Florida’s residents and visitors, and develop and promote outdoor programs that provide for those opportunities. **[#46]** [n-ref #65] (Note – new objective, not ranked)
  4. Address the growing disconnect between people and nature by marketing and providing opportunities and education for diverse age, race, gender, ethnic and other demographic sectors.
    - a. By the end of 2019, develop and promote education and outdoor opportunities designed to encourage a stronger connection between nature and people of diverse age, race, gender, ethnic and other demographic sectors. **[#47]** [n-ref #84] (Note – new objective, not ranked)

**Goal 3: Use minimal regulations to manage sustainable fish and wildlife populations, manage access to fish and wildlife resources, and protect public safety.**

### Strategies:

1. Continually evaluate proposed and existing regulations, based on resource management benefits, public safety concerns, and economic and social impacts, to improve or eliminate regulations as warranted.
  - a. By the end of 2019, develop and implement standards to collect, analyze and integrate economic and sociological information with the rule development process. **[#48]** [o-ref #28] [RLT rank 9] [OPT #2]

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- b. By the end of 2018, develop and implement an adaptive process to evaluate new and existing fish, wildlife and public safety regulations, that includes cross-Division and Office and stakeholder input, to determine whether they are still appropriate, effective and enforceable and by the end of 2019 improve or repeal regulations as warranted. **[#49]** [o-ref #7] [RLT rank 6] [OPT #1 & #2]
2. Coordinate with partners and stakeholders to ensure that appropriate authorities and regulations exist to maintain sustainable fish and wildlife populations.
  - a. By the end of 2019, develop and implement performance measures for appropriate staff to ensure coordination with partners and stakeholders during the creation and/or revision of the authorities and regulations necessary to maintain sustainable fish and wildlife populations, and during the repeal of those regulations not needed. **[#50]** [o-ref #23] [RLT rank 11] [OPT #2]
3. Implement and enforce regulations in an informative, proactive and influential manner to enrich resident and visitors' outdoor experience while safeguarding the natural resources.
  - a. By the end of 2019, develop and implement outreach programs and other methods to increase awareness and support of rules intended to help sustain fish and wildlife populations and their safe use. **[#51]** [o-ref #24] [RLT rank 10] [OPT #2]
  - b. Identify and implement strategies to increase the number of proactive contacts between FWC law enforcement officers and those who hunt, fish, boat and view fish and wildlife by 2% annually. **[#52]** [o-ref #36] [OPT top 10] [RLT rank 8] [OPT #2]
  - c. By the end of 2018, develop and implement programs for law enforcement agencies to discuss FWC regulations and enforcement approaches to ensure consistent enforcement of fish, wildlife and boating regulations. **[#53]** [o-ref #25] [RLT rank 9] [OPT #2]

**Goal 4: Minimize adverse environmental, social, economic and health and safety impacts from fish, wildlife and plants that are known, or have a potential, to cause adverse impacts.**

Strategies:

1. Manage species and their habitats as well as species and human interactions to eliminate or reduce the adverse environmental, social, economic and health and safety impacts from native and non-native fish, wildlife, and plants.

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- a. By the end of 2019, develop a risk assessment process and necessary research and monitoring programs that will be used to examine potential environmental, social, economic, human health and safety risks posed by fish, wildlife and plants. **[#54]** [o-ref #68] [RLT rank 11] [OPT #1]
  - b. Beginning in 2019, develop and implement adaptive plans designed to proactively address adverse environmental, social, economic and health and safety impacts from fish, wildlife and plant species. **[#55]** [o-ref #62] [OPT top 10] [RLT rank 5] [OPT #1]
2. Effectively communicate to residents, visitors and businesses how to be safe and act responsibly when interacting with or possessing fish, wildlife and plants.
- a. By January 2019, evaluate residents and visitors' attitudes, beliefs, motivations and values regarding adverse environmental, social, economic and health and safety impacts of native and non-native fish, wildlife and plants and periodically monitor residents and visitors' understanding of these topics. **[#56]** [o-ref #61] [RLT rank 11] [OPT #3]
  - b. By the end of 2019, develop and implement FWC-coordinated and adaptive educational campaigns for targeted audiences to disseminate information about potential environmental, social, economic and health and safety risks and how to act responsibly when interacting with fish, wildlife and plants. **[#57]** [o-ref #63] [OPT top 10] [RLT rank 9] [OPT #3]
3. Manage captive and non-native wildlife movement and trade through proactive and responsive enforcement, regulation and education, with an emphasis on species that pose a high risk to our native fish and wildlife.
- a. By end of 2017, evaluate FWC's Law Enforcement inspection programs and identify gaps and needs for those programs in order to minimize risks to human health and safety and the environment from fish, wildlife and plants. **[#58]** [o-ref #67] [RLT rank 10] [OPT #1]
  - b. By January 2018, develop, distribute and promote FWC guidance that effectively demonstrates how to properly handle and manage captive fish and wildlife. **[#59]** [o-ref #66] [RLT rank 10] [OPT #3]
  - c. By the end of 2019, develop and implement improvements to managing captive and non-native wildlife movement and trade through proactive and responsive enforcement, regulation and education, with an emphasis on species that pose a high risk to human health and safety or native fish and wildlife. **[#60]** [n-ref #100] (Note – new objective, not ranked)

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4. Enhance partnerships to address adverse environmental, social, economic and health and safety impacts from fish, wildlife and plants and ensure a consistent and integrated approach with FWC.
  - a. By January 2018, develop and implement an adaptive, integrated approach to strengthen participation and coordination with partners and volunteers to reduce adverse environmental, social, economic and health and safety impacts of fish, wildlife, and plants. **[#61]** [o-ref #64] [RLT rank 10] [OPT #3]

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### ***Theme Three – Sharing Responsibility for Fish and Wildlife Conservation and Management with an emphasis on developing conservation values in our youth***

#### **Goal 1: Ensure current and future generations support fish and wildlife conservation**

##### Strategies:

1. Expand and promote the Florida Youth Conservation Centers Network through leveraging FWC programs and staff, and developing public and private partnerships and sponsorships.
  - a. By January 2018, all staff will be aware of the Youth Conservation Initiative and all programs will provide support for youth conservation programs to the greatest extent feasible. **[#62]** [o-ref #46] [OPT top 10] [RLT rank 8] [OPT #3]
  - b. By January 2019, develop and implement an adaptive engagement process to expand and strengthen partnerships, improve communications and provide more opportunities for partners to support the Youth Conservation Initiative and programs. **[#63]** [o-ref #48] [RLT rank 7] [OPT #3]
  - c. By January 2019, expand the network of youth conservation centers to a combined minimum of 400 executed partnership agreements or sponsorships with public and private partners. **[#64]** [o-ref #45] [OPT top 10] [RLT rank 8] [OPT #3]
  - d. By the end of 2019, develop and implement promotional campaigns that specifically target urban, suburban and rural communities to attract youth and families to youth conservation centers and programs to encourage them to participate in outdoor conservation-based activities. **[#65]** [o-ref #49] [RLT rank 7] [OPT #3]
2. Develop and deliver standardized youth conservation curricula and fishing, hunting, boating and wildlife viewing outdoor activity programs, and assist with adapting programs and curricula to meet the needs of diverse communities.
  - a. By the end of 2018, develop and implement standardized youth conservation curricula designed to provide enjoyable experiences that create a conservation stewardship ethic while teaching safe fishing, hunting, boating and wildlife viewing skills. **[#33]** [o-ref #30] [OPT top 10] [RLT rank 2] [OPT #2 & #3]

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- b. By the end of 2019, develop and implement a plan to assist stakeholders to adapt components of the youth conservation curricula to address the socially and culturally diverse lifestyles of Florida's residents and visitors. **[#66]** [o-ref #47] [RLT rank 10] [OPT #3]
3. Foster stewardship and shared responsibility for fish and wildlife conservation through conservation education programs.
  - a. By January 2018, develop and implement an adaptive plan to promote conservation education programs as a way to foster stewardship and shared responsibility for fish and wildlife conservation. **[#67]** [o-ref #50] [OPT top 10] [RLT rank 6] [OPT #3]
4. Expand marketing and outreach to reach diverse audiences, and engage all staff in priority outreach initiatives.
  - a. By end of 2019, develop and implement an adaptive plan to expand marketing and outreach programs to reach diverse audiences, and engage all staff in priority outreach initiatives. **[#68]** [n-ref #101] (Note – new objective, not ranked)

**Goal 2: Ensure residents, visitors, stakeholders, and partners are engaged in the processes of developing and implementing conservation programs.**

Strategies:

1. Foster a common vision among partners and the FWC to maintain and enhance fish and wildlife populations and their habitats through interagency coordination, mutually beneficial goals and initiatives.
  - a. By January 2018, work with partners to create a common vision to improve and maintain optimal species populations and their habitats through interagency coordination and mutually beneficial goals and initiatives. **[#69]** [o-ref #54] [RLT rank 7] [OPT #3]
2. Engage residents, visitors, stakeholders and partners to understand their perspectives, develop and implement conservation programs, and implement fishing, hunting, boating and wildlife viewing management activities.
  - a. By the end of 2017, develop and implement a FWC-wide adaptive process to determine and understand resident, visitor, stakeholder and partner needs, attitudes, beliefs, motivations and values regarding fish and wildlife

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conservation, fishing, hunting, boating and wildlife viewing, and monitor trends at appropriate intervals. **[#70]** [o-ref #51] [OPT top 10] [RLT rank 5] [OPT #3]

- b. By the end of 2019, each Division and Office will assess, develop and implement coordinated and adaptive communication plan(s) to increase FWC's credibility and resident, visitor, stakeholder and partner's trust in FWC by providing education about; 1) FWC's role in protecting and conserving fish and wildlife and their habitats, 2) the value of fish and wildlife conservation, 3) how FWC programs benefit current and future generations and 4) the conservation needs of fish and wildlife. **[#71]** [o-ref #52] [OPT #5] [RLT rank 9]
  - c. By the end of 2019, each Division and Office will create and use coordinated and adaptive approaches to efficiently and effectively engage residents, visitors, stakeholders and partners in developing and implementing fishing, hunting, boating, wildlife viewing and conservation programs to ensure FWC is fulfilling its public trust responsibilities. **[#72]** [o-ref #53] [RLT rank 8] [OPT #3]
3. Use citizen science to enhance conservation programs.
    - a. By the end of 2019, fully implement an adaptive process to identify and implement fish and wildlife conservation activities that can be enhanced with citizen science and stewardship volunteers. **[#73]** [n-ref #102] (Note – new objective, not ranked)
    - b. By the end of 2019, working with partners, implement a volunteer support infrastructure to support citizen science and stewardship volunteers. **[#74]** [n-ref #103] (Note – new objective, not ranked)

**Goal 3: Increase opportunities for residents and visitors, especially youth, to actively support and practice fish and wildlife conservation stewardship.**

Strategies:

1. Inform residents and visitors about conservation stewardship and encourage their active involvement in achieving conservation of fish and wildlife.
  - a. By the end of 2019, develop and implement an adaptive campaign to inform residents and visitors about conservation stewardship, how they can be actively involved in achieving conservation of fish and wildlife, including how compliance with regulations benefits conservation. **[#75]** [o-ref #57] [OPT top 10] [RLT rank 5] [OPT #3]

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2. Provide and promote opportunities for residents and visitors, especially youth, to participate in conservation stewardship activities, including FWC volunteer opportunities.
  - a. By January 2019, all FWC public and youth programs will provide and promote at least one conservation stewardship activity. **[#76]** [o-ref #58] [RLT rank 11] [OPT #3]
  - b. By January 2019, promote conservation stewardship and fishing, hunting, boating and wildlife viewing activities in all FWC youth education programs and provide those programs to all Florida Youth Conservation Centers Network partners and other stakeholders. **[#77]** [o-ref #59] [RLT rank 6] [OPT #3]
  - c. By the end of 2019, increase by 15% the number of FWC volunteers. **[#78]** [n-ref #104] (Note – new objective, not ranked)
  - d. By the end of 2019, increase by 15% the number of staff utilizing volunteers to assist with FWC programs. **[#79]** [n-ref #105] (Note – new objective, not ranked)

### **Goal 4: Encourage communities to conserve lands and waters critical to sustaining healthy and diverse fish and wildlife populations.**

1. Provide communities with the necessary assistance to help them obtain the social and economic benefits of local conservation lands.
  - a. By December 2018, develop and implement an adaptive plan to efficiently and effectively assist communities in realizing the social and economic benefits of nearby areas that are managed for fish and wildlife. **[#80]** [o-ref #75] [OPT top 10] [RLT rank 8] [OPT #4]
2. Provide residents and visitors with relevant information on the social and economic benefits of conservation, fishing, hunting, boating, and wildlife viewing.
  - a. By the end of 2019, appropriate staff will recognize how residents and visitors receive information and use this knowledge to efficiently and effectively disseminate current and relevant information about the social and economic benefits of fishing, hunting, boating, wildlife viewing and wildlife conservation, to reach all demographics of the public. **[#81]** [o-ref #76] [OPT top 10] [RLT rank 2] [OPT #4]
  - b. By January 2019, identify priority data needs regarding the social and economic benefits of wildlife conservation, fishing, hunting, boating and wildlife viewing and implement appropriate methods to fill data gaps with up-to-date information. **[#82]** [o-ref #79] [OPT top 10] [RLT rank 8] [OPT #4]

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3. Support community events and programs that promote fish and wildlife conservation.
  - a. By July 2018, each Division and Office will develop and implement adaptive plans to efficiently and effectively support external events and programs that enhance and/or support wildlife conservation and/or increase fishing, hunting, boating and wildlife viewing participation. **[#83]** [o-ref #71] [RLT rank 9] [OPT #3]

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### ***Theme Four – Responsive Organization and Quality Operations***

**Goal 1: Integrate our commitment to benefit the community and enhance the economy through our conservation efforts and public service.**

Strategies:

1. Identify and implement ways to support Florida businesses and job growth while managing fish and wildlife.
  - a. By the end of 2019, each Division and Office will develop and implement adaptive plans to support Florida businesses and job growth while effectively managing fish and wildlife. **[#84]** [o-ref #69] [RLT rank 10] [OPT #4]
2. Identify and promote opportunities for staff to benefit local communities through participation in approved activities where FWC resources can be used (for example, the Florida State Employees' Charitable Campaign, the Guardian ad Litem Program, mentoring programs, FWC Disaster Response Teams, and American Red Cross Disaster Services).
  - a. By the end of 2019, develop and implement an adaptive plan for FWC to efficiently and effectively maintain current level of, identify new and promote opportunities for staff to benefit local communities through participation in approved activities where FWC resources can be used (for example, the Florida State Employees' Charitable Campaign, the Guardian ad Litem Program, mentoring programs, FWC Disaster Response Teams, and American Red Cross Disaster Services). **[#85]** [o-ref #70] [RLT rank 11] [OPT #4]
3. Provide residents and visitors with reliable and current information on Florida's fish and wildlife.
  - a. By the end of 2019, appropriate staff will recognize how residents and visitors receive information and use this knowledge to efficiently and effectively disseminate current and relevant information about Florida's fish and wildlife to reach all demographics of residents and visitors. **[#86]** [n-ref #27] [OPT top 10] [RLT rank 2] [OPT #4]

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4. Continue to attract visitors by providing top-quality fishing, hunting, boating and wildlife viewing opportunities.
  - a. By the end of 2017 and annually thereafter, FWC, or in cooperation with other partners, will complete a minimum of 15 projects that increase access opportunities on public or private lands for fishing, hunting, boating or wildlife viewing participants. **[#87]** [o-ref #72] [RLT rank 11] [OPT #2]
  - b. By the end of 2019, improve, promote and market quality fishing, hunting, boating and wildlife viewing opportunities to attract visitors and improve local and statewide economies. **[#88]** [o-ref #73] [OPT top 10] [RLT rank 4] [OPT #2]
  - c. By the end of 2019, enhance coordination with state and local tourism entities to develop, support, promote, market, and encourage participation in fishing, hunting, boating and wildlife viewing community events that attract visitors and improve local economies. **[#89]** [o-ref #74] [RLT rank 10] [OPT #2]

**Goal 2: Provide resources and support for the safety and protection of residents and visitors, our natural and cultural resources, and for emergency responses to critical incidents and environmental disasters.**

Strategies:

1. Identify existing and emerging risks to the safety of residents and visitors and foster internal collaboration and external partnerships necessary to effectively manage, reduce or eliminate those risks.
  - a. By January 2018, each Division and Office will implement adaptive processes that identify existing and emerging risks to the safety of residents and visitors, and will foster internal collaboration and external partnerships necessary to effectively manage, reduce or eliminate those risks. **[#90]** [o-ref #78] [OPT top 10] [RLT rank 9] [OPT #4]
2. Provide immediate and effective disaster response and recovery through mutual-aid efforts with local, state and federal partners.
  - a. Continue to deliver efficient and effective, as determined by annual review, emergency response, through formal and informal mutual aid efforts with partner agencies. **[#91]** [o-ref #77] [RLT rank 8] [OPT #4]
3. Provide search, rescue, and recovery services in coordination with local, state and federal entities to ensure the safety of residents and visitors.

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- a. Continue to deliver efficient and effective, as determined by annual review, search, rescue, and recovery service with partner agencies. **[#92]** [n-ref #106] (**Note** – new objective, not ranked)
4. Protect natural and cultural resources through proactive and responsive enforcement efforts.
  - a. By the end of 2019, enhance enforcement efforts to protect residents, visitors and natural resources through intelligence gathering, proactive law enforcement and patrols. **[#93]** [n-ref #107] (**Note** – new objective, not ranked)
  - b. By the end of 2019, enhance training and improve our abilities to respond to and investigate calls for service, incidents, accidents and crimes. **[#94]** [n-ref #108] (**Note** – new objective, not ranked)

### **Goal 3: Ensure the FWC has highly effective and adaptive business practices.**

#### Strategies:

1. Address emerging biological, social and economic trends, anticipate impacts and take advantage of opportunities to accomplish FWC's mission.
  - a. By the end of 2019, develop and implement an adaptive plan to research, monitor, measure and evaluate emerging biological, social and economic trends; address anticipated impacts; and take advantage of opportunities to accomplish FWC's mission. **[#95]** [o-ref #94] [RLT rank 6] [OPT #5]
2. Expect each employee to be an ambassador for FWC and its mission to Florida's diverse residents and visitors.
  - a. Develop and implement the resources and protocols necessary for employees to become successful ambassadors for FWC. **[#96]** [n-ref #109] (**Note** – new objective, not ranked)
3. Provide efficient and effective service to Florida's diverse residents, visitors, and FWC staff.
  - a. By June 30, 2018, each Division and Office will develop and implement an adaptive plan to engage their internal and external customers to understand their changing needs. **[#97]** [o-ref #80] [OPT top 10] [RLT rank 10] [OPT #5]
  - b. By June 2019, each Division and Office will develop and implement an adaptive improvement plan for efficient and effective internal and external customer service that takes into account customer needs, core customer service standards

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and includes a process for gathering and responding to customer feedback. **[#98]**  
[o-ref #81] [OPT top 10] [RLT rank 4] [OPT #5]

4. Foster a diverse, accountable, responsive and skilled workforce who effectively serves Florida's residents and visitors.
  - a. By the end of 2019, develop and implement an adaptive plan to enhance our ability to recruit, hire and retain highly effective applicants that better represent and serve the needs of Florida's diverse residents and visitors. **[#99]** [o-ref #82] [OPT top 10] [RLT rank 9] [OPT #5]
  - b. By end of 2019, develop and implement an adaptive and comprehensive plan that requires multi-tiered training encompassing the concepts of the Public Trust Doctrine, the Agency Strategic Plan and the value of working collaboratively, which promotes an understanding of the individual's role in contributing to and achieving FWC's mission and enables them to enhance residents and visitors' understanding and support of FWC. **[#100]** [o-ref #86] [OPT top 10] [RLT rank 3] [OPT #5]
  - c. By end of 2017, develop and implement quality training and professional-development opportunities, an effective leadership-development program, mentoring, and a succession plan. **[#101]** [o-ref #83] [RLT rank 7] [OPT #5]
  - d. By the end of 2018, develop new FWC-wide methods of internal communications that promote, support and encourage face-to-face open dialog and creativity while fostering an environment of trust and accountability. **[#102]** [o-ref #85] [OPT top 10] [RLT rank 5] [OPT #5]
  - e. By the end of 2018, develop and implement an FWC-wide program that ensures a healthy and safe work environment for all FWC employees. **[#103]** [o-ref #90] [OPT top 10] [RLT rank 7] [OPT #5]
5. Manage existing and secure additional resources necessary to achieve fish and wildlife conservation and meet residents, visitor and stakeholder needs.
  - a. By the end of 2018, each Division and Office, in coordination with Finance & Budget, will develop and implement an adaptive plan to continually monitor and improve business and financial practices to ensure a high level of fiscal accountability, integrity, soundness, and risk-management principles. **[#104]** [o-ref #89] [RLT rank 10] [OPT #5]
  - b. By the end of 2019, develop and implement an FWC-wide adaptive plan to identify, secure and use sustainable and diverse funding to support program

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activities to achieve fish and wildlife conservation and meet customer needs.

**[#105]** [o-ref #87] [RLT rank 7] [OPT #5]

- c. By July 1, 2019, be fully engaged in aligning FWC resources to support FWC strategic priorities. **[#106]** [o-ref #88] [OPT top 10] [RLT rank 2] [OPT #5]
  - d. By January 1, 2019, develop and implement an adaptive plan to annually evaluate and address equipment, facilities and infrastructure needs to support fish and wildlife conservation and meet our customers' needs. **[#107]** [o-ref #91] [OPT top 10] [RLT rank 4] [OPT #5]
6. Create and maintain an effective business model that supports the FWC's mission by using continuous improvement approaches that foster a collaborative and professional culture.
- a. By the end of 2017, to ensure FWC's core value of continuous improvement is being achieved identify and implement processes to monitor, measure and evaluate the way FWC does business. **[#108]** [o-ref #92] [OPT top 10] [RLT rank 9] [OPT #5]
  - b. By the end of 2019, develop and implement an adaptive plan to support continuous improvement by providing a work environment where innovation is encouraged and becomes part of the FWC culture. **[#109]** [o-ref #93] [RLT rank 8] [OPT #5]

## **13.9 AWMA: Conceptual Burn Plan**

**APPALACHEE WILDLIFE MANAGEMENT AREA  
CONCEPTUAL PRESCRIBED FIRE PLAN**



**JUNE 2013**



## I. INTRODUCTION

The following plan outlines the use of prescribed fire as a habitat management tool on Apalachee Wildlife Management Area (WMA). This plan is intended to provide a conceptual outline of the objectives and techniques used to implement prescribed burning on Apalachee WMA. The plan closely follows recommendations for the management of focal species as developed in the Apalachee WMA Wildlife Conservation, Prioritization and Recovery Strategy (WCPR) and recommendations of prescribed fire seasonality and fire return intervals for the various natural community types occurring on the area. An operational plan is completed annually to identify areas to be burned and the prescriptions under which those burns will take place.

Apalachee WMA is located west of the Chattahoochee River and Lake Seminole, between 3 and 15 miles north of Sneads in northeastern Jackson County. The area was established as a WMA in 1955 when the area was leased to the Florida Fish and Wildlife Conservation Commission (FWC) then the Florida Game and Fresh Water Fish Commission (GFC) by the U.S. Army Corps of Engineers (COE) following completion of Jim Woodruff Lock and Dam below the confluence of the Chattahoochee and Flint Rivers. The area is separated into 3 management zones labeled A, B, and C.

Zone A encompasses 5,461 acres, of which approximately 3,468 acres are designated in the prescribed burn program. Acreage unavailable for burning mostly includes ponds, portions of Lake Seminole, or defined parcels consisting of natural community types not fire dependent. Additionally, there are approximately 520 acres of agriculture fields maintained on the area and are occasionally burned for various habitat management and agronomic purposes.

Habitat types in Zone A include uplands, ponds, lakeshore, and small islands in Lake Seminole. Uplands are dominated by upland pine-oak forest, primarily comprised of the longleaf pine (*Pinus palustris*)/wiregrass (*Aristida* spp.) community. Lowlands and drainages are dominated by the basin swamp natural community, generally black gum (*Nyssa biflora*), red maple (*Acer rubrum*), wax myrtle (*Myrica cerifera*), and willows (*Salix* spp.). Extremely dry, sandy sites are covered with turkey oak (*Quercus laevis*), blackjack oak (*Quercus marilandica*), and sand post oak (*Quercus margaretta*). Some transition areas between uplands and lowlands contain an upland hardwood component, mainly a scattering of live oak (*Quercus virginiana*), southern red oak (*Quercus falcata*), white oak (*Quercus alba*), and willow oak (*Quercus phellos*). The Florida Natural Areas Inventory (FNAI)

natural community survey and mapping was conducted in 2008 and has identified Upland Pine and Upland Mixed Woodland reference sites occurring on Apalachee WMA (Table 1 and Figure 1).

FNAI Natural Community	Current Acreage	Historical Acreage
Basin Marsh	92.0	69.5
Basin Swamp	40.0	22.0
Bottomland Forest	595.2	419.5
Clastic Upland Lake	298.0	67.6
Cultural Hardwood Forest	63.0	N/A
Depression Marsh	5.6	70.2
Dome Swamp	2.0	5.3
Mesic Hammock	18.6	0.0
Pine Plantation	26.2	N/A
Ruderal (agricultural fields/clearings)	713.9	N/A
Ruderal (development)	6.6	N/A
Ruderal (impoundment/artificial pond)	976.0	N/A
Ruderal (roads/canals/ditches)	79.7	N/A
Sandhill	401.6	775.9
Sandhill Upland Lake	37.3	1.3
Upland Hardwood Forest	19.0	2.5
Upland Mixed Woodland	298.1	815.2
Upland Pine Forest	1794.0	3226.7

Table 1. Acreage of Current and Historic Communities Occurring on Apalachee WMA Zone A

Zones B and C, the river bottom parcel, comprises approximately 2,491 acres, and are a distinctly different habitat type, consisting of a long, narrow tract ( $\pm$  8 miles long X 1.4 miles at widest point) of floodplain forest, small floodplain ponds, and oxbows. Mesophytic hardwoods such as overcup oak (*Quercus lyrata*), diamond leaf oak (*Quercus laurifolia*), swamp chestnut oak (*Quercus michauxii*), and water hickory (*Carya aquatica*) are the dominant species. Green ash (*Fraxinus pensylvanica*), sweetgum (*Liquidambar styraciflua*), red maple, American sycamore (*Platanus occidentalis*), sweetbay magnolia (*Magnolia virginiana*), and American hornbeam (*Carpinus caroliniana*) are also found in the mid or overstories. The understory is typically comprised of greenbriar (*Smilax spp.*), poison ivy (*Rhus radicans*), muscadines (*Vitis spp.*), and various other shrubs and vines. Currently, Zones B and C are not part of the prescribed fire program on Apalachee WMA and no official survey and mapping of natural community types have been conducted.

## II. OBJECTIVES

Prescribed fire will be used on Apalachee WMA as a habitat management tool exclusively or in conjunction with other management techniques to accomplish a variety of objectives including:

- A) Restoration and/or maintenance of fire dependent native vegetative communities. This will result in preserving native plant communities while simultaneously improving wildlife habitat.
- B) Maintenance of early successional habitats. Early successional habitats are important for many species of wildlife including Northern bobwhite quail (*Colinus virginianus*), which is a featured game and WCPR focal species on the area. Other WCPR focal species that benefit from these habitats are Gopher tortoise (*Gopherus polyphemus*), Bachman's sparrow (*Aimophila aestivalis*), and Fox squirrel (*Sciurus niger*).
- C) Promotion of wildlife habitat diversity. By increasing or maintaining habitat diversity, the number of wildlife species utilizing the area will increase.
- D) Site preparation for ground cover restoration and propagation of native grass seed for collection.

The benefits that will be derived from prescribed burning on the Apalachee WMA include not only the long term preservation of native plant communities and improved wildlife habitat but numerous others as well:

- 1) Reduction of fuel loads which help to prevent or mitigate effects of wildfires.
- 2) Enhancement of the areas aesthetics by controlling undesirable vegetation.
- 3) Control of exotic plant species.
- 4) Improved public access and recreation opportunities.

### **III. BURN UNITS**

A total of 59 burn units have been delineated on Apalachee WMA (Figure. 2). They range in size from 159.3 acres to 4.2 acres averaging 58.8 acres and total 3,468 acres. Table 2 includes acreage, vegetation, topography and soils for each unit. As previously mentioned Apalachee has numerous agricultural fields, most of which are under lease by area farmers. These fields are often opportunistically burned when burning adjacent burn units and are considered part of the areas prescribed fire program. The field acres are not included within a particular delineated burn unit but the additional acres are added to the burn plan to reflect the agricultural fields, if included in the burn. For special cases where only the agricultural field is to be burned independently, not in conjunction with an existing burn unit, a specific burn plan will be developed. Apalachee WMA contains 53 agricultural fields ranging in size from 26.42 acres to 2.41 acres and average 10.67 acres. Written burn plans and burn history are maintained in the Apalachee WMA Fire Data base and spatial data maintained in ArcGIS. Records of burns are reported and compiled in the Land Management Information System (LMIS).

### **IV. BURN TIMING AND FREQUENCY**

To accomplish the prescribed fire objectives established for Apalachee WMA an adaptive management approach has been implemented, meaning the burn regime of individual burn units is dynamic. Generally each burn unit will be burned on a one to three year rotation. The timing of burns will also vary for each burn unit depending on what is needed to achieve the prescribed fire objectives, however, both growing and dormant season burns will occur on the area. Prescribed burns scheduled in a given year are spatially distributed to represent a mosaic of growing season and dormant season burns, having proximate areas that contain burned and unburned habitats, and avoid large acreage burns. Objectives outlined for Apalachee WMA requires between 60% and 70% of the upland community types to be burned annually. A sample annual burn completion map can be found in Figure 3.

### **V. FIRING TECHNIQUES**

Various firing techniques are used on Apalachee WMA including backing, flanking, strip-head, spot, and head fires. The techniques employed depend on the size, configuration of the burn unit, burn objectives, weather conditions, and fuel loads. Generally, a backing fire is used initially to secure the baseline. Once the fire has burned away from the baseline sufficiently to prevent an escape, strip-head, flanking, or spot fires are used to complete the burn. Burns are conducted by ground ignition utilizing a variety of

tools and methods including, hand drip torches, ATV mounted drip torches, and aerial signal flares.

## **VI. FIRELINES**

Firelines are a necessary part of a successful prescribed fire program. On Apalachee WMA every effort is made to use natural fire breaks, roads, agricultural fields, and existing ditches to secure burn units, however, some burn units especially those adjacent to private lands necessitates the need for dedicated firelines to mitigate safety and liability concerns. Dedicated firelines are disced with a farm disc harrow annually to maintain their effectiveness. Firelines, other than nature fire breaks such as wetlands and Lake Seminole consist of the following approximations: 8.6 miles of disced firelines, 14.5 miles of management area roads, 10.3 miles of county maintained roads and 2.7 miles of ditches (Figure 4).

## **VII. SMOKE MANAGEMENT**

Determining and mitigating impacts of smoke resulting from prescribed burning must be at the forefront. This includes not only minimizing impacts on well traveled roads and areas defined as smoke critical but residences and communities that may be affected by smoke as well. Reducing smoke effects will foster community relations by garnering support for prescribed burning or curtailing qualms. River Road (CR 271) is the only road treated as smoke critical however much effort is made to reduce smoke impacts to many of the smaller county maintain roads such as Butler Road, Little Zion Church Road, and Salem Church Road. All residences and communities adjacent to the west and south boundaries of Zone A are treated as smoke sensitive and units are burned on winds that will carry the smoke away from these places.

## **VI. MONITORING**

Post burn monitoring is subjective in nature but is based upon the desired conditions of the habitat or natural community type. These desired conditions are quantified in the Objective Based Vegetation Management (OBVM) strategy for the area. OBVM defines optimal overstory, mid-story, and ground cover composition and density parameters that meet the area's habitat and wildlife management objectives. Once the vegetation parameters are exceeded this will trigger a management action such as a prescribe burn. Although there may be occasions where actual vegetation compositions will be measured using scientific methods, most monitoring and evaluations are accomplished simply by visual observations.

## CURRENT NATURAL COMMUNITIES ON APALACHEE WMA

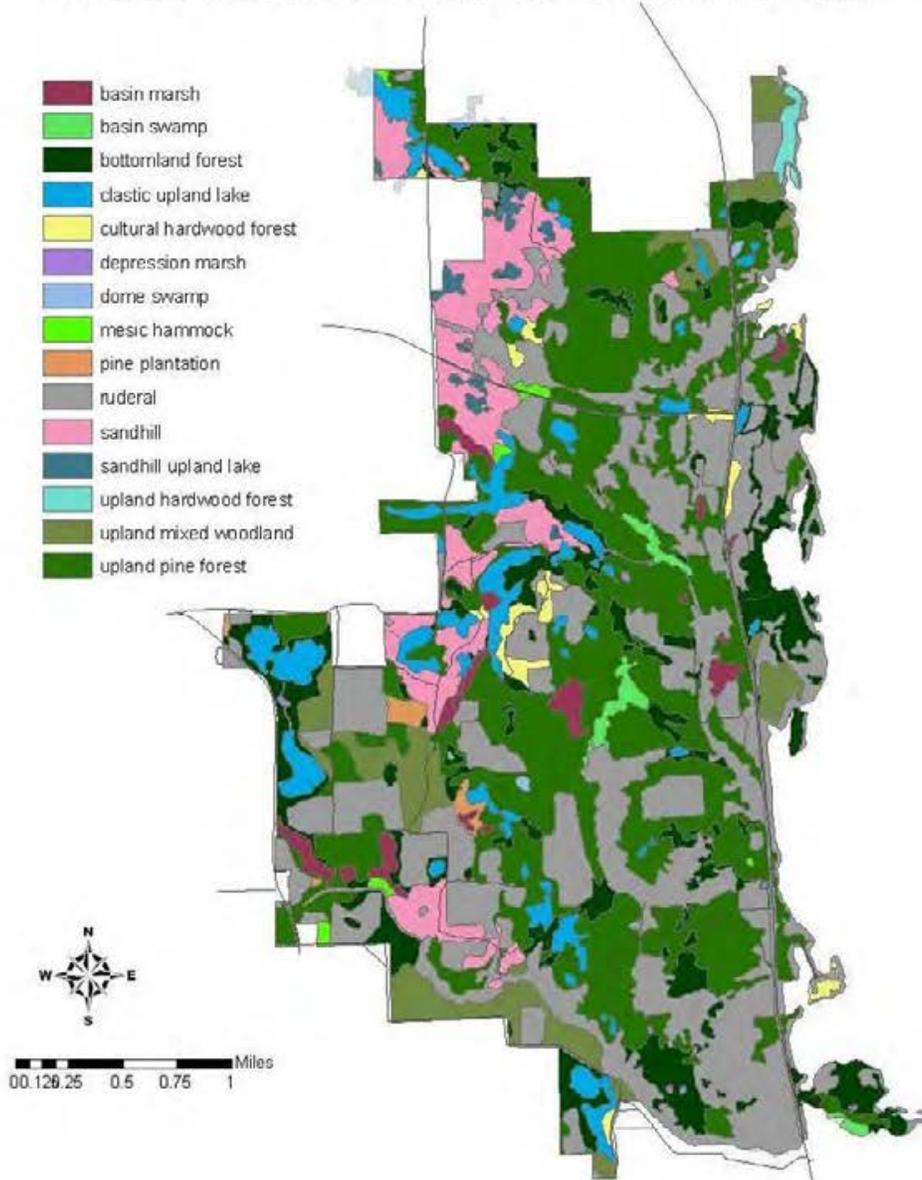


Figure 1.

# Apalachee WMA Burn Units

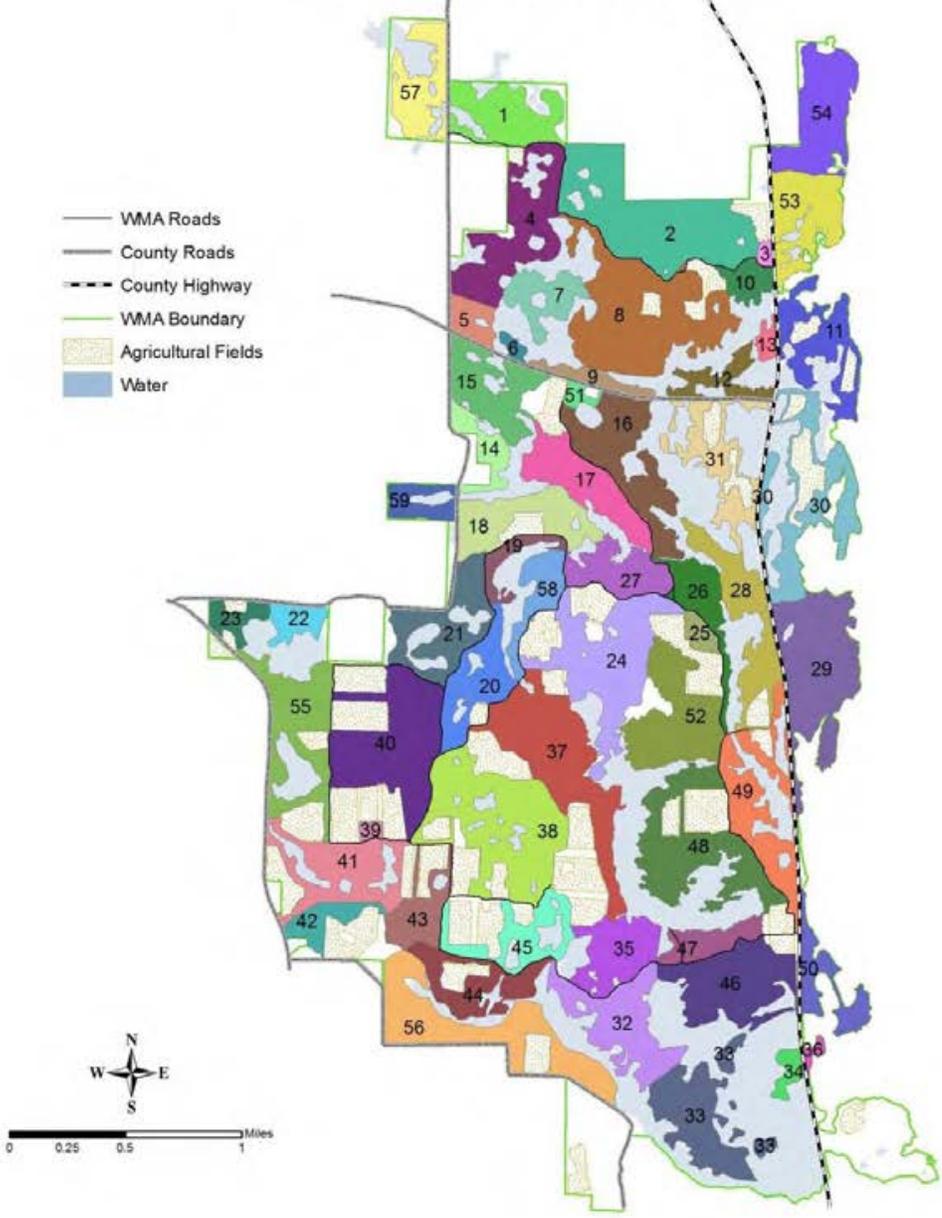


Figure 2.

APALACHEE WMA UNITS BURNED, 2011-12

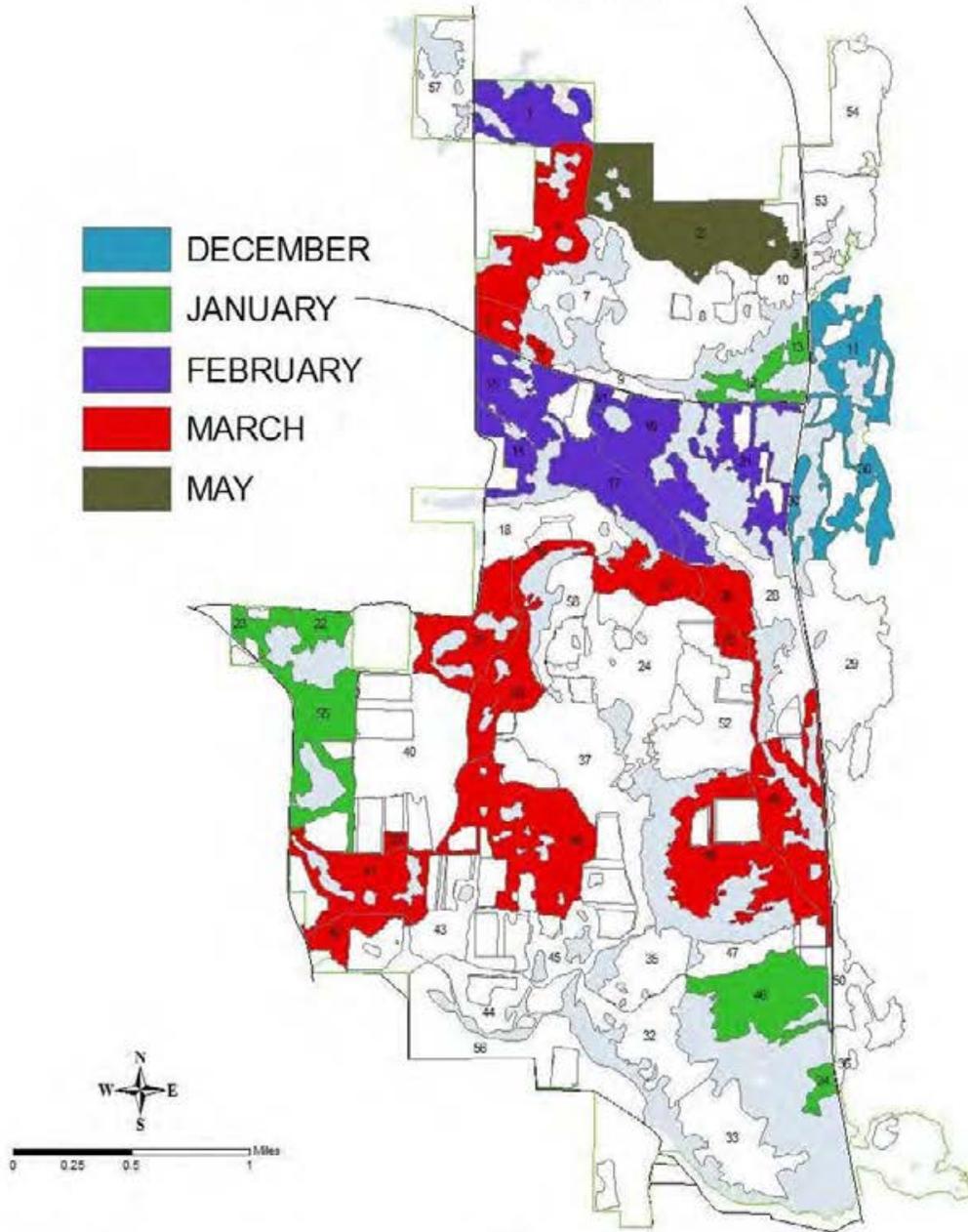


Figure 3.

Table 2. Burn Unit Acreage and Attributes, Apalachee WMA 2013

BURN UNIT #	ACRES	OVERSTORY	UNDERSTORY	TOPO & SOIL
1	61.4	LONGLEAF PINE, SOME UPLAND OAKS	10% OAKS - 75% WIREGRASS	MOD. SLOPING, SAND AND CLAY SOILS
2	157.4	LONGLEAF PINE/UPLAND AND BOTTOMLAND HW	TURKEY OAK 10%, WIREGRASS	MOD. SLOPE-SAND AND CLAY
3	4.18	LONGLEAF PINE/BOTTOMLAND HW	TURKEY OAK 51-75%	MOD. SLOPE-CLAY AND SAND
4	90.17	UPLAND HW / 1 LONGLEAF STAND	TURKEY OAK/SOME SMALL PINES	MOD. SLOPE-SAND AND CLAY
5	19.77	TURKEY OAK/POST OAK, YOUNG LONGLEAF	0-25% TURKEY AND POST OAK, GRASS AND OAK LEAVES	NEARLY FLAT, VERY SANDY SOIL
6	5.66	SPARSE - MAINLY BLACKJACK/POST/TURKEY OAKS	TURKEY OAK 0-25%	FLAT - SANDY
7	35.5	UPLAND HARDWOOD / SINGLE STAND ON LONGLEAF	TURKEY OAK/PINES IN NW	MOD. SLOPE-SAND AND CLAY
8	159.27	LONGLEAF PINE - SOME SCATTERED HARDWOODS	VERY SPARSE - SOME TURKEY OAK AND WAX MYRTLE	MOD. HILLY, CLAY AND SANDY SOIL
9	16.84	LONGLEAF PINE - SOME UPLAND HARDWOODS	VERY SPARSE - SOME TURKEY OAK AND WAX MYRTLE	MOD. HILLY-CLAY AND SANDY SOIL
10	20.09	PRIMARILY MATURE LONGLEAF PINE	SPARSE, SOME WAX MYRTLES AND OAKS, 10-15% COVERAGE.	MODERATE SLOPING, SANDY AND CLAY SOILS.
11	59.54	VARIABLE-LONGLEAF/SLASH/UPLAND HARDWOOD	RUBUS/GRASSES/WAX MYRTLES/OPEN	FLAT - CLAY AND SAND
12	25.79	LONGLEAF PINE / UPLAND HW IN NE	RUBUS/WAX MYRTLE/WIREGRASS/TURKEY OAK	FLAT-SAND AND CLAY
13	7.9	SPARSE, CLUMPS OF LONGLEAF PINE	RUBUS 25%, MYRTLE/SUMAC 25-50%, GRASS 0-25%.	FLAT, SAND AND CLAY SOILS
14	25.69	LONGLEAF PINE/TURKEY OAK	SPARSE - MAINLY TURKEY OAK	SLIGHT SLOPE - SAND AND CLAY SOIL
15	61.21	MOSTLY UPLAND H.W. (POST AND TURKEY) SOME LONGLEAF PINE	SPARSE TURKEY OAK, YOUNG LONGLEAF	SLIGHTLY SLOPING - SANDY
16	87.35	PRIMARILY LONGLEAF PINE, 20% UPLAND OAKS	VARIABLE HARDWOODS/TURKEY OAK, MYRTLES, COVERS 0-90% IN AREA	HILLY, MODERATE SLOPE, SANDY CLAY SOILS.
17	66.14	LONGLEAF PINE/SOME HW ISLANDS	WIREGRASS/WAX MYRTLE/TURKEY OAK	MOD. SLOPE-SAND AND CLAY
18	63.28	SCRUB OAK ON EAST END, LONGLEAF REMAINDER.	SPARSE TURKEY OAK, WIREGRASS	SLIGHTLY SLOPING, SANDY SOIL, MOD. SLOPE - CLAY AND SAND
19	18.44	MAINLY POST OAK AND LONGLEAF PINE	TURKEY AND POST OAK/RUBUS - 0-40%	SLIGHTLY SLOPING, SAND & CLAY SOILS
20	54.91	NE 1/2 = LONGLEAF, W 1/2 = POST/TURKEY OAK	SPARSE ON WEST SOME WIREGRASS, NE WIREGRASS AND TURKEY OAK	
21	68.18	MOSTLY POST/TURKEY OAK-SOME MIXED LONGLEAF	SCATTERED YOUNG OAKS	MOD. SLOPE - SANDY SOIL
22	20.74	LONGLEAF PINE/SCATTERED UPLAND HARDWOODS	SPARSE - 0-25% TURKEY OAK, WAX MYRTLE, RUBUS	GENTLY SLOPING - SAND AND CLAY

Table 2. Burn Unit Acreage and Attributes, Apalachee WMA 2013

23	17.61	LONGLEAF PINE NEARLY 80-90 BA	WAX MYRTLE/TURKEY OAK - 50-75%	MODERATE SLOPE - SANDY LOAM
24	121.71	MOSTLY LONGLEAF PINES, SOME UPLAND AND BOTTOMLAND HARDWOODS	OPEN IN MOST OF UNIT, BUT AREAS OF MYRTLES AND OAKS	MOD. HILLY - SAND AND CLAY SOIL
25	11.82	LONGLEAF PINE	WIREGRASS/TURKEY OAK	FLAT - SAND AND CLAY
26	40.17	VARIABLE - LONGLEAF PINE MIXED WITH UPLAND HARDWOODS	9-25% TURKEY OAK, 100% WAX MYRTLE ON POND BORDERS	FLAT - SAND AND CLAY
27	48.76	LONGLEAF PINE/SOME HARDWOODS MIXED	RED OAK/WAX MYRTLE	MOD SLOPE - SANDY SOIL
28	67.41	MIXED-LONGLEAF PINE/UPLAND AND BOTTOMLAND HW	RUBUS/WAX MYRTLE/TURKEY OAK	FLAT-SAND AND CLAY
29	123.6	VARIABLE-LONGLEAF AND SLASH WITH UPLAND HARDWOOD	DENSE-WAX MYRTLE/OAKS/VINES	FLAT - SAND AND CLAY
30	83.26	LOBLOLLY PINE/AREAS OF SUMAC AND OAKS	WAX MYRTLE/RUBUS/SUMAC/LYGGDRUM	FLAT-SAND AND CLAY
31	52.98	LONGLEAF PINE/UPLAND HARDWOOD	RUBUS/WIREGRASS-SHRUBS	FLAT-SAND AND CLAY
32	79.43	LONGLEAF PINE	WIREGRASS/SOME WAX MYRTLE	FLAT - SANDY
33	83.93	LONGLEAF AND LOBLOLLY PINES - CLOSED CANOPY IN SOME AREAS	DENSE WAX MYRTLE AND TURKEY OAK - 76-100%	FLAT - MOSTLY CLAY
34	10.87	LONGLEAF PINE	ALMOST NONE	FLAT - SANDY
35	56.37	LONGLEAF AND LOBLOLLY PINES	ALMOST NONE-SOME WAX MYRTLE AND RUBUS	FLAT-SAND AND CLAY
36	4.21	LONGLEAF PINE/SOME UPLAND HARDWOOD	WAX MYRTLE/TURKEY OAKS/SOME HARDWOOD SHRUBS (0-25%)	CLAY SOILS - FLAT
37	130.64	LONGLEAF/LOBLOLLY PINE/UPLAND HW	VARIABLE-RUBUS/TURKEY OAK/HW SHRUB 0-25 %	MOD SLOPE-SAND AND CLAY MODERATELY HILLY-SAND AND CLAY
38	144.86	LONGLEAF PINE / UPLAND HARDWOOD (30%)	TURKEY OAK, WAX MYRTLE 10%	FLAT-SANDY
39	5.13	MIXED LONGLEAF PINE/LIVE OAK	WAX MYRTLE, SMLAX, OAKS	FLAT-SANDY
40	127.45	POST-TURKEY OAK-2 STANDS MIXED HW/PINE	ALMOST NONE - SCATTERED TURKEY OAK	MOD SLOPE-SANDY
41	74.61	HIGHLY VARIABLE - LONGLEAF PINE, HARDWOODS, MOST AREAS MIXED	MOSTLY OPEN - WAX MYRTLE/RED OAK/RUBUS (0-25%)	MODERATE TO FLAT - SAND AND CLAY
42	24.69	LONGLEAF & LOBLOLLY PINE, OAKS	DENSE WAX MYRTLE / HARDWOOD SHRUB (50-75%)	FLAT - SAND / CLAY
43	39.35	TURKEY/POST OAK	NONE	FLAT-SAND AND CLAY
44	51.35	POST AND TURKEY OAKS/SCATTERED LONGLEAF PINE	ALMOST NONE - 10-20% TURKEY OAK	MODERATE SLOPE-SAND/CLAY SOIL
45	48.05	UPLAND HARDWOOD - MAINLY TURKEY OAK	TURKEY OAK/WAX MYRTLE	MOD SLOPE-SAND AND CLAY
46	92.2	LONGLEAF PINE / SCATTERED LIVE OAKS	MOSTLY WIREGRASS / SOME WAX MYRTLE	MOD SLOPE-SAND AND CLAY
47	30.52	LONGLEAF/LOBLOLLY PINES	SPARSE -methyl 10%, 5% sumac and oak shrubs	FLAT - CLAY AND SAND
48	107.1	LONGLEAF/LOBLOLLY PINE	DENSE S OF FIELDS - RUBUS/WAX MYRTLE	MOD. SLOPE-SAND AND CLAY
49	80.25	LONGLEAF PINE/UPLAND HW - LIVE OAK HAMMOCKS ON S END	LITTLE PRESENT EXCEPT NEAR PONDS WAX MYRTLE/RUBUS/WILLOWS	FLAT - SAND AND CLAY

Table 2. Burn Unit Acreage and Attributes, Apalachee WMA 2013

50	35.35	NONE	30%RUBUS, 30%MYRTLES, 30%WILLOW/SUMAC, 10%BROOMSEDGE	FLAT - SAND AND CLAY SOILS
51	7.25	LONGLEAF PINES / SOME UPLAND HARDWOOD	RUBUS 10% / WAX MYRTLE 10%	MODERATE SLOPE-SAND AND CLAY
52	90.61	LONGLEAF PINE/SOME UPLAND AND BOTTOMLAND HW	VARIABLE-WAX MYRTLE SPARSE TO DENSE	MOD. HILLY-SAND AND CLAY MODERATE SLOPE-SAND AND CLAY
53	64.92	Loblolly and Spruce Pine mixed with Hardwoods	Oaks, vines and some wet bottom grasses	MODERATE SLOPE-SAND AND CLAY
54	79.64	Loblolly and Spruce Pine mixed Hardwoods	Oaks, vines and some wet bottom grasses	MODERATE SLOPE-SAND AND CLAY
55	81	MIXED LONGLEAF/HARDWOOD	SMALL OAKS,10% RUBUS, 10% VINES, LEAF LITTER	SANDY CLAY
56	110.84	MIXED LONGLEAF AND HARDWOOD	SMALL OAKS AND VINES	SAND
57	51.21	60% Longleaf, 20% shortleaf, 20% hardwoods	10% vines, 20% small hardwood and shrubs,	Mod. Slope Primarily sand with some clay
58	34.68	60% Oaks, 40%Loblolly Pine	60% HARDWOOD, 40% VINES AND SHRUBS,	FLAT, SANDY TO CLAY
59	23.18	Longleaf, loblolly pine, hardwoods, total DA 70-90	15% small hardwood, wiregrass, myrtle/vines around pond edge	Moderate slope, sand and clay
	3468.46			

# Apalachee WMA Firelines

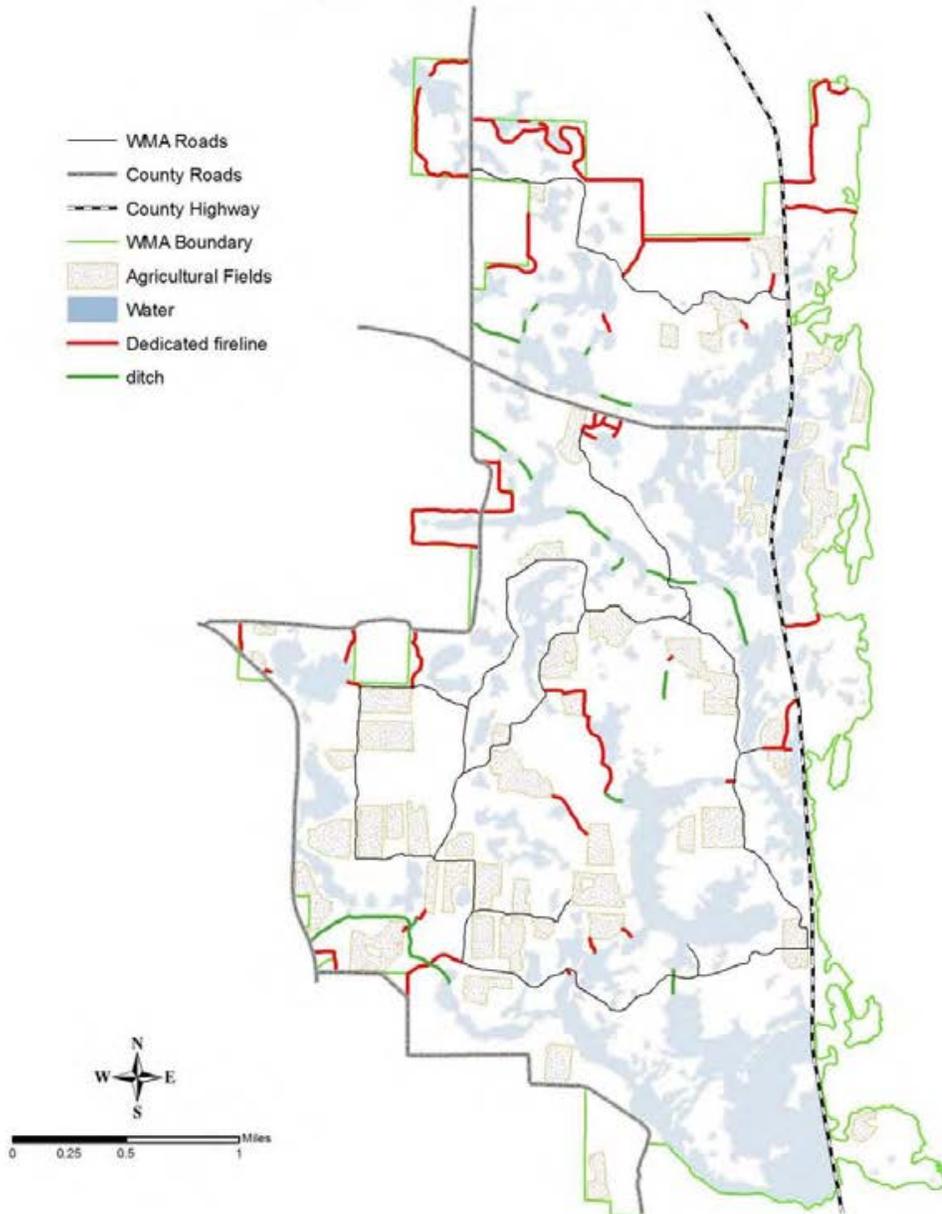


Figure 4.

**Appendix I**  
**Sample Prescribed Burn Plan**



**ENVIRONMENTAL AND FIRE BEHAVIOR PARAMETERS CONT.**

	<u>PREFERRED</u>	<u>PREDICTED</u>	<u>ONSITE</u>	<u>ONSITE</u>
FUEL MOISTURE:	10-20 %	_____	_____	_____
FLAME HEIGHT:	<15 FT	_____	_____	_____
RATE OF SPREAD:	1-3 CH/HR	_____	_____	_____

**MOP UP:**

ALL SNAGS, STUMPS, OR LIMBS WITH OPEN FLAME WITHIN 20 YARDS OF PLOWED FIREBREAKS, ROADS, AND DITCHES WILL BE EXTINGUISHED. BURN MANAGER WILL DETERMINE RISK OF AND ACTION ON SMOLTERING FUELS AT THE COMPLETION OF A BURN. FOLLOW-UP WITH DAILY INSPECTIONS OF THE UNIT UNTIL THE BURN OR FIRE IS CALLED OUT. BURN IS CALLED OUT AND SAFE WHEN, 1) NO FORSEEN THREAT EXISTS FROM SMOLTERING FUELS AS DEEMED BY THE BURN MANAGER OR ALL COMBUSTION OF FUELS HAS STOPPED, 2) FIRELINES ARE IN SATISFACTORY CONDITION, 3) MOP-UP STANDARDS HAVE BEEN MET.

**CONTINGENCY:**

ANY SPOT OVERS THAT MAY OCCUR WILL BE AGGRESSIVELY SUPPRESSED WITH ALL AVAILABLE MAN-POWER AND EQUIPMENT ON SITE AND ALL IGNITION ON THE BURN WILL BE HALTED UNTIL SUPPRESSION IS COMPLETE. IF FIRE ESCAPES INTO AN ADJACENT UNIT THE BURN MANAGER WILL UTILIZE EXISTING ROADS, DITCHES AND PONDS AS FIRE BREAKS TO CONTAIN THE SPREADING FIRE. IF FIRE ESCAPES THE BOUNDARIES OF THE MANAGEMENT AREA OR THE BURN MANAGER DEEMS THE FIRE BEYOND CONTROL OF "ON THE GROUND PERSONEL", FFS AND LOCAL AUTHORITIES WILL BE NOTIFIED IMMEDIATELY.

**NOTIFICATION LIST**

FL FOREST SERVICE: # 850-547-7083 ACCT# 1306701 \_\_\_\_\_

FWC DISPATCH: # 1-800-342-1676 \_\_\_\_\_

CORPS OF ENGINEERS: # 229-662-2001 \_\_\_\_\_

CITY OF SNEADS POLICE/FIRE: #850-593-6403 \_\_\_\_\_

OTHER NOTIFICATIONS:

JACKSON CO. SHERIFF OFFI # 850-482-9648 DISPATCH \_\_\_\_\_

\_\_\_\_\_ # \_\_\_\_\_

\_\_\_\_\_ # \_\_\_\_\_



**BURN EVALUATION**

FIRING TECHNIQUE: \_\_\_\_\_

SMOKE DISPERSION: \_\_\_\_\_

PERSONNEL AND EQUIPMENT: \_\_\_\_\_

% AREA BURNED: \_\_\_\_\_ % CROWN SCORCH: \_\_\_\_\_ CHAR HEIGHT: \_\_\_\_\_

**NOTES/COMMENTS:**

PLAN PREPARED BY: \_\_\_\_\_ CERTIFICATION #: \_\_\_\_\_



## **13.10 Apalachee WMA and Judges Cave WEA WCPR Strategy**

# **Apalachee WMA and Judges Cave WEA Species Management Strategy**

February 2012

Florida Fish and Wildlife Conservation Commission  
Division of Habitat and Species Conservation  
Terrestrial Habitat Conservation and Restoration Section  
A product of the Wildlife Conservation,  
Prioritization and Recovery Program



## Executive Summary

The Florida Fish and Wildlife Conservation Commission's (FWC) Terrestrial Habitat Conservation and Restoration section (THCR) takes a proactive, science-based approach to species management on lands in the Wildlife Management Area/Wildlife and Environmental Area (WMA/WEA) system. This approach uses information from statewide models in conjunction with input from species experts and people with knowledge of the area to create site-specific wildlife assessments of a number of focal species. Staff combines these assessments with management considerations to develop a wildlife management strategy for the area. FWC intends for this strategy to: 1) provide land managers with information on actions they should take provided the necessary resources are available, 2) promote the presence of and ensure the persistence of focal wildlife species on the area, and 3) provide measurable species objectives that can be used to evaluate the success of wildlife management on the area.

This document presents the results of an approach to evaluating focal species needs within an ecosystem management approach for Apalachee Wildlife Management Area (AWMA) and Judges Cave Wildlife and Environmental Area (JCWEA). Natural community management focused on a set of focal species provides benefits to a host of species reliant upon these natural communities. Monitoring select species provides information that verifies whether natural community management is having the desired effect on wildlife. Throughout the process, to maximize the potential benefit of management on these areas, we considered the role of these areas in regional and statewide conservation initiatives.

[Section 1](#) informs the reader about the process used to generate this document. [Section 2](#) describes the historic and ongoing management actions on the properties. [Section 3](#) provides a list of focal and listed species on the areas, and an assessment of each species' level of opportunity/need. This includes species-specific goals and objectives when appropriate. Objectives are identified for 5 species on these areas: gopher frog, Bachman's sparrow, brown-headed nuthatch, northern bobwhite, and southeastern American kestrel. [Section 4](#) describes specific land management actions recommended for focal species. This includes Strategic Management Areas (SMA) and Objective-Based Vegetation Management (OBVM) considerations. An SMA is an area in which FWC will apply specific land or species management action(s) to facilitate conservation of a species or group of species. Staff identified 1 SMA focusing on northern bobwhite on AWMA, and 1 SMA focusing on cave protection and research at JCWEA. This section also discusses management necessary to facilitate continued persistence of focal species. [Section 5](#) describes species-specific management (e.g., restocking, nest structures), species monitoring prescribed for the area, and research that would be necessary to guide future management efforts. We describe species management actions for the southeastern American kestrel. We describe monitoring efforts for gopher frogs, gopher tortoises, Bachman's sparrows and brown-headed nuthatches (avian spring call-count survey), northern bobwhite, and gray and southeastern bats. Opportunistic monitoring is suggested for a number of other focal and imperiled species. The conservation of JCWEA and AWMA wildlife requires interaction with other entities. Intra-agency coordination with 7 other units in FWC and inter-agency coordination with 6 other entities are identified in [Section 6](#). [Section 7](#) describes efforts prescribed "beyond the area's boundaries" to help effect conservation of the species on the area.

Continuation of current resource levels would be required to provide for most of the land management recommended in this document. The FWC will use a combination of private sector contract work and efforts of area staff to accomplish these activities. Some of the monitoring recommendations will require additional resources, while FWC can accomplish others with continuation of existing resources. Additional resources will be required to achieve desired removal of exotic invasive plant species on the property.

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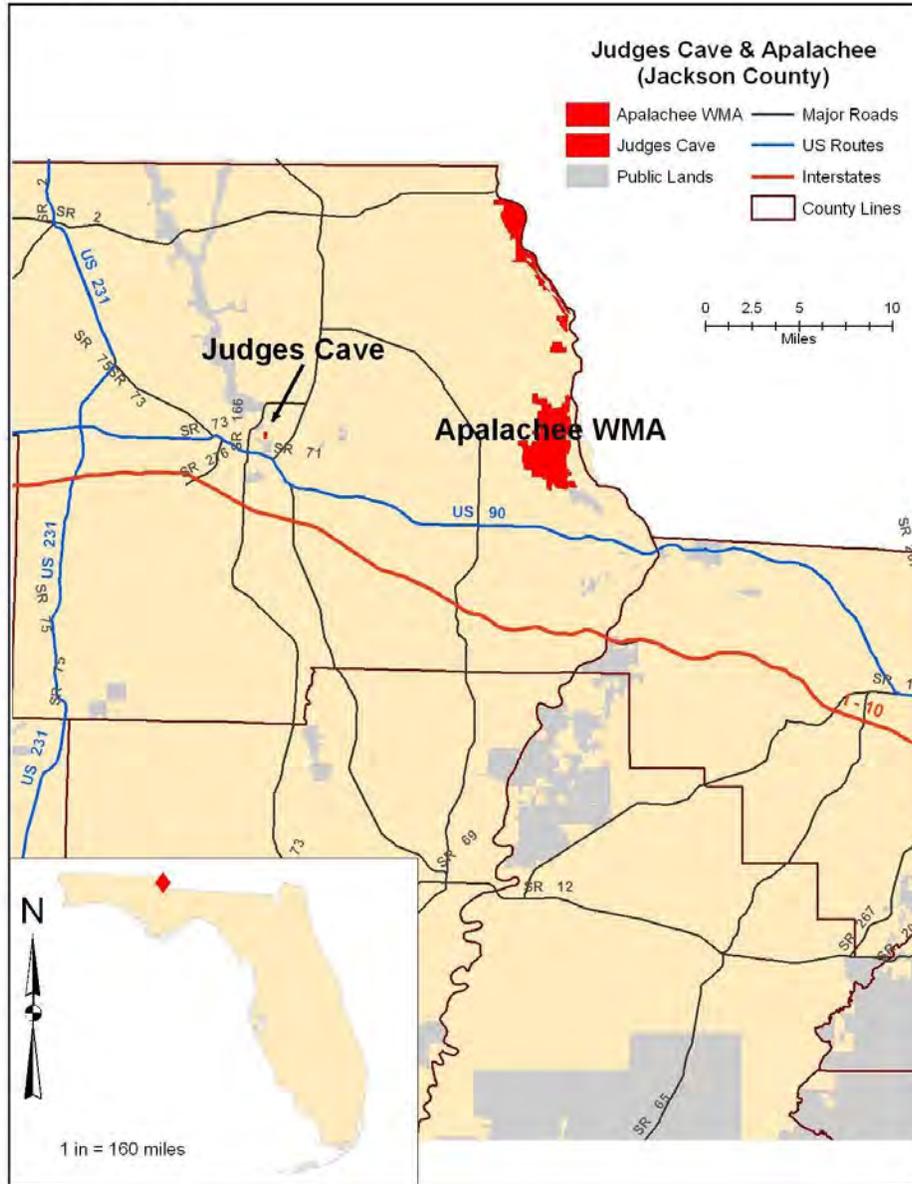
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## Acronym List

ACOE	United States Army Corps of Engineers
AWMA	Apalachee Wildlife Management Area
DFC	Desired Future Condition
FNAI	Florida Natural Areas Inventory
FTE	Full Time Equivalent (employment classification)
FWC	Florida Fish and Wildlife Conservation Commission
FWRI	Florida Wildlife Research Institute
GFC	Florida Game and Freshwater Fish Commission
GIS	Geographic Information System
JCWEA	Judges Cave Wildlife and Environmental Area
MU	Management Unit(s)
OBVM	Objective Based Vegetation Management
PBG	Potential Breeding Group
PLCP	Public Lands Conservation Planning (project)
PVA	Population Viability Analysis
SCP	Species Conservation Planning (section)
SGCN	Species of Greatest Conservation Need
SHCA	Strategic Habitat Conservation Area
SMA	Strategic Management Area
THCR	Terrestrial Habitat Conservation and Restoration (section)
TNC	The Nature Conservancy
UERP	Upland Ecosystem Restoration Project
WCPR	Wildlife Conservation Prioritization and Recovery
WEA	Wildlife and Environmental Area
WMA	Wildlife Management Area
USFWS	United States Fish and Wildlife Service

## Locator Map



## Section 1: Introduction

The FWC takes a proactive, science-informed approach to species management on lands in the WMA/WEA system. Staff integrates conservation planning, Population Viability Analysis (PVA) results, and geospatial analytical techniques to model potential habitat to help FWC determine where to affect focal species conservation. Staff combines the landscape level assessments with input from species experts and people with knowledge of the area to create site-specific wildlife assessments for a number of focal species. Staff combines these assessments with management considerations to develop a wildlife management strategy for the area or WMA complex.

The FWC intends for this Strategy to: 1) provide land managers with information on actions they should take provided the necessary resources are available, 2) promote the presence and facilitate the persistence of focal wildlife species on the area, and 3) provide measurable species objectives managers can use to evaluate the success of wildlife management on the area. On FWC lead areas, we reference goals and objectives included in the Management Plan when discussing the species and drafting the Strategy; therefore this Strategy will help guide and support the goals of the Management Plan. The species-specific objectives identified in this Strategy will be incorporated into the Management Plan and this Strategy will be appended to the Management Plan.

In this document, we define goals, objectives and strategies as follows: Goals are broad statements of a condition or accomplishment to be achieved; goals may be unattainable, but provide direction and inspiration. Objectives are a measurable, time-specific statement of results responding to pre-established goals. Strategies are the actions that will be taken to accomplish a goal or objective, and strategies may be measurable.

Staff uses species-specific habitat models to create statewide potential habitat maps. A GIS analysis was conducted to determine which of the focal species were modeled to have potential habitat on each area. We use local staff's knowledge, species-expert knowledge, and area-specific maps of natural communities to refine habitat information for each species and evaluate the area's potential role in conservation of the species. A workshop is conducted at which all individuals involved in the decision making process discuss the focal species status, evaluate opportunities for land and species management on the area, and decide on appropriate monitoring and/or research actions. Some species cannot be expected to persist on an area based solely on area-specific measures; therefore, this strategy identifies intra- and interagency coordination and any "beyond the boundary" considerations (i.e. working with neighboring landowners) necessary for the management of focal species. Area-specific species objectives, a list of necessary actions to achieve these objectives, and the monitoring necessary to verify progress towards objectives are agreed upon and used to create the area's Strategy.

The primary focus of this approach is non-game species; however, two of the focal species are game birds. Game management actions are considered when drafting the Strategy and are compatible with the actions prescribed by this Strategy. While this Strategy focuses on Apalachee WMA and Judges Cave WEA, it considers the role of the areas within the larger State and/or regional context. Similarly, while the Strategy has species-specific objectives and actions, it does not endorse single-species management. The FWC's land

management focuses on natural community management that benefits the host of species that naturally occur in each natural community. However, some species may need directed actions if they are to recover from past declines or be restored to habitat from which they were extirpated. By implementing the Strategy, FWC believes our management will benefit the largest suite of native wildlife by keeping common species common and aiding in the recovery of listed species.

## **Section 2: Current and Historic Management Actions**

### **2.1: Apalachee Wildlife Management Area**

Apalachee Wildlife Management Area (AWMA) was established in 1955. The U.S. Army Corps of Engineers (ACOE) leased the original 5,027-acre parcel now designated as Zone A to the FWC, then the Florida Game and Freshwater Fish Commission (GFC), following the completion of the Jim Woodruff Lock and Dam. Another 256 acres were added to the WMA between 1955 and 1985. A separate 2,669-acre unit (now Zones B and C) of primarily bottomland forest was added in 1987, bringing the current total acreage for AWMA to 7,952 acres. The ACOE and the FWC finalized the most recent lease agreement relating to AWMA in 2005, with the option to renew for an additional 25 years. FWC personnel conduct all land management activities comparable to that of traditional FWC lead areas, except for timber harvesting and cultural resource monitoring, which the ACOE conducts. Nearly all management activities are completed on Zone A, which is comprised of primarily upland community types; Zones B and C are not actively managed.

Between 1825 and 1838, a portion of Econchatimico's Indian Reservation was located on what is now Zone A, from River Road east to the Chattahoochee River. The waters of Lake Seminole now inundate most of what was reservation land. From the mid 19<sup>th</sup> century to 1955, most of AWMA's uplands were converted to family homesteads used for farming and cattle grazing. There is evidence of turpentine production occurring on northwest portions of the property and of timber harvests in the bottomlands before the creation of Lake Seminole.

The Florida Master Site File lists 85 cultural sites occurring on AWMA, but none meet the criteria established for monitoring by FWC. Although no monitoring is required by the FWC, 29 sites are monitored annually by ACOE. Area staff plans to conduct informal monitoring on other sites, and follow appropriate measures to avoid potential disturbance to sites when conducting management activities.

Soon after acquisition, the GFC tried to incorporate waterfowl management on the area using levees and water control structures to manipulate water levels. This ultimately failed because most pond water levels on AWMA are dependent on the level of Lake Seminole. The interest and success of northern bobwhite hunters prompted increased efforts to manage the uplands. Emphasis on northern bobwhite (*Colinus virginianus*) has driven most of the management activities conducted on the area since the 1960s. In the uplands, management strives to create mature, low-density stands of native pines with a diverse and healthy native groundcover, maintained with frequent fire.

Prescribed fire continues to be the most prominent management tool used on the area. Although burn history and methodology were incompletely documented prior to 1991, records and evidence indicated that approximately 80-90% of the longleaf pine habitat was

burned annually. During the 1990s, managers lengthened the fire return interval, relied more heavily on dormant season burns and excluded fire from some units. This management resulted in an increased hardwood understory. Since 2005, efforts have been made to burn 60-70% of the northern bobwhite habitat annually (1-2 year rotation). This includes incorporating more growing season burns applied in a mosaic pattern intended to improve habitat diversity and reduce hardwoods. From 2005-2009, 6 new burn units were added totaling 422 acres. These units consist primarily of degraded upland pine forest and upland mixed woodland and have received 1 to 2 burns to date. In total, AWMA has 3,430 burnable acres included in 58 burn units that range in size from 4-159 acres.

The Florida Natural Areas Inventory (FNAI) completed natural community mapping on AWMA in 2009 (Table 1), and identified reference sites for upland pine forest and upland mixed woodland natural communities on the area. Reference sites are considered exemplary examples of a given natural community, and habitat conditions found within them are used as the basis for setting Desired Future Conditions (DFCs) for the given natural community at other locations.

**Table 1.** Mapped acreage of current plant communities on Apalachee WMA, including management status and number of focal species that use the community.

Natural Community	Acreage mapped	Actively Managed <sup>1</sup>	# of Species That Use the NC
basin marsh	92.0		6
basin swamp	40.0		5
bottomland forest	595.2		4
clastic upland lake	298.0		1
cultural hardwood forest	63.0		0
depression marsh	5.6		4
dome swamp	4.0		6
mesic hammock	18.6		4
pine plantation	26.2		4
ruderal	1,776.2		5
sandhill	402.1	Yes	12
sandhill upland lake	37.3		0
upland hardwood forest	19.0		5
upland mixed woodland	298.1	Yes	12
upland pine forest	1,794.0	Yes	11
TOTAL ACRES	5,468		

<sup>1</sup>Communities that are actively managed and will be monitored via the OBVM process. Other communities are managed, but will not be monitored via OBVM.

FNAI has documented several State-listed plant species and 1 federally endangered plant, gentian pinkroot (*Spigelia gentianoides*) on AWMA (Section 3.2.15). The largest

known population of gentian pinkroot occurs on AWMA. This species responds well to prescribed fire. To ensure the protection of gentian pinkroot, when conducting land management activities near known populations of gentian pinkroot, staff follows avoidance measures as prescribed by the United States Fish and Wildlife Service (USFWS). For example, the USFWS is consulted, and buffer areas are established around known populations before timber thinning operations. The extreme rarity of *Spigelia gentianoides* has drawn interest to the area from plant enthusiasts, botanists, and nearby chapters of the Native Plant Society.

Some stands of upland pine forest have served as wiregrass (*Aristida stricta*) seed donor sites for other conservation lands. Although most of the natural communities on AWMA are in maintenance condition, there are about 30% that require additional management activities to improve, and in some cases restore, preferential habitat. Where lack of fire has facilitated hardwood proliferation into historically fire maintained communities, area staff uses herbicide and mechanical treatments in conjunction with prescribed fire to restore a more natural condition. A significant amount of hardwood control has been conducted for sandhill community restoration, and this work was partially supported by Florida's State Wildlife Grants Program and gopher tortoise (*Gopherus polyphemus*) mitigation funds from the FWC Species Conservation Planning Section (SCPS). Current ground cover restoration activities on AWMA include seed collection in donor sites as well as site preparation and planting native grass seed on a 17.8 acre abandoned agricultural field that was historically upland pine forest.

Thinning of stands is often required to promote herbaceous plant diversity, which is beneficial for many species of wildlife. Since 1997, the ACOE with FWC input has conducted timber thinning on approximately 1,543 acres of AWMA and there are plans to thin another 1,137 acres over the next 5 years. All revenue generated from timber sales belongs to ACOE. Timber management on AWMA is a cooperative program between the FWC and ACOE and a vital part of the management strategy for maintaining and restoring natural communities. FWC's role is to propose potential thinning treatments and the ACOE has made concerted efforts to accommodate these proposals. ACOE is sensitive to the impacts of timber management on wildlife and consults with area staff on concerns pertaining to specific projects. As an example, to prevent disturbance to gopher tortoises and their burrows during thinning operations, ACOE staff mark gopher tortoise burrows and make loggers aware of the presence of burrows.

In 2005, FWC staff implemented an invasive-exotic plant control program utilizing "in-house" resources and grants provided from the FWC Upland Invasive Plant Section. Japanese climbing fern (*Lygodium japonicum*), which has expanded on the area and is threatening many of the upland communities, is a primary target for plant control treatments. Other invasive plants treated include Chinese tallow (*Sapium sebiferum*), Chinaberry (*Melia azedarach*), mimosa (*Albizia julibrissin*) and tung tree (*Aleurites fordii*).

There are 518 acres of agricultural fields ranging in size from 2.4 to 26.4 acres on AWMA. Approximately 228 acres are leased to local farmers under indefinite sharecrop agreements and 110 acres are allocated for a revenue contract or paid lease. Farmers plant FWC approved crops (generally peanuts, corn, wheat, and soybeans) and leave 10% of the crop for wildlife as directed by the area manager. Area personnel conduct agronomic activities on the remaining 180 acres, most of which are planted in small grains such as benne and grain sorghum. Once crops have matured in the fall, staff systematically mows

fields to make seed available for consumption by wildlife. To provide nesting cover and promote seed-producing grasses and forbs, some fields are intentionally left fallow. Staff has established wildlife openings on lands that were previously agricultural fields to provide enhanced northern bobwhite habitat. Most wildlife openings occur around field margins and hedgerows and they are mowed, disced, or burned to maintain these important ecotones in early-successional herbaceous vegetation, which produces a variety of cover, forbs, seeds, and insects throughout the year. These wildlife openings account for 118 acres.

Game wildlife has been the focus of monitoring on AWMA. Staff has completed traditional spotlight surveys for white-tailed deer (*Odocoileus virginianus*) on AWMA since 1983. In conjunction with traditional spotlight surveys, counts using line-transect methodology have been accomplished since 2006. Both spotlight count surveys indicate a stable deer population and suggest a population sufficient to maintain adequate hunter satisfaction.

Staff initiated fall covey call-count surveys for northern bobwhite in 2008 using methodology developed by Tall Timbers Research Station for the Upland Ecosystem Restoration Program (UERP). Staff established 9 listening stations to include as many different habitats used by northern bobwhite as possible. Surveys indicate a mean bird density of approximately 0.41 birds/acre. Other northern bobwhite surveys completed in the past included: roaming spring cock call-counts, flush counts, hunter covey finds, and mark recapture. However, these survey techniques did not provide data rigorous enough to use in making management decisions.

Staff monitors and maintains 150 wood duck (*Aix sponsa*) nesting boxes that are dispersed throughout the natural ponds and ruderal impoundments on AWMA. The boxes are checked annually in January to determine usage, clean out debris, and make necessary repairs. Typically, over 75% of boxes are used each year for at least 1 nesting attempt. Part of the maintenance of nesting boxes includes using an airboat to conduct some herbicide treatments of encroaching cattails and other aquatic weeds around the boxes. This is normally done in concert with herbicide spraying to keep waterways, which are utilized as firebreaks, open and suitable as effective fire breaks.

As a condition of the funds used to match the State Wildlife Grant for sandhill restoration, a baseline gopher tortoise survey was conducted on sandhill communities. The results of this survey indicated a population density of 1.16 gopher tortoises/acre in surveyed sandhills.

Although there is no official wading bird survey completed on AWMA, 2 nesting colonies exist on the area. Bird species observed nesting in these colonies include the great blue heron (*Ardea herodias*), great egret (*A. alba*), and anhinga (*Anhinga anhinga*).

Area staff includes a full time equivalent Fish and Wildlife Biological Scientist III, one full time equivalent Fish and Wildlife Technician, and one other personal services Field Technician. This staff is responsible for completing all land management activities on AWMA and JCWEA, including maintaining 13.6 miles of road and 7.5 miles of firebreaks. AWMA provides hunting opportunities from mid-October to mid-February administered by a manned check station where hunting and biological data are collected. Other general duties include but are not limited to equipment and facility maintenance, reporting, and administration.

## 2.2: Judges Cave Wildlife and Environmental Area

During January 1983, The Nature Conservancy (TNC) deeded the 37.3-acre property then known as the “Marianna Bat Cave” to FWC (then known as the GFC). The Warranty Deed states, “...Marianna Bat Cave, shall forever be held and maintained as a natural area for management as a wildlife preserve, without any disturbance whatever of habitat or plant or animal populations...Should the premises cease to be used solely as provided herein, then the property hereby conveyed to the State of Florida, Game and Fresh Water Fish Commission may be terminated by The Nature Conservancy...” TNC purchased this property for the sole purpose of protecting the maternity colony of gray (*Myotis grisescens*) and southeastern bats (*Myotis austroriparius*) that use the cave, and deeded the property to GFC for permanent protection. Shortly following the issuance of the Warranty Deed, the GFC established this area as Judges Cave Wildlife and Environmental Area (JCWEA) on March 11, 1983.

During 2004-2005, FNAI conducted natural community mapping on the area. This indicated JCWEA is comprised of 16.2 acres of floodplain forest, 5.3 acres of floodplain swamp, and 15.8 acres of upland hardwood forest. During natural community mapping, FNAI recorded the presence of 3 State-listed plants ([Section 3.2.15](#)): variable leaf Indian plantain (*Arnoglossum diversifolium*), Carolina larkspur (*Delphinium carolinianum*), and May apple (*Podophyllum peltatum*).

The deed restrictions, small size of the property and the fact that there are no actively managed natural communities occurring on JCWEA minimize the need for active management. THCR staff maintains signage, assists FWC bat researchers as necessary, monitors and maintains the fence that surrounds the cave site, monitors the area for signs of disturbance, and treats exotic plant species that occur on the area. Staff has treated exotic species on JCWEA since 2008. There is currently a high occurrence of nandina (*Nandina domestica*) and a low occurrence of Chinese tallow and Japanese climbing fern. Staff will continue to use appropriate control measures to treat exotic species occurrences.

Though THCR staff’s involvement on the area is limited to maintenance and treating exotics, Fish and Wildlife Research Institute (FWRI) researchers conduct bat-related research at JCWEA, including efforts to determine seasonality of use, and species composition. Most recently, researchers affixed radio tags to southeastern bats in an effort to determine where bats using the cave as a maternity colony were going when they emerged at night. Other than bat-related monitoring and research, no additional wildlife monitoring or management takes place on JCWEA.

## Section 3: Area Focal Species

The FWC’s land management focuses on restoring the natural form and function of natural communities. However, in some instances, it is important to consider the needs of specific species, and it is necessary to monitor the impacts of natural community management on select wildlife to ensure management is having the desired effect. To ensure a focused, science-based approach to species management the FWC uses the focal species concept embraced by the [Wildlife Habitat Conservation Needs in Florida](#) project. The focal species approach incorporates a variety of concepts and considerations that, if applied correctly, allow one to identify the needs of wildlife collectively by strategically selecting a subset of wildlife species. The species selected as focal species include umbrella species,

keystone species, habitat specialists, and indicator species. The Public Lands Conservation Planning (PLCP) project selected 60 focal species for the statewide assessment. The PLCP project used potential habitat models to create statewide potential habitat maps for each species. Models were created using relevant available data. The base layer for all models was the FWC 2003 landcover data. Staff selected additional data layers such as the species range, soils, land use, etc., based on the natural history of the species. As such, each model is species specific. Once statewide potential habitat maps were available, a PVA was conducted for each focal species.

Using the statewide landcover based habitat maps, models identified 13 and 6 of the 60 focal species as having potential habitat on AWMA and JCWEA, respectively ([Section 3.1](#)). In addition to the species modeled to occur on the area, 3 additional species were identified as occurring or having the potential to occur on AWMA: the southeastern American kestrel, red-cockaded woodpecker, and the fox squirrel. To create more accurate area-specific potential habitat maps, we used the same statewide model for each focal species on the area but replaced the landcover data with area-specific natural community data. The resulting potential habitat map was then refined using input from local managers and species experts. All potential habitat acres provided in [Section 3.2](#) are the results of this area-specific model and resulting map. Acreages provided are estimates.

The AWMA and JCWEA Wildlife Conservation Prioritization and Recovery (WCPR) Workshop held July 20-21, 2011 brought decision makers together to discuss an assessment of the opportunity and needs; identify measurable objectives; determine necessary actions including monitoring; and identify necessary coordination efforts. WCPR staff compiled information on the focal species in a workbook to facilitate informed discussion. Participants at the workshop discussed the “level of opportunity and need” for each species. This included analyzing the long-term security of the species (i.e., examine PVA results), considering if the species occurs in actively managed communities ([Table 1](#)), if the species is management responsive, and any other local overriding considerations (e.g., status of species in the region, local declines/extirpations). A summary of this assessment of each species is available in [Section 3.2](#).

### 3.1: Apalachee WMA and Judges Cave WEA Focal Species

#### 3.1.1 Apalachee WMA

The following 16 species were assessed for their level of opportunity or need on AWMA. Species that have a measurable objective are indicated with a <sup>1</sup> and species for which monitoring is recommended are indicated with a <sup>2</sup>. Occasionally, models indicate species have potential habitat on the area when using statewide data; however, the local assessment indicates there is little opportunity to manage for these species on the area and they are not a focus of management on the area. These species are identified with an \*.

Gopher frog (*Lithobates [Rana] capito*)<sup>1,2</sup>  
Reticulated flatwoods salamander (*Ambystoma bishopi*)\*

Florida pine snake (*Pituophis melanoleucus mugitus*)  
Gopher tortoise (*Gopherus polyphemus*)<sup>2</sup>

Bachman's sparrow (*Peucaea aestivalis*)<sup>1,2</sup>  
Brown-headed nuthatch (*Sitta pusilla*)<sup>1,2</sup>  
Cooper's hawk (*Accipiter cooperii*)  
Northern bobwhite (*Colinus virginianus*)<sup>1,2</sup>  
Red-cockaded woodpecker (*Picoides borealis*)\*  
Southeastern American kestrel (*Falco sparverius paulus*)<sup>1,2</sup>  
Southern bald eagle (*Haliaeetus leucocephalus*)  
Wading birds (*Multiple spp.*)

Florida black bear (*Ursus americanus floridanus*)\*  
Fox squirrel (*Sciurus niger*)  
Gray bat (*Myotis grisescens*)  
Southeastern bat (*Myotis austroriparius*)

### 3.1.2 Judges Cave WEA

The following 6 species were assessed for their level of opportunity or need on JCWEA. However, due to the extremely small size of JCWEA (37.3 acres), the small amount of upland habitat (15.8 acres), and its location within a human altered landscape, the area does not have a role in management for the 4 species indicated with an \*. Bats and cave protection are the primary focus of management at JCWEA and the reason for acquisition. Therefore, all species except for the gray and southeastern bat are considered "limited opportunity species" on JCWEA and are not discussed any further below. The role of JCWEA for the bat species will be covered in their respective sections below.

Brown-headed nuthatch\*  
Cooper's hawk\*  
Northern bobwhite\*

Florida black bear\*  
Gray bat  
Southeastern bat

### 3.2: Focal Species Opportunity/Needs Assessment

This section provides an assessment of the opportunity and needs of each of the focal species. As the gray bat and southeastern bat are the only species assessed on JCWEA, the species assessments for these species below include their assessment on both AWMA and JCWEA. All other assessments are for AWMA only.

Because all federally listed animal species are FWC-listed, for species listed at the federal level, we will provide the federal listing. When a species is not federally listed but is listed by the FWC, we will provide the FWC listing category. Unless otherwise noted, all

acres of potential habitat are the result of using the area-specific natural community data in the species potential habitat model. We presume that by doing the actions called for in this strategy, we will ensure the area fulfills its role in the conservation of wildlife.

FWC is currently in the process of developing management plans for FWC-listed species. Staff will monitor these plans to determine if the content of the plans would warrant a revision to any of these assessments. Revisions will be amended to the strategy.

### *3.2.1: Gopher Frog*

The status of the gopher frog on AWMA is currently unknown, but they are presumed absent. During 2002-2004, FWC staff surveyed many potentially suitable ponds for flatwoods salamanders by dip netting. No gopher frogs were detected during these surveys, though they were not targeted. Additional dip-netting surveys conducted on the area also failed to detect any gopher frogs. However, no auditory surveys to document presence have been conducted on the area.

Gopher frogs breed in seasonally flooded grassy ponds that lack predatory fish. After breeding, frogs move into xeric uplands that have an open canopy and healthy native groundcover. Frequent prescribed fire is essential to maintain high-quality gopher frog habitat. Gopher frogs often occupy gopher tortoise burrows, but also use rodent and crayfish burrows, stump holes, or hollow logs. They are rarely found more than 1 mile from breeding habitat.

This FWC-listed species of special concern is responsive to management actions making it likely that management on AWMA will benefit this species if present. The gopher frog triggers 2 of 6 statewide prioritization parameters (Species of Greatest Conservation Need [SGCN] population trend and PLCP PVA proportion of populations to persist on public lands). Models identified 841 acres of potential habitat with 982 acres modeled to occur if management could restore all natural communities to their historic condition. Little is known about specific habitat requirements or home range size, but it is likely that AWMA has enough potential habitat to support a viable population provided there are suitable breeding ponds.

The frequent fire return interval and suitable soils found on AWMA support a healthy gopher tortoise population, and therefore provide suitable upland habitat for gopher frogs. Though dip netting revealed many of the ponds contain fish, there are likely ponds located adjacent to suitable uplands that lack fish. Though suitable conditions exist on AWMA, there are no current or historic records of gopher frogs in Jackson County. The closest records occur in Calhoun County to the south. Because of the lack of nearby records, it is unlikely for gopher frogs to colonize AWMA if they are currently absent. As such, the ability to affect this species locally may be limited if the species is not currently present.

Even though past dip netting efforts failed to document this species, an auditory survey of gopher frogs within potential breeding ponds is recommended to determine presence or presume absence ([Section 5.2.1](#)). If gopher frogs are not documented during these surveys, there may be a need to explore the possibility of restocking this species on the area in the future should this be deemed necessary.

Because existing natural community management and other management actions on AWMA are compatible with the needs of this species, no SMA is

recommended. See [Section 4.3.1](#) for additional land management recommendations to benefit this species. There is a need to determine if the gopher frog is present or absent from AWMA. If monitoring confirms presence, the area goal will be to maintain a viable population of the species on the area. If measures to detect the species fail to document presence, we will presume the area has no role in the conservation of this species unless a FWC or federal plan identifies the need for restocking the area. The measurable objective is to:

- 1) Conduct the initial auditory survey to determine the presence/absence of gopher frogs on the area by 2014. If necessary, conduct the second survey within 3-5 years, per the protocol.

### 3.2.2: Florida Pine Snake

The Florida pine snake is considered rare on AWMA. Though a survey capable of detecting large-bodied snakes has not been conducted on the area, the area manager recently observed this species in a sandhill area that recently received mechanical and herbicide treatments. While pine snakes use a number of plant communities, they typically occupy pine-dominated locations that have sandy soils and a well-developed grassy understory. Pocket gophers are a major source of food for this species and it appears pine snakes actively seek out pocket gopher mounds and burrow-in to capture prey. However, the absence of pocket gopher burrows does not mean that pine snakes are also absent.

The Florida pine snake triggers 3 of 6 prioritization parameters (PLCP PVA proportion of populations to persist on public lands, Millsap supplemental score and SGCN population trend) and is a FWC-listed species of special concern. Similar to other large snakes, pine snakes occur in low-density populations and require large acreages of suitable habitat for populations to persist. Models identified 3,205 acres of potential habitat with 4,223 acres modeled to occur if management could restore all natural communities to their historic condition. However, due to ongoing agricultural leases, roads and ditches that cannot be restored, only 3,533 acres are potentially available after restoration. According to the literature, this is enough habitat to support a viable population (> 2,500 acres). The status of pine snakes in the surrounding landscape is unknown. There are no FNAI Element Occurrences in the area; however, it is presumed the species does occur at a low density.

Much of the habitat on AWMA is considered high quality due to the suitable soils, presence of pocket gophers, and frequent fire regime. As such, AWMA plays an important role for this species in the local landscape. This makes this species a high priority on AWMA. Management actions that maintain or enhance habitat for this species include prescribed fire and mechanical actions in sandhill, upland pine and upland mixed woodland that aid in restoring natural community structure and function, provided efforts are taken to reduce direct mortality of snakes during these activities. Stumps and other coarse woody debris should be retained during land management activities as potential refuge sites ([Section 4.3.2](#)). Because efforts to restore and maintain AWMA natural community structure and function will benefit pine snakes on AWMA and the SMA proposed for northern bobwhite will increase the amount of suitable habitat for this species, no SMA is recommended.

Opportunistic observation of pine snakes is recommended ([Section 5.2.6](#)). While drift-fence arrays will not provide population level information on pine snakes, future drift-fence surveys conducted on the area should include the use of upland snake traps to ensure adequate detection of large snakes.

The area goal is to enhance and maintain the suitability of habitat to support pine snakes on AWMA. By maintaining the acres of potential habitat in a condition that is suitable to this species, we will ensure we are achieving the goal.

### *3.2.3: Gopher Tortoise*

Gopher tortoises are common on AWMA and there is evidence of reproduction occurring on-site. The gopher tortoise is a management-responsive species that can serve as an indicator of properly managed upland pine or grassland communities. This species is often considered a keystone species because many other species use their burrows, including the gopher frog. This FWC-listed threatened species triggers 4 of 6 prioritization parameters (PLCP PVA proportion of populations modeled to persist on public lands, Millsap biological score, Millsap supplemental score, and SGCN population trend), making it a high-priority species statewide. The FWC recently approved a management plan for the species that places emphasis on increasing the number of tortoises on public lands.

AWMA received a State Wildlife Grant and gopher tortoise mitigation funds to begin a sandhill restoration project on the area. Funds from this project supported the construction of firebreaks, burning, and mechanical and herbicide treatments. In January 2010, 0.6 miles of firebreaks were created to establish a new burn unit encompassing 51.2 acres of which 28.7 acres are sandhill. Staff burned this unit in February 2010. The unit has great restoration potential due to the overstory of 60-80 year old longleaf pines and intact native groundcover. Another 470.8 acres of sandhill have been burned using project funds on this property since January of 2010. Additionally, mechanical and herbicide treatments were used for hardwood control and longleaf thinning. Prior to beginning restoration work, a gopher tortoise survey was conducted within sandhill habitats on AWMA using the protocol established in the gopher tortoise management plan. This survey indicated sandhill habitats on AWMA had a relatively high density of gopher tortoises (1.16 tortoises/acre). Though not surveyed as part of this effort, gopher tortoise burrows are common in both upland pine and upland mixed-woodland habitats on the area.

Models identified 3,188 acres of potential habitat with 4,223 acres modeled to occur if management could restore all natural communities. However, due to ongoing agricultural leases, roads and ditches that cannot be restored, only 3,533 acres are potentially available after restoration. Based on the amount and quality of potential habitat on the area and the recently completed burrow survey, AWMA likely supports a viable population of gopher tortoises. Gopher tortoises are present in the surrounding agriculturally dominated landscape; however, AWMA contains the largest amount of intact habitat in this area. Because of this, and the lack of conservation lands in the area, AWMA plays an important role in the regional conservation of this species.

Ongoing natural community management and restoration activities that promote an open canopy with a diverse understory in upland natural communities will continue to benefit this species. Additionally, ongoing sandhill restoration work and the proposed northern bobwhite SMA will increase the amount and quality of potential habitat on the area. Therefore, no SMA is recommended. See [Section 4.3.3](#) for additional land management recommendations to benefit this species. A future survey using the same methodology as the 2010 survey is recommended to determine the effect sandhill restoration activities have on the gopher tortoise population ([Section 5.2.2](#)). Because the species is common on the area and experience indicates the species does well under proposed management, there is no need to monitor the population area-wide. The area goal is to maintain a viable population of gopher tortoises on AWMA. By maintaining the acres of potential habitat in a condition that is suitable to this species, and having the species remain common, we will ensure we are achieving the goal.

#### 3.2.4: *Bachman's Sparrow*

Bachman's sparrows are common on AWMA and nesting has been documented. However, no formal survey to document density, trend or extent of presence has been conducted. This species prefers open stands of mature pine forests with a healthy herbaceous groundcover that is maintained with frequent prescribed fire, such as occurs on approximately 70% of AWMA's uplands. The Bachman's sparrow is responsive to management and the occurrence of fire is critical to sustaining this species. Use of an area by Bachman's sparrows declines rapidly around 18 months post-fire and sites are typically abandoned if fire is excluded for greater than 3 years.

The Bachman's sparrow triggers 2 of 6 prioritization parameters (PLCP PVA proportion of populations modeled to persist on public lands and SGCN population trend) and is currently experiencing range-wide population declines. From a regional perspective, AWMA likely serves as an island of suitable habitat within a matrix of agricultural lands. There is a relatively large tract of privately owned land to the northwest of AWMA that is not currently actively managed and not enrolled in any incentives programs. Some native groundcover persists among the old growth pines. However, its suitability is deteriorating due to lack of fire. The regional population of Bachman's sparrows including those using AWMA would benefit if the landowner could be encouraged to use prescribed fire or mechanical treatments to restore and maintain these habitats ([Section 6.1.4](#)).

Models identified 2,494 acres of potential habitat with 4,223 acres modeled to occur if management could restore all natural communities. However, due to ongoing agricultural leases, roads and ditches that cannot be restored, only 3,533 acres are potentially available after restoration. Literature suggests a minimum of 520 acres is required to maintain a viable population of Bachman's sparrows; therefore, AWMA could support a viable population. Due to frequent growing season prescribed fire, the open overstory and abundant herbaceous vegetation found on AWMA provides very good habitat for this species. Restoration of the 286 acres in management units

(MU) 28, 27, 18, 2, and 3 identified in the SMA for the northern bobwhite will add to the amount of suitable habitat for the Bachman's sparrow.

[Section 7](#) discusses consideration for this and other species beyond the boundaries of AWMA. Because this species is an indicator of well-managed pinelands, we propose monitoring this species through a spring bird survey with the purpose of tracking changes in distribution and relative abundance across the area to ensure management is having the desired effect ([Section 5.2.3](#)).

Because ongoing natural community management and planned restoration activities will benefit this species, no SMA is recommended. By providing suitable foraging and nesting sites that maintain the presence of Bachman's sparrows on the area, AWMA will fulfill its role in reversing the ongoing decline of this focal species. The area goal is to maintain a viable population of Bachman's sparrows on AWMA. By maintaining the acres of potential habitat in a condition that is suitable to this species, and having the species remain common, we will ensure we are achieving the goal. The measurable objective is to:

- 1) Conduct an initial spring call-count survey by 2014, and repeat the survey once every 3 years thereafter.

### *3.2.5: Brown-Headed Nuthatch*

Brown-headed nuthatches are commonly seen and heard throughout AWMA and nesting has been documented. However, no formal survey to document density, trend or extent of presence has been conducted. Brown-headed nuthatches use sandhill, upland pine, and upland mixed-woodland habitats on AWMA. This species is dependent on open stands of mature pine interspersed with snags for excavating nesting cavities. Older pine forests (> 35 years for longleaf-slash pine) and stands with basal area between 35-50 ft<sup>2</sup>/ acre are preferred, and found throughout the uplands of AWMA.

The brown-headed nuthatch triggers 2 of 6 prioritization parameters (PLCP PVA proportion of populations modeled to persist on public lands and SGCN population trend) and is currently experiencing range-wide declines due to habitat loss and degradation. From a regional perspective, AWMA likely serves as an island of suitable habitat within a matrix of agricultural lands. There is a relatively large tract of privately owned land to the northwest of AWMA that is not currently actively managed and not enrolled in any incentives programs. Some native groundcover persists among the old growth pines. However, its suitability is deteriorating due to lack of fire. The regional population of brown-headed nuthatches including those using AWMA would benefit if the landowner could be encouraged to use prescribed fire or mechanical treatments to restore and maintain these habitats ([Section 6.1.4](#)).

Models identified 2,520 acres of potential habitat with 4,223 acres modeled to occur if management could restore all natural communities. However, due to ongoing agricultural leases, roads and ditches that cannot be restored, only 3,533 acres are potentially available after restoration. Literature suggests 1,000 acres of habitat is necessary to support a viable population, therefore, AWMA could support a viable population on its own. Management actions that maintain or enhance habitat for this species include prescribed fire, silvicultural thinning and management favoring

mature timber, and mechanical actions that aid in restoring natural community structure providing snags are retained. Therefore, efforts to restore the 286 acres in management units within the northern bobwhite SMA will also benefit the nuthatch. Given these factors and the fact that the brown-headed nuthatch is highly responsive to management actions, it has a high level of opportunity on AWMA. Ongoing natural community management and restoration including mechanical treatments and timber thinning when combined with a short fire return interval will maintain and improve the suitability of habitat for the brown-headed nuthatch; therefore, no SMA is required.

Additional land management considerations for this species are found in [Section 4.3.4](#). [Section 7](#) discusses consideration for this and other species beyond the boundaries of AWMA. Because this species is an indicator of well-managed pinelands, we propose monitoring this species through a spring bird survey with the purpose of tracking changes in distribution and relative abundance across the area to ensure management is having the desired effect ([Section 5.2.4](#)).

The area goal is to maintain a viable population of brown-headed nuthatches on AWMA. By providing suitable foraging and nesting sites that maintain the presence of nuthatches on the area, AWMA will fulfill its role in reversing the ongoing decline of this focal species. The measurable objective is to:

- 1) Conduct an initial spring call-count survey by 2014, and repeat the survey once every 3 years thereafter.

### *3.2.6: Cooper's Hawk*

The Cooper's hawk is considered common on AWMA. Commonly associated with woodlands, this species will nest in a variety of habitats including swamps, floodplain and bottomland forests, sand pine scrub and baygalls. Nests are usually placed near the crown of a tree close to an edge in dense stands of oaks. Cooper's hawks primarily feed on other birds, so nests are located in proximity to suitable hunting areas. While nesting has not been documented, staff believes nesting is occurring on AWMA.

The Cooper's hawk triggers 1 of 6 prioritization parameters (PLCP PVA probability of a 50% decline on public lands). There are 3,721 acres of potential habitat with 4,286 acres modeled to occur if management could restore all natural communities. Cooper's hawks are not typically considered management-dependent and the opportunity to affect this species at the management-area level on AWMA is low. However, this species thrives in landscapes managed for the northern bobwhite. Therefore, ongoing efforts to maintain AWMA's natural community structure and function will benefit the Cooper's hawk. Management actions that maintain or enhance habitat for this species include prescribed fire and mechanical actions that aid in restoring natural community structure. Ongoing management will maintain existing habitat in a suitable condition, and restoration of the approximately 286 acres included in the northern bobwhite SMA will increase the amount of suitable habitat.

Because the Cooper's hawk is not management dependent, the species is likely to persist on AWMA without directed management. Despite the low level of management opportunity, planned and ongoing natural community management will

benefit this species by improving conditions for their prey; therefore, no SMA or species-specific management is required.

During the nesting season (April-July), the Cooper's hawk is secretive and sensitive to human disturbance near the nest site. No attempt will be made to actively search for nests, but if individuals are observed exhibiting nesting behavior (e.g., carrying nesting material to/from an area, acting aggressively), the location will be noted ([Section 5.2.6](#)) and the area will be protected from disturbance ([Section 4.3.5](#)). The area goal is to promote suitable habitat that will allow individuals using AWMA to function as part of a regional population. By maintaining the acres of potential habitat in a condition that is suitable to this species, and having the species remain common, we will ensure we are achieving the goal. It is unlikely any single management area could independently sustain a population of Cooper's hawks. However, the recent population increases experienced by this species and the amount of potential habitat on AWMA and the surrounding landscape greatly increase the chances of persistence of this species in this area.

### *3.2.7: Northern Bobwhite*

Northern bobwhite are commonly heard on AWMA and nesting has been documented. This species is a focus of management on AWMA, and staff uses fall covey call counts to track relative abundance and distribution over time. Monitoring on AWMA has shown a relatively stable number of coveys since monitoring began in 2007-2008. Northern bobwhite have experienced significant range-wide population declines since the 1980s and are currently a major focus of many initiatives including the UERP. Northern bobwhite are typically associated with open canopy forests and grassland communities dominated by warm-season grasses, legumes, and patchy bare ground. Areas with dense herbaceous cover are used for brooding and foraging; shrubs or other thickets are useful as roosting habitat or escape cover.

The northern bobwhite triggers 2 of 6 prioritization parameters (SGCN population trend and population status). From a regional perspective, this species historically was common in the landscape around AWMA. Open canopy sandhill and upland pine, maintained with frequent fire created the appropriate matrix of habitat for bobwhites. Many of these communities are now in agricultural production or pasture, or subject to incompatible silviculture. While there is no data on the occurrence of northern bobwhite in the surrounding landscape, they are known to occur on adjacent private lands.

On AWMA, models identified 3,233 acres of potential habitat with 4,223 acres modeled to occur if management could restore all natural communities. However, due to ongoing agricultural leases, roads and ditches that cannot be restored, only 3,533 acres are potentially available after restoration. The literature indicates 2,000-4,000 acres of potential habitat is capable of supporting a viable population even when subjected to moderate hunting pressure. Based on data collected at check stations, hunters harvest about 10% of the population annually on AWMA, with 137 northern bobwhite harvested during the 2010-2011 season.

Management actions taken to benefit the bobwhite including the application of frequent growing season burns (staff burns 60% to 70% of northern bobwhite habitat

annually) has benefited many other focal species. This is apparent when considering that brown-headed nuthatches, Bachman's sparrows, and gopher tortoises are common on the area. In addition to the frequent fire return interval, staff maintains wildlife openings and agricultural fields, use mechanical treatments to control hardwoods, and maintain a staffed check station to collect data on quail harvest.

Ongoing efforts to maintain AWMA's natural community structure through frequent fire will continue to maintain the suitability of habitat for this species. About 70% of the potential habitat for northern bobwhite on AWMA is in maintenance condition, with an open overstory and suitable herbaceous vegetation. However, approximately 286 acres in MUs 28, 27, 18, 2, and 3 are currently in need of thinning. Reducing the basal area in these management units to approximately 50 ft<sup>2</sup>/acre and burning more frequently will increase the amount of suitable habitat for northern bobwhite, as well as for the Bachman's sparrow, brown-headed nuthatch, gopher tortoise, and pine snake. Because there is such a large opportunity to increase the amount of suitable habitat for the northern bobwhite, an SMA is recommended ([Section 4.1.1](#)).

[Section 7](#) discusses consideration for this and other species beyond the boundaries of AWMA. We propose continued monitoring of this species through fall covey call counts and the use of check stations to evaluate exploitation rates and to make informed decisions regarding harvest ([Section 5.2.4](#)).

The area goal is to maintain a viable population of northern bobwhite while enhancing the quality of the northern bobwhite hunting experience. This can be achieved by providing a traditional hunting opportunity in an aesthetically pleasing environment with ample coveys of wild birds. The measurable objectives are to:

- 1) Increase the density of northern bobwhite to 0.5 birds/acre as determined through covey call surveys by 2016.
- 2) Maintain a 3-year average density of  $\geq 0.5$  birds/acre indefinitely once this level is reached.
- 3) Over the life of this Strategy, monitor harvest and consider additional regulations if the 3-year average harvest rate exceeds  $\geq 15\%$  of the area's estimated northern bobwhite population.

#### *3.2.8: Southeastern American Kestrel*

The status of the southeastern American kestrel on AWMA is unknown; however, the migratory American kestrel is common during the fall and winter months. There was a recent reported sighting of a kestrel on AWMA in April 2011. It is possible that a kestrel present in April could be the southeastern subspecies. Efforts to confirm this sighting in June were unsuccessful. Presence of this species on the area would be significant because there are no records of this species in Jackson County documented in the Breeding Bird Atlas and they have not been detected on any of the nearby Breeding Bird Survey routes.

Southeastern American kestrels utilize upland habitats including sandhills and longleaf savannas, pastures, sand pine scrub and prairies. As a secondary cavity nesting species, southeastern American kestrels use previously excavated cavities in large snags. They will utilize artificial cavities when placed in areas of suitable

habitat. They require adequate perch sites within foraging areas for hunting, and low ground cover (<1 ft) and an open canopy (<20% canopy closure) are ideal for this species. Average breeding territory size is 125 acres, though more area may be necessary if the habitat quality is marginal.

Southeastern American kestrels are a FWC-threatened species and trigger 4 of 6 prioritization parameters (PLCP PVA proportion of populations modeled to persist on public lands, Millsap updated biological score, SGCN population trend, and population status). From a regional perspective, the landscape around AWMA has the potential to support this species. While much of the former sandhill has been destroyed or degraded, the open pasture and agricultural lands around AWMA can be suitable for foraging kestrels. Though this suitable habitat exists, there are no records of southeastern American kestrels in Jackson County.

On AWMA, models identified 2,914 acres of potential habitat with 3,750 acres modeled to occur if management could restore all natural communities. AWMA contains suitable habitat in the form of quality sandhill and upland pine habitats, as well as 626 acres of ruderal type habitats that could provide foraging habitat. Due to the lack of species records in the county and lack of confirmed observations on the area, kestrels currently have a low opportunity on AWMA. However, if a kestrel is documented nesting on the area in subsequent years ([Section 5.2.6](#)), this assessment will change. Breeding bird surveys alone are not suitable for documenting this species and staff should actively search for kestrels while in sandhill and ruderal habitats during the breeding season (mid-April through July). Additionally, staff should revisit the area of the suspected sighting periodically during the breeding season.

Ongoing natural community management combined with a shorter fire return interval will improve the suitability of habitat for kestrels. As the pines on AWMA mature, they will increase in size. This, combined with an active burning program, should increase the suitability of the area to this species by ensuring a continuing supply of large snags to act as potential nesting sites in the future. Additionally, while the status of this species on AWMA is unknown, the species has not been documented breeding in the county. Therefore, no SMA is recommended. Additional land management considerations including the protection and creation of snags can be found in [Section 4.3.6](#). Species management recommendations can be found in [Section 5.1.2](#). The area goal is to have southeastern American kestrels nest on the area. However, the use of the area by the southeastern American kestrel may be dependent on conditions that influence the regional population.

The measurable objectives are to:

- 1) Determine if southeastern American kestrels are present on the area during the life of this Strategy.
- 2) Install nest boxes if southeastern American kestrels are documented on the area.

### *3.2.9: Southern Bald Eagle*

Bald eagles are seen occasionally on AWMA, with 2 active nests observed over the last several years. There are an additional 2 known bald eagle nests within

–2 miles of AWMA. These nests and several other nests are located along the banks of Lake Seminole, which provides ample foraging habitat. Bald eagles use a number of natural communities with the best nesting habitat occurring in forested areas close to open water. While not considered management dependent, this species does benefit from active management to restore natural communities provided managers follow nest protection guidelines.

The bald eagle does not trigger any of the prioritization parameters, but is protected by the Bald and Golden Eagle Protection Act. Furthermore, the FWC approved a Bald Eagle Management Plan in 2008 to ensure the continued recovery of this species in Florida. Models identify 2,838 acres of potential habitat on AWMA with 3,800 acres modeled to occur if management could restore all natural communities. Bald eagles are not typically considered management-dependent and the opportunity to affect them at the management area-level is low. However, ongoing efforts to maintain AWMA's natural community structure and function will benefit this species. Management actions that maintain or enhance habitat for this species include managing for mature stands, prescribed fire, and mechanical actions that aid in restoring natural community structure. This species will also benefit from the protections to water quality provided by having conservation lands bordering the lake in which the species feeds. Habitat suitability for this species should be maintained or increase with management.

Bald eagle nests on AWMA are monitored as part of a large statewide monitoring effort. Additional monitoring would be inefficient as information from the statewide effort can provide meaningful results to area staff. As there are no specific management activities recommended for this species, there is no need to establish a SMA and no need to establish measurable objectives. If eagle behavior indicative of nesting (e.g., courtship flights, carrying sticks) is observed, an effort will be made to determine the location of any potential nest on the area ([Section 5.2.6](#)). If bald eagle nesting is documented on site, the nest will be reported and the taxa coordinator for this species notified ([Section 6.1.1](#)). Managers will follow management guidelines around existing and future nesting sites ([Section 4.3.7](#)).

[Section 6.1.3](#) describes other coordination recommendations. The area goal is to promote suitable foraging and nesting habitat that will allow individuals using AWMA to function as part of a regional population. While the continued use of AWMA by the bald eagle is dependent on conditions that influence the regional population, AWMA's location along a major lake and associated river system greatly enhances the chance for persistence.

### 3.2.10: Wading Birds

Four of the 8 focal species of wading birds [snowy egret (*Egretta thula*), tricolored heron (*E. tricolor*), white ibis (*Eudocimus albus*), and wood stork (*Mycteria americana*)] are occasionally seen on AWMA. Two others, the little blue heron (*Egretta caerulea*) and the great egret are considered common. The roseate spoonbill (*Platalea ajaja*) and the reddish egret (*Egretta rufescens*) have not been documented. Two breeding colonies comprised of great egrets, great blue herons, and anhingas have been documented on the area for several years. Due to the

location of these colonies, there is little concern for disturbance from land management activities.

Statewide, this group of species is a moderate priority. Several species are FWC-listed species of special concern and the wood stork is federally listed as endangered. The Millsap biological scores for the reddish egret, little blue heron and wood stork are high. The snowy egret, little blue heron, and roseate spoonbill have SGCN declining population trends, while the tricolored heron and white ibis have unknown SGCN trends. From a regional perspective, there are a few other wading bird colonies on the landscape; however, while the colonies on AWMA have remained active, the closest documented historic colony outside of AWMA has not been active since 1999.

On AWMA, models identify 439 acres of potential habitat with 108 acres modeled to occur if management could restore all natural communities. Despite the small amount of potential habitat modeled to occur on AWMA, due to the proximity to Lake Seminole, the area has a large amount of important foraging habitat that was not identified in the models. Wading birds may travel great distances between foraging and roosting habitat, and the opportunity to affect the regional populations of these species at the management area level is low because they tend to use habitats that are not actively managed. Wading bird population levels are highly influenced by regional conditions, especially water level conditions, therefore no SMA or measurable objectives are recommended. Managers should protect breeding colonies by providing a 330-ft buffer around the colony ([Section 4.3.8](#)). New wading bird colonies should be documented and reported ([Section 5.2.6](#)). Coordination recommendations are described in [Section 6.1.3](#).

The area goal is to maintain the suitability of habitat for these species to allow the wading birds using AWMA to continue nesting and functioning as part of the regional population. It is unlikely that any WMA will independently support these wide-ranging, mobile species. However, the FWC manages AWMA in a manner that accommodates the needs of these species, and the continued presence of these species on the area is relatively secure due to the amount of habitat in and around AWMA.

### *3.2.11: Fox Squirrel*

Fox squirrels are common on AWMA and reproduction has been documented. Though the Sherman's fox squirrel subspecies is unlikely to occur here, we chose to include fox squirrels as a focal species, regardless of sub-species, due to their importance in the ecosystem. Biologists believe fox squirrels need a mosaic of habitat conditions to ensure a year-round supply of food that consists of a variety of seasonally abundant items. Suitable habitat for fox squirrels includes longleaf pine sandhills or flatwoods with a mixture of pines and oaks, such as along the edges of longleaf pine savannas and live oak forests. There is excellent habitat on AWMA for this species, with mature trees, open canopies and diverse groundcover found within upland pine, upland mixed-woodland and sandhill natural communities on the area. Additionally, agricultural fields are suitable when interspersed among suitable habitat, as is the case on AWMA. Large oaks, such as those found within upland mixed-woodland habitats on AWMA are ideal for use as nest sites by fox squirrels.

On AWMA, models identified 3,309 acres of potential habitat with 4,254 acres modeled to occur if management could restore all natural communities to their historic condition. However, due to ongoing agricultural leases, roads and ditches that cannot be restored, only 3,533 acres are potentially available after restoration. This species is most common within upland pine and upland-mixed woodland natural communities on AWMA. They also occur within sandhill habitats on the area; however, they seem to use the more mature sites.

The fox squirrel is a wide-ranging species and it is not known if the potential habitat on AWMA combined with adjacent habitats could support an independent population of this species. Literature suggests fox squirrels require 2,000–9,000 acres of habitat to support a population. Ongoing efforts to restore and maintain natural community structure and function will benefit this species. Management actions that maintain or enhance habitat for fox squirrels include prescribed fire and mechanical actions that aid in restoring natural community structure and timber management that results in open, mature pine forests, provided appropriate species and densities of oaks are retained. Further land management recommendations can be found in [Section 4.3.9](#).

From a regional perspective, the landscape around AWMA supported a good population of this species historically. Much of the sandhill and open-canopied flatwoods desired by fox squirrels, however, has been converted to agriculture. Woodlots and small tracts of habitat within the agricultural matrix, particularly when located adjacent to remaining small, isolated patches of pine forests may provide some suitable habitat.

As ongoing natural community management and restoration efforts on AWMA will benefit this species, no SMA is recommended. Because this species naturally occurs at relatively low densities and is difficult to count with statistical confidence, no specific monitoring action is recommended. No measurable objective for this species is recommended at this time.

The area goal is to maintain a robust population of fox squirrels that allows squirrels using the area to function as part of the regional population. By maintaining the acres of potential habitat in a condition that is suitable to this species, and having the species remain common, we will ensure we are achieving the goal.

### *3.2.12: Gray Bat*

In Florida, gray bat colonies have been found only in Jackson County, and due to the scarcity of suitable cave roosts, colonies are not likely to occur elsewhere. In 1984, researchers estimated the Florida population of gray bats contained about 10,000 individuals. Recent summer surveys in Florida have failed to find any gray bats, so the population is surely smaller now and may be gone. Judges Cave is 1 of 4 caves in Florida known to have contained a maternity colony of gray bats. Protection of the maternity roost (for southeastern bats and gray bats) was the primary reason for acquisition of JCWEA.

This federally endangered species triggers 4 of 6 prioritization parameters (PLCP PVA probability of a 50% decline on public lands, Millsap biological score, declining SGCN population trend, and low SGCN population status) and is a high

statewide priority. Roost sites are restricted to caves throughout the year. Because this species has very specific tolerances for cave microhabitat, only a small percentage of available caves are suitable. To be suitable as a maternity roost, caves must be located close to suitable foraging habitat and have rooms that provide warm stable temperatures for efficient growth and development of young bats. Additionally, most maternity caves contain pools of ground water and have high, horizontal ceilings at least 6 feet above the water. Forested areas along the banks of streams and lakes provide important foraging habitat. Availability of foraging habitat is not believed to be a limiting factor for this species, however, little is known about gray bat foraging habitat requirements.

Though gray bats have not been documented in Florida in recent years, they are doing well in other portions of their range. Jackson County, Florida is the southernmost extent of this species range, and due to the scarcity of suitable cave roosts, colonies are not likely to occur elsewhere in Florida. The reason for the relatively recent decline or disappearance of gray bats in Florida is unknown. Some speculate that bats formerly roosting in Florida have moved to large caves in other portions of this species' range where cave protection efforts have increased the suitability. However, the exact reason remains unknown. The effect that factors such as changing water levels within the cave and climate change would have on the suitability of Judges Cave to bats is also unknown.

As mentioned, Judges Cave is 1 of only 4 caves in Florida known to have historically contained a maternity colony of gray bats. Furthermore, it is the only former gray bat maternity cave owned by Florida. This allows FWC researchers unrestricted access to study the cave and factors that influence bat usage. Additionally, it places a great deal of responsibility on FWC to protect the cave from current and future potential threats. Due to these factors, an SMA encompassing all of JCWEA focusing on cave protection and research for both gray bats and southeastern bats is recommended ([Section 4.1.2](#)).

Gray bats have not been documented on AWMA. Models identified 1,053 acres of potential habitat for gray bats within current natural communities with 679 acres modeled to occur if management could restore all natural communities. Roost sites for gray bats are restricted to caves. Because of the lack of suitable caves on AWMA, the role for the area in the conservation of this species is to provide suitable foraging habitat. However, part of AWMA contains limerock outcroppings that may contain undiscovered caves capable of being suitable to this species. Therefore, these areas should be surveyed for bat presence ([Section 5.2.5](#)). If potentially suitable caves are found, staff will work with FWC's bat experts to determine the appropriate course of action.

This species is not typically considered management dependent and the opportunity to affect this species at the management-area level on AWMA is low. However, ongoing efforts to maintain AWMA's natural community structure and function will benefit gray bats should they be present. Management actions that maintain or enhance habitat for this species included the use of prescribed fire along habitat edges to prevent shrubby encroachment.

The area goal for JCWEA is to continue to protect the cave and promote conditions that allow for the use of the cave as a maternity colony. The area goal for

AWMA is to promote suitable foraging for bats that will allow individuals using AWMA to function as part of a regional population. However, most factors that influence the continued persistence of this species in Florida are beyond the control of area managers, and the long-term potential for this species in Florida is unknown.

### *3.2.13: Southeastern Bat*

The southeastern bat is common and breeding has been documented on JCWEA. Judges Cave is 1 of 9 active southeastern bat maternity caves in Florida, each breeding season hosting approximately 30,000 bats. This makes it the fifth largest maternity roost for southeastern bats in the world, and by far the largest maternity roost on public lands in Florida. Protection of the maternity roost was the primary reason for acquisition of JCWEA.

This species triggers 2 of 6 prioritization parameters (PLCP PVA probability of a 50% decline on public lands and Millsap updated supplemental score) and is a moderate statewide priority. This species primarily forages over rivers, creeks and lakes and to a lesser degree, along hammock edges and in flatwoods. Roosting habitat varies seasonally. Outside the breeding season, individuals may roost in caves, culverts, under bridges, hollow trees and occasionally houses. During the maternity season, most known maternity roosts in Florida occur in caves where females gather to bare and rear young. Hollow trees and manmade structures also serve as maternity sites, but the prevalence and importance of these to the population is not fully understood.

The primary focus of management at JCWEA is protection of Judges Cave. However, areas surrounding JCWEA are already developed or will soon be developed. As a result, the entire area contained within JCWEA serves as an important buffer for the cave. Additionally, the area provides bats using Judges Cave permanently protected access to the Chipola River, which is thought to be an important corridor for foraging bats. Though not actively managed, these wooded areas contained within JCWEA are vitally important to the continued use of Judges Cave by bats. However, many other factors that are important to continued use of Judges Cave by bats are unknown. For example, it is unknown where bats using Judges Cave forage when they emerge from the cave. It is also unknown where bats using Judges Cave as a maternity roost winter. It is important to answer these and other questions so that we can take protective measures to mitigate any potential threats to bats that use Judges Cave. Additional research needs are discussed in the Judges Cave Protection and Research SMA ([Section 4.1.2](#)).

As mentioned, Judges Cave supports the fifth largest maternity colony of southeastern bats in the world, and by far the largest maternity colony on State lands in Florida. This allows FWC researchers unrestricted access to study the cave and factors that influence bat usage. Additionally, it places a great deal of responsibility on FWC to protect the cave from current and future potential threats. Due to these factors, an SMA encompassing all of JCWEA focusing on cave protection and research for both gray bats and southeastern bats is recommended ([Section 4.1.2](#)). Further land management recommendations for this species can be found in [Section](#)

4.3.10. The area goal for JCWEA is to continue to promote conditions that allow for the use of the cave by bats as a maternity colony.

This species likely forages over AWMA, though it has not been officially documented. No caves capable of supporting large colonies of bats are known to occur on the area, however, an area containing limerock outcroppings has the potential to provide roosting habitat and should be surveyed for bat presence ([Section 5.2.5](#)). If potentially suitable caves are found, staff will work with FWC's bat experts to determine the appropriate course of action. Additionally, the area manager has witnessed many bats emerging from an old hollow snag in standing water. This snag, and others like it, has the potential to provide important roosting habitat on the area.

On AWMA, models indicate 3,152 acres of potential habitat for southeastern bats within current natural communities and 4,373 acres modeled to occur if management could restore all natural communities. Any bats using AWMA are likely foraging over the many wetlands and adjacent Lake Seminole. Management actions that maintain or enhance habitat for this species included the use of prescribed fire along habitat edges to prevent shrubby encroachment. This species is not typically considered management dependent and the opportunity to influence this species at the management-area level on AWMA is low. However, ongoing efforts to maintain AWMA's natural community structure and function will benefit southeastern bats by maintaining foraging habitat and potentially providing roost sites. The area goal for AWMA is to provide suitable foraging and roosting habitat for bats that will allow individuals using the area to function as part of a regional population.

#### *3.2.14: Limited Opportunity Species*

*Reticulated Flatwoods Salamander* - The reticulated flatwoods salamander is considered absent from AWMA. Suitable upland habitat consists principally of open-canopied, mesic longleaf pine-wiregrass savannas and flatwoods, while ideal breeding ponds lack predatory fish, have an open overstory and support herbaceous vegetation throughout the basin.

During 2002-2004, FWC staff conducted extensive dipnetting on AWMA to determine the presence/absence of flatwoods salamanders and other pond-breeding amphibians. Flatwoods salamanders were not detected during these surveys, and many of the ponds sampled were found to contain fish. The closest known population is approximately 10 miles away and AWMA occurs in an agriculturally dominated landscape. Therefore, it is highly unlikely that this species would naturally colonize the area. Additionally, there are no flatwoods on AWMA. When the potential habitat models are run using upland pine occurring on mesic and hydric soils, the results indicate 950 acres of currently potential habitat and 1,581 acres modeled to occur if management could restore all natural communities to their historic condition. Due to the lack of suitable habitat types, distance to the closest known occupied area, and the absence of the species on the area, there is limited opportunity for this species on AWMA.

*Red-Cockaded Woodpecker* - The red-cockaded woodpecker has never been documented on AWMA. Red-cockaded woodpeckers inhabit open, mature pine woodlands with a diversity of grass, forbs and shrub species. A basal area of 40-80 ft<sup>2</sup>/acre is preferred. As cavity nesters, individuals excavate cavities in the heartwood of older (typically > 60 years) living pine trees. Suitable cavities and potential cavity trees are often the limiting factor for this species; however, there are ample amounts of suitable trees on AWMA. Artificial cavities have been effective in increasing local populations when combined with appropriate habitat management.

Models identified 2,222 acres of potential habitat with 3,737 acres modeled to occur if management could restore all natural communities. With a home range of 100-400 acres per territory, a population of 5.5 to 22 territories on AWMA could be possible with the current estimates. Using the historic estimate of 3,737 acres of potential habitat, AWMA could support a local population of 9 to 38 territories. Populations with 30-100 potential breeding groups aggregated are considered moderately secure.

From a regional perspective, the nearest known population of red-cockaded woodpeckers occurs on the Silver Lake Tract in Georgia, approximately 10 miles east of AWMA across Lake Seminole. This tract of land was designated as a mitigation site for red-cockaded woodpeckers found on other International Paper lands and currently supports approximately 18 potential breeding groups.

The chance of red-cockaded woodpeckers colonizing AWMA naturally is extremely low. Red-cockaded woodpeckers have a limited dispersal capability, and their populations tend to grow around the edges of existing populations, rather than pioneering into unoccupied territory. Any colonization would likely come from the population at the Silver Lake Tract expanding its range northward where dispersers could cross the Chattahoochee River and then expand their range southward towards AWMA. This scenario would require many, many years even if with strategic creation of recruitment clusters.

Red-cockaded woodpeckers will not occur on AWMA in the near future without directed restocking efforts. Even though AWMA could support a small population, neither the FWC nor the federal recovery plan identified AWMA as a potential restocking site. Restocking AWMA would be a low priority, as the property has no potential to interact with other red-cockaded woodpecker populations, and no specified recovery role in existing recovery plans. As such, there is limited opportunity for this species on AWMA.

*Florida Black Bear* - The Florida black bear is a wide-ranging species capable of significant dispersal. Home range sizes vary according to resource availability and the level of habitat fragmentation on the landscape. A mosaic of flatwoods, swamps, scrub oak ridges, bayheads and hammocks provides foraging opportunities, cover when traveling between these habitat types and adequate den sites.

This FWC-listed threatened species triggers 2 of 6 prioritization parameters (PLCP PVA probability of a 50% decline on public lands and Millsap biological score). While models identified 798 acres of potential bear habitat, AWMA is >13 miles from secondary range, and > 20 miles from primary range. Further, the bear management program did not identify AWMA as a first priority area for bear, and

AWMA was not modeled to be an important dispersal corridor for bear. There have been a limited number of nuisance bear complaints in the area of AWMA in the past, but the number has been very low. Any bear in this area is likely a young dispersing male. Because of the small acreage of potential habitat, the distance of the area for primary or secondary bear range, and the fact the area has not been identified as important to bear for dispersal, AWMA currently has a limited opportunity in the conservation of this species. If a bear is observed on the property, the observation will be recorded ([Section 5.2.6](#)).

### 3.2.15: Other Focal and Imperiled Species

In addition to the listed species discussed above, the American alligator (*Alligator mississippiensis*) is the only listed animal known to occur on AWMA, and no other listed animal species have been documented on JCWEA. The American alligator is common on AWMA and occurs in ponds within the WMA and portions of Lake Seminole encompassed by the WMA. The USFWS lists the alligator due to its similarity in appearance to other listed crocodylians, not due to actual imperilment. Planned and ongoing management activities that include allowing prescribed fire to run into wetland communities will continue to provide habitat for the American alligator.

Six listed plant species have been documented on AWMA. The USFWS lists Gentian pinkroot (*Spigelia gentianoides*) as threatened. Leopard's-bane (*Arnica acaulis*), sweet shrub (*Calycanthus floridus*), Catesby's bindweed (*Calystegia catesbaei*), and Barbara's buttons (*Marshallia obovata*) are listed as endangered by the State of Florida. The rainlily (*Zephyranthes atamasco*) is listed as threatened by the State of Florida.

Gentian pinkroot is a small herbaceous plant found in fire-dependent ecosystems. Variety *gentianoides* (found on AWMA) is restricted to longleaf pine-wiregrass and pine-oak-hickory woods of Florida and Alabama. Since this plant appears to prefer partially open canopies, canopy shading is assumed to negatively affect this species. Because of this, staff should continue to work with the ACOE and USFWS to overcome the challenges of completing timber harvests in upland mixed-woodland habitats where this species occurs. The USFWS has recently completed a [Draft Recovery Plan](#) for this species.

Leopard's-bane, Catesby's bindweed, and Barbara's buttons occur within upland pine and sandhill habitats on AWMA. The open overstory and frequent application of prescribed fire will continue to benefit these species. Rainlily occurs in rich moist woods, or low ground, typical of wet pastures and meadows. These areas are interspersed among actively managed natural communities on AWMA, and ongoing management will continue to provide suitable conditions. Sweet shrub is found within bottomland hardwood forest habitats on AWMA. Because this natural community is not actively managed, area staff has little opportunity to manage for this species. Ongoing treatment of exotic vegetation in bottomland hardwood forests and the protections afforded species occurring on conservation lands will benefit this species.

Three listed plant species have been documented on JCWEA. Variable leaf Indian plantain is listed as threatened by the State of Florida, and Carolina larkspur and May apple are listed as endangered by the State of Florida.

Variable leaf Indian plantain occurs in the river swamps along the Chipola River, while Carolina larkspur and May apple occur on the slopes and bluffs found around the entrance to Judges Cave. None of the natural communities where these species occur are actively managed; however, ongoing treatment of exotic species will continue to provide benefits.

It is possible that additional imperiled species occur on these areas and if encountered, staff will document these encounters ([Section 5.2.6](#)). Imperiled species should continue to benefit from FWC's ongoing management actions that aim to restore natural community structure and function. Florida's imperiled species are adapted to these natural communities and have a higher probability of persistence under FWC management actions than in the absence of management.

#### **Section 4: Land Management Actions and Considerations**

Models identified potential habitat for 13 focal species on AWMA, and area staff identified 3 other focal species that may occur on the property ([Section 3.1](#)). Additionally, models indicated 6 focal species on JCWEA. However, not all of these species have the same level of management opportunity or need ([Section 3.2](#)). On AWMA, FWC's natural community-based management, which emphasizes prescribed fire methods that promote a mosaic of burned and unburned areas, will promote the habitat conditions necessary for most of these species, without the need for further strategic management actions. On JCWEA, FWC's management is focused on protection of the cave and bat research.

We may designate Strategic Management Areas (SMAs) when actions over and above ongoing natural community management are required ([Section 4.1](#)). The designation of SMAs allows for identification of an area in which managers can apply specific land or species management action(s) to facilitate conservation of a species or group of species. An SMA is an area in which specific actions will occur that typically will not occur area-wide and can be used to do the following:

- Identify the area in which to apply specific land or species management that creates the highest probability for persistence/conservation of a species/suite of species. These specific actions may aid in restoring, enhancing or maintaining the habitat or population.
- Identify an area in which to focus specific management actions (land management or species management) for the best chance of success on large areas with more restoration/enhancement than can be accomplished in short order. This might be the first or next step in a sequential series of management actions that will increase the likelihood of occupation and/or persistence of a specific species.
- Identify an area that is so critical to the persistence of a species on the area that it warrants identification to ensure protection against negative alteration.
- Focus efforts on restoration/enhancement of a natural community that will benefit a priority species or a group of focal species. The SMA should identify the area in which these actions have the greatest positive impact for the species of interest.
- Identify areas that are critical for research or monitoring.

- Recommend specific OBVM DFCs in a specific area to benefit a specific species when we would not want to change the DFCs in the natural community area-wide.

We designated 1 SMA on AWMA to guide efforts aimed at increasing the amount of habitat for northern bobwhite ([Section 4.1.1](#)), and 1 SMA on JCWEA to identify important cave protection measures and identify research opportunities ([Section 4.1.2](#)).

As AWMA had yet to undergo the OBVM workshop process, actively managed communities and DFCs were established as part of the WCPR workshop process ([Section 4.2](#)). Additionally, an OBVM-oriented objective was determined to be necessary.

Some species have specific protective measures or land management considerations that are necessary to ensure their continued use of the property. [Section 4.3](#) provides these recommendations.

#### **4.1: Strategic Management Areas**

The intent on AWMA is to restore most restorable natural communities to a more natural condition, while retaining a certain amount of agricultural fields and early successional habitat, primarily for quail management. The intent on JCWEA is to apply management focused on cave protection. However, SMAs allow focus on areas with the highest possibility of success and/or areas most critical for the conservation of a species on the area. The WCPR process identified 1 area for which an SMA was established on AWMA and established 1 SMA that encompasses all of JCWEA. For each SMA, staff developed an area-specific goal, measurable objectives, and a strategy to guide management. We define goals, objectives and strategies in [Section 1](#).

##### *4.1.1: Northern Bobwhite*

We designated a northern bobwhite SMA on AWMA in order to identify areas in which restoration efforts should be focused to provide the greatest benefit for this species on the area. Northern bobwhite are typically associated with open canopy forests and grassland communities dominated by warm-season grasses, legumes, and patchy bare ground. Areas with dense herbaceous cover are used for brooding and foraging; shrubs or other thickets are useful as roosting habitat or escape cover. Though about 70% of AWMA currently contains suitable habitat in the form of an open overstory with diverse herbaceous vegetation, approximately 286 acres in management units 28, 27, 18, 2, and 3 are currently in need of thinning and/or more frequent application of prescribed fire. Reducing the basal area in these management units to approximately 50 ft<sup>2</sup>/acre and burning more frequently will increase the amount of suitable habitat for northern bobwhite.

Northern bobwhite have been the focus of management on AWMA since the 1960s and the population is carefully managed. The application of frequent growing season burns (60% to 70% of northern bobwhite habitat is burned annually) to increase the quality of northern bobwhite habitat, has greatly benefited many other focal species. This management is compatible with the needs and supports the current populations of Bachman's sparrows, brown-headed nuthatches, gopher tortoises, fox squirrels, and pine snakes currently found on the area.

All of the management units identified as part of the SMA occur on the periphery of the area. Prior management has focused on maintaining the high quality of the habitats on the interior of the area. By focusing on these peripheral areas, staff can increase the overall acreage of high-quality habitat, and have the opportunity to expand the current population of northern bobwhite.

**SMA Goal:** Expand the current population of northern bobwhite within the SMA by increasing the amount of suitable habitat.

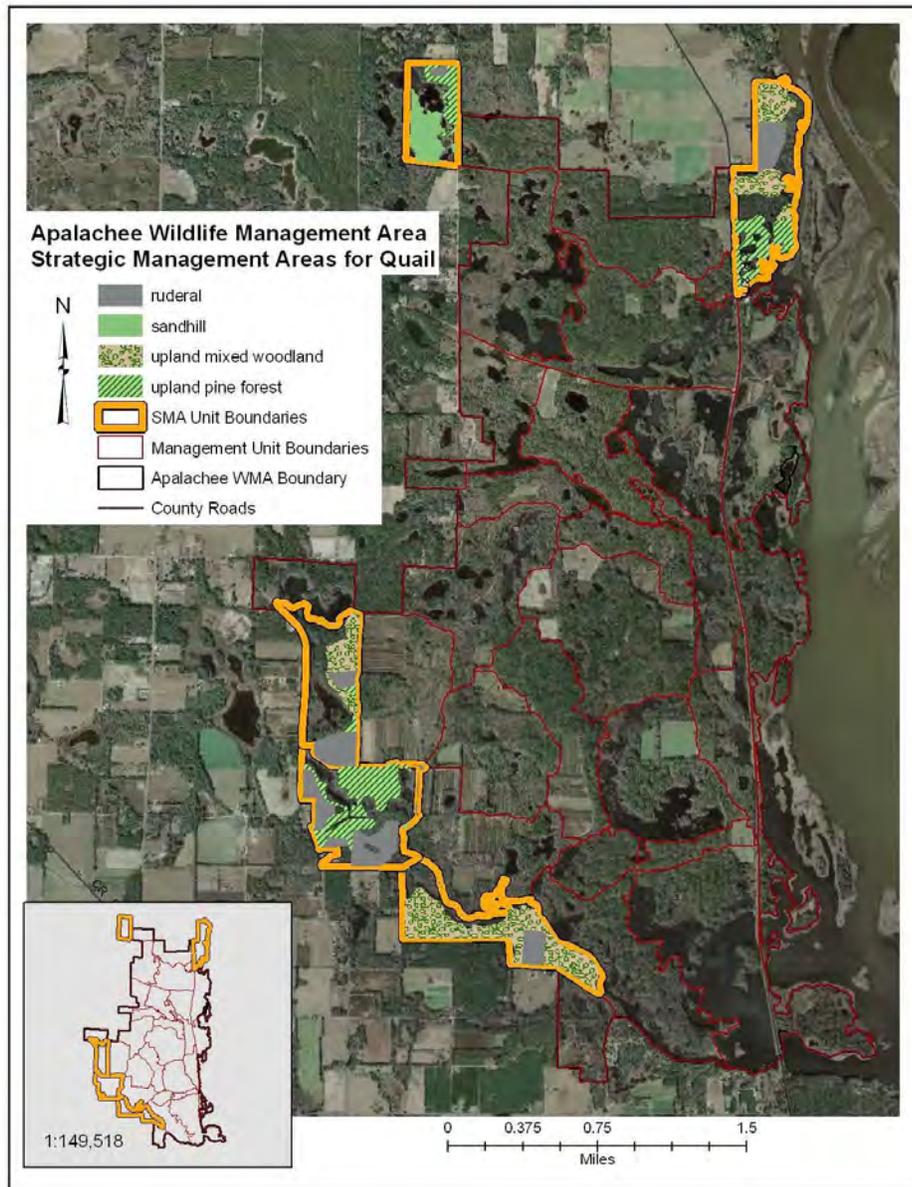
**SMA Objective 1:** Determine a baseline density of northern bobwhite within the SMA by 2013. This baseline density should be the average density over a period of 2 years.

**SMA Objective 2:** Following the establishment of a baseline density in the SMA, increase the density of northern bobwhite to 0.5 birds/acre as determined through covey call surveys. However, it may take longer than the term of this Strategy to reach this objective.

**SMA Objective 3:** Apply 3 prescribed burns in the SMA within 10 years after completion of timber thinning in stands where thinning is required.

**Description of the SMA:** The SMA focuses on 5 MUs spread around the periphery of the area and includes approximately 28 acres of sandhill, 107 acres of upland pine, 151 acres upland mixed-woodland, and 101 acres of agricultural fields ([Figure 1](#)). These units each have their own management needs and are discussed in detail below.

**Strategy:** Management units within this SMA are spread throughout the area and each has its own management history and needs. Management Unit 28 is the southernmost MU in the SMA and is dominated by upland mixed-woodland (86 acres) and 1 large agricultural field. All areas to the east of the agricultural field have been thinned to a basal area of approximately 70-90 ft<sup>2</sup>/acre, and are in need of midstory control in the form of herbicide application or mechanical treatments, and a frequent fire return interval. Areas to the west of the agricultural field are currently at a basal area of approximately 90-100 ft<sup>2</sup>/acre. These areas have not been thinned due to the presence of the federally endangered gentian pinkroot. The USFWS has been reluctant to allow thinning in areas where this species occurs; however, if opening up the canopy can be shown to benefit gentian pinkroot it may be allowed. Before thinning is considered, the DFC for basal area within upland mixed woodland natural communities must be determined ([Section 4.2](#)). Following the establishment of DFCs for this community type, the DFCs for upland-mixed woodland habitats occurring throughout the SMA should be adjusted to the lower end of the range in basal areas found on the reference site while balancing the needs of the federally endangered gentian pinkroot and the northern bobwhite. Coordination with the USFWS regarding thinning in areas with gentian pinkroot and the ACOE who retain rights to the timber on the area is necessary ([Section 6.4](#) and [6.5](#)). As such, it is not within



**Figure 1:** Management units targeted for management and restoration associated with the northern bobwhite SMA on Apalachee Wildlife Management Area.

FWCs authority to conduct timber thinning on AWMA. Therefore, any thinning identified in this strategy is considered a recommendation.

Management units 18 and 27 consist of upland pine (60 acres), upland-mixed woodland (26 acres), and a number of agricultural fields. Thinning has already occurred in both management units including the upland-mixed woodland areas where gentian pinkroot locations were flagged and buffered during timber thinning operations. As basal area in these MUs is currently in the 70-90 range ft<sup>2</sup>/acre, the focus should be on a frequent fire return interval focusing on growing season burns, and mechanical and/or herbicide treatments to control midstory growth. Appropriate precautions will be enacted to ensure protection of the gentian pinkroot.

Management Unit 2 is the area that received mechanical treatments and its first burn in 2010. This area was thinned in 2002 and contains both sandhill (28 Acres) and upland pine (16 acres) habitats that are dominated by old-growth longleaf pines. The area contains relatively intact groundcover that has benefitted from the recent management. Continued focus on growing season burns and limited midstory control in this area is needed for this area to become optimal habitat.

Management Unit 3 consists of upland pine (31 acres), upland mixed-woodland (39 acres), and a large agricultural field. The basal area within this MU is currently in the range of 120-220 ft<sup>2</sup>/acre, and needs to be thinned to provide optimal northern bobwhite habitat. The desired BA within upland pine habitats is 40-90 ft<sup>2</sup>/acre. This MU is currently on the ACOE schedule for thinning, however, it is possible the desired basal area will not be achieved on the first thin. Staff should keep this area a high priority when submitting thinning recommendations to the ACOE in the future.

Monitoring is necessary to determine if management is having the desired effect and to determine progress towards reaching objectives for the species. See [Section 5.2.4](#) for monitoring recommendations and [Section 6.1.2](#) for coordination recommendations.

#### *4.1.2: Judges Cave Protection and Research*

Judges Cave found within JCWEA is 1 of only 4 caves in Florida known to have contained a maternity colony of gray bats and 1 of only 9 caves in Florida currently used as a maternity roost by the southeastern bat. Each breeding season Judges Cave hosts approximately 30,000 bats making it the fifth largest maternity roost for southeastern bats in the world, and the largest maternity roost on public lands in Florida. The cave and the large maternity colonies of bats that use the cave are the reason TNC acquired and donated JCWEA to the State of Florida, and the bats and the cave are the focus of management on the area. State ownership allows FWC researchers easy access to study the cave and factors that influence bat usage. Additionally, it places a great deal of responsibility on FWC to protect this critical resource from current and future potential threats. As such, an SMA encompassing the entire area of JCWEA is recommended. The focus of the SMA is on current and future cave protection and research needs.

**SMA Goal:** Maintain or increase the population of southeastern and gray bats using the cave as a maternity roost within the timeframe of this strategy.

Factors outside of the control of area managers influence the ability to achieve this goal. However, staff will fulfill their role in achieving this goal by providing conditions that allow for the use of the cave by bats as a maternity colony.

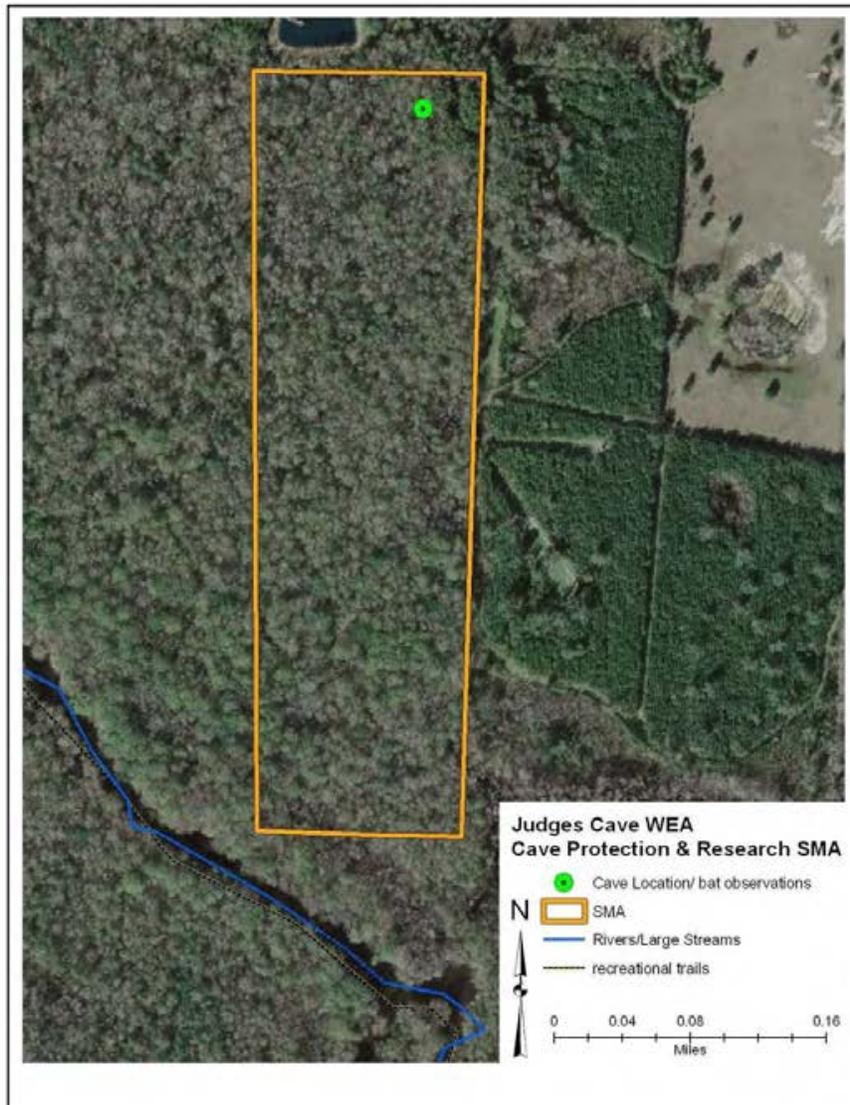
**SMA Objective 1:** By 2022, determine timing of seasonal cave usage and what factors may influence timing of usage by southeastern and gray bats within 10 years.

**SMA Objective 2:** Until deemed unnecessary, maintain conditions around the cave and at the cave entrance to enhance potential for continued use by bats.

**Description of the SMA:** The SMA consists of the entire 37.3 acres that comprises JCWEA. This includes 5.3 acres of floodplain swamp, 16.2 acres of floodplain forest, and 15.8 acres of upland hardwood forest. The entrance to Judges Cave is located in the northeast corner of the property ([Figure 2](#)).

**Strategy:** Staff designated this SMA to outline cave protection efforts and identify factors that may influence use of the cave by bats. Disturbance of a maternity roost can decrease bat use and even cause bats to abandon a cave permanently. Additionally, the fungal disease White-Nosed Syndrome has affected bats in the northern portion of their range. Humans can spread this fungus between caves and this should be prevented. As many of the factors that affect bat use of the area are not in our control, cave protection is the single most important aspect FWC can influence.

In 1983, when TNC deeded the property to FWC (then GFC), TNC included a clause in the deed stating that ownership would revert to TNC if there were "...any disturbance whatever of habitat or plant or animal populations..." due to FWC allowing public access on the area. As such, there is no public access allowed on JCWEA. Currently, the perimeter of JCWEA is posted as "Closed to Hunting" but not "No Trespassing", though it is in the establishment orders. Judges Cave WEA is located in a human altered landscape, and access to the area is provided via an easement on private lands. There are no signs indicating the area is a WEA and there is an approximately 50-ft X 50-ft chain-linked fence about 8-ft tall surrounding the cave entrance. Management actions in this area include treating invasive exotic plants, fence maintenance and removing any vegetation that may fall and obstruct the cave entrance. Staff and researchers believe these measures are currently sufficient to protect the cave, as trespass is currently very rare. However, due to the potential for future development and the possibility of a trail, proposed by Jackson County and the Office of Greenways and Trails that would link Florida Caverns State Park and the Chipola Greenway, would increase the probability of trespass and cave disturbance, future protection efforts should be considered. As this proposed trail may come close to the boundary of JCWEA, if given the opportunity, staff should provide comments and recommendations to limit potential negative consequences.



**Figure 2:** Map of Judges Cave Wildlife and Environmental Area showing the location of the cave entrance.

In order to determine if increased trespass is taking place and additional protection measures are necessary, monitoring of the cave site is necessary. Area staff, law enforcement, and researchers are not at JCWEA frequently enough to monitor trespass. By the time trespass is noticed (trash, vandalism, etc.), it may have been months since it occurred. Options for monitoring entrance into caves include the use of motion detection counters and/or cameras. As motion detection counters cannot differentiate between human and animal use, motion detection cameras are recommended. The ability of motion detection cameras to differentiate between animals and humans can serve a dual purpose on JCWEA. Not only will they inform us about trespass, they can help answer the important question of the exact dates of cave use by bats. This information is very important to researchers (see below) and can be used to further protect bats by increasing staff or law enforcement presence during periods of bat use. These cameras should be installed at the cave entrance as soon as adequate funding is available.

If cave disturbance is determined to be a problem, the FWC should take action to protect the cave. Cave protection measures including gating and fencing cave entrances have been used with some success and some failures for various bat species at other caves. Due to the biological importance of Judges Cave and the reported adverse impacts (cave abandonment) cave entrance gating and fencing have had on southeastern bats and gray bats in Florida, they should not be considered at Judges Cave. If the proposed trail connecting the Chipola Greenway to Florida Caverns State Park is built, and problems with trespass increase, FWC should install and maintain "No Trespass" signs along the boundary. Additionally, FWC could install a fence along the JCWEA boundary between the cave entrance and the trail. If other trespass problems arise, fencing the entire perimeter of JCWEA should be considered.

Most bat maternity colonies in Florida are located on private lands. Because of this, it is difficult for researchers to conduct research and answer important questions regarding these species. JCWEA is extremely valuable to FWC researchers as it offers unrestricted access for research. Timing of seasonal usage of caves by bats is important from both a cave protection and bat management perspective. If we can determine the timing of seasonal use, we can hypothesize what influence other factors such as climate change might have on bats. Other research topics include:

- 1) Does the water level of the Chipola River affect the water in the cave? How are they related? What is the probability of cave flooding during times of bat use?
- 2) Does the quality of the water in the cave influence bats or bat use of the cave?
- 3) Is the temperature in the cave changing? Will this affect bat use of the cave?
- 4) Is the humidity in the cave changing? Will this influence bat use of the cave?
- 5) Where do the bats that use the cave as a maternity colony forage and what routes do the bats take to get there? What habitats are they using? Are the foraging areas or travel corridors being affected by current land-use?
- 6) Where are the bats wintering?
- 7) What environmental factors influence cave use by bats?

FWRI staff monitors the maternity colony at the cave on an annual basis and intends to continue to do so in the future. Area staff should continue to monitor the condition of the

fence and the cave entrance, and make repairs as necessary. If either FWRI researchers or area staff notice problems with trespass or cave disturbance, this information should be shared so corrective action can be taken. See Sections [6.1.1](#), [6.1.3](#), [6.1.7](#), [6.2](#), and [6.3](#) for coordination recommendations.

**4.2: Objective-Based Vegetation Management (OBVM) Considerations**

On JCWEA, staff does not apply natural community management that would trigger OBVM monitoring. On AWMA, staff will use OBVM to monitor progress towards DFCs of various natural community parameters. As such, OBVM will be effective in monitoring progress towards land management strategies on AWMA.

The OBVM DFCs target a range in values for various habitat parameters within actively managed communities. The AWMA and JCWEA WCPR workshop gave participants the opportunity to suggest DFCs that meet the needs of the focal species considered for AWMA. This resulted in establishment of DFCs for 2 of the 3 actively managed natural communities ([Table 2](#)).

**Table 2.** Desired Future Conditions for specific vegetative parameters in actively managed natural communities at AWMA as determined through the WCPR process.

Upland Pine		Sandhill	
Total Basal Area	40-90 ft <sup>2</sup> /acre	Total Basal Area	20-60
Pine Basal Area	40-80 ft <sup>2</sup> /acre	Pine Basal Area	20-60
Non-Pine Density	≤2	Non-Pine Density	≤3
Shrub Stems	≤ 1	Shrub Stems	≤ 1
Shrub cover	<10	Shrub cover	20-40
Mean Shrub Height	<2ft	Mean Shrub Height	≤3ft
Herbaceous Cover (%)	20-60	Herbaceous Cover (%)	10-30
Wiry Cover (%)	5-25	Wiry Cover (%)	5-10
Weedy Cover (%)	0-5	Weedy Cover (%)	0-5
Exotics (%)	0	Exotics (%)	0

Through the workshop process, it was determined that we did not have enough information to make an informed decision on the DFCs for the upland mixed woodland natural community type. The FNAI only recently described the upland mixed woodland natural community type that occurs on portions of AWMA. As this is a new natural community type, quantitative descriptions outlining ideal conditions found in reference areas have yet to be completed.

FNAI indicates that some of the upland mixed woodland habitats found on AWMA are high quality and should be considered a reference area for the community type. Therefore, the goal for upland mixed woodland is to manage the natural community in a manner that provides for the needs of the many plant and animal species that depend on the community. In order to accomplish this goal, FWC will contract with FNAI to have FNAI identify appropriate reference areas for this natural community. Once reference sites have been identified and quantitative data describing a number of vegetative parameters are available, the measurable objective is to:

- 1) By 2014, recommend DFCs for upland mixed woodland on AWMA based on the quantitative data collected from the reference site while considering the needs of focal species that may use this natural community.

#### **4.3: Further Land Management Considerations**

Most generalist or wide-ranging species benefit from management that restores the natural structure and function of natural communities they use. However, for some species, specific management recommendations and precautions are necessary to ensure continued suitability of the area for the species. The following recommendations should help ensure AWMA continues to fulfill its role in the conservation of these species.

##### *4.3.1 Gopher Frog*

Gopher frogs frequently move between wetland breeding ponds and adjacent uplands. Do not place ground disturbing firebreaks along wetland ecotones because they can alter/destroy the herbaceous component of pond margins preferred by this species and other amphibians. Wet lining can be an alternative to mineral firebreaks around wetlands if necessary; however, it is preferred to allow fire to burn through the wetland. Managers will use prescribed fire as the primary tool to remove shrubs and other thick vegetation from pond margins; mechanical treatments may be needed initially, but prescribed fire should be the main management tool in suitable wetlands.

Growing season (April–September) burns, preferably after April, are more beneficial to gopher frogs than dormant season (October–March) burns. This is because they are more effective at reducing shrub cover and litter in the wetland basin, stimulating the growth of herbaceous emergent vegetation, enhancing the wetland/upland ecotone, and stimulating the reproduction of wiregrass in the surrounding uplands. The most beneficial time to burn is when the wetland is dry. While growing season fires are preferred, it is better to burn during the dormant season than to avoid burning.

Because it is important to maintain potential breeding ponds in good condition, minimize soil disturbance within 500 yards of potential breeding ponds and continue the prohibition on public off-road vehicle use. Timber management around known or potential breeding ponds should focus on selective thinning and natural regeneration enhanced by prescribed fire.

##### *4.3.2 Florida Pine Snake*

Large upland snakes such as the Florida pine snake are relatively wide-ranging and elusive. Ongoing land management activities will enhance the suitability of habitat for this species, but could also be directly detrimental. When using heavy equipment during land management activities, it is important to avoid direct mortality. When practical, keep heavy equipment at least 25 feet from areas with a high density of pocket gophers or gopher tortoise burrows, as pine snakes regularly use their burrows. Coarse woody debris and residual stumps should be left intact when possible to provide cover for these species. In general, avoid removing stumps.

While it is acceptable to pile and burn excess logging slash if necessary to reduce smoke management issues, ensure some debris remain in the stand to provide cover for these species. Creating brush piles can provide cover for these species if natural cover is sparse or absent.

#### *4.3.3: Gopher Tortoise*

In areas where gopher tortoises occur, the timing of land disturbance activities (e.g. roller-chopping, timber removal) should, whenever possible, occur during the dormant season to minimize negative impacts to gopher tortoise. This species generally is less active and spends more time in burrows during the winter months. Therefore, disturbances at this time will be less likely to crush or otherwise harm foraging tortoises. Regardless of timing, minimize impacts on known burrows. Gopher tortoise burrows tend to be clumped even in good habitat; avoid using heavy equipment in clusters of burrows. All mechanical treatments should be followed with a prescribed burn, when conditions are suitable. Additionally, continue to support the ACOE flagging all burrows prior to timber thinning operations.

#### *4.3.4: Brown-Headed Nuthatch*

This species is a cavity nester and is dependent on the presence of snags for suitable nesting habitat. Unfortunately, and to the detriment of the nuthatch, management activities frequently knock over snags, especially the old, soft snags on which the nuthatch is dependent. The impact of land management on snags should be evaluated to ensure new snags are replacing consumed snags. If there is a net loss of snags during prescribed fire or mechanical treatments, consider taking efforts to protect snags or taking actions to create new snags. It is possible to create future suitable snags by girdling oaks with a diameter at breast height of < 10 inches. Over time, these snags become soft and become preferred nest sites. Managers should take care to keep this particular type of snag.

When possible, avoid prescribed fire during February and March in management units known to contain brown-headed nuthatches. The loss of nests early in the season frequently results in re-nesting attempts. Most re-nesting occurs during periods of increased snake activity which results in greater predation on nesting females and their eggs and young. However, if this is the only time in which suitable conditions occur for a burn, it is better to burn than to avoid burning.

#### *4.3.5: Cooper's Hawk*

During the nesting season (April-July), Cooper's hawks are secretive and intolerant of human disturbance near the nest site. Males show a strong fidelity to traditional territories. For this reason, whenever possible, protect known nesting sites from human disturbance (e.g., prescribed fire, timber thinning, mechanical treatments) by maintaining a 50-foot (15.2 m) buffer around the nest during the nesting season, and avoid heavy alteration of the nesting location. Whenever signs of

Cooper's hawk nesting (e.g., carrying nesting material, aggressive dive bombing) are encountered, the location should be documented and an effort made to locate the nest.

#### 4.3.6: Southeastern American Kestrel

Southeastern American kestrels are dependent on the occurrence of open upland habitats that contain a number of snags for nest sites. While ongoing management will encourage the open foraging condition this species requires, make an effort to retain large snags during land management activities. The practice of snag management (i.e., protecting snags when safe and practical, promoting the creation of new snags in areas currently lacking) will benefit southeastern American kestrels. If nesting is documented, the amount of mechanical activity within 500 feet of the nest will be minimized during the nesting season and the snag will be protected during prescribed fire activities. For more information on management for kestrels, see:

Stys, B. 1993. [Ecology and habitat protection needs of the southeastern American kestrel \(\*Falco sparverius paulus\*\) on large-scale development sites in Florida](#). Florida Game and Fresh Water Fish Commission, Nongame Wildlife Program Technical Report No. 13. Tallahassee, Fl. 35 pp.

#### 4.3.7: Southern Bald Eagle

Protection of bald eagle nests, including avoiding disturbance of nesting eagles, is necessary to continue the recovery of this species. Managers will consider the management guidelines available at [FWC Bald Eagle Management Plan](#) (or any subsequent version) when planning activities within 660 feet of known eagle nests. Staff will document and report any new nests that are located. Staff will check the bald eagle nest locator ([FWC Bald Eagle Nest Locator](#)) annually to determine if any new nests are detected within 660 feet of the WMA via the statewide monitoring efforts. It is undesirable to have unnaturally dense stands around eagle nests. Continue to manage stands in which eagle nest buffers occur, but with proper planning to avoid negative impacts to the eagles, per the guidance of the management plan. During management activities, retain large mature pines as potential nesting sites.

#### 4.3.8: Wading Birds

It is possible that ongoing actions (e.g., prescribed fire, timber harvest) could have negative impacts on wading birds if the needs of the species are not considered during the planning of these activities. Providing a 330-foot buffer around nesting colonies during nesting season will ensure adequate protection of these resources. Additionally, plan any mechanical and/or chemical control of aquatic vegetation at a time that avoids disturbance to the colony, and using methods that do not damage the plants in which wading birds construct their nests.

#### 4.3.9: Fox Squirrel

As habitat restoration occurs on AWMA, it is likely the area will become more suitable for fox squirrels. To ensure the area reaches its potential for fox squirrels, prescribed fire and thinning should continue to create an open, mature forest structure. Efforts to reduce the dense shrub layer will benefit this species by providing the open conditions the species prefers, as well as promoting food producing species such as runner oak (*Quercus pumila*). As fox squirrels require an oak component, some oaks should be retained within upland pine natural communities. Ideally, a variety of oak species in a range of age classes should be retained, but not to the extent that it would interfere with other species needs and natural community management.

#### 4.3.10: Southeastern Bat

Large hollow trees, particularly hardwoods or cypress in the basin swamp are potential roost sites for southeastern bats. Protect these important resources when possible during land management activities. Prior to removing old culverts or abandoned buildings, check for occupancy by bats.

While not pertinent to the southeastern bat, some species of tree bats roost in leaf litter on the ground when the temperature goes below freezing. When temperatures are this low, the bats are in a state of torpor that may prevent them from arousing to escape. To avoid negative impacts to tree bats, following nights when the temperature drops below freezing, when possible, delay initiation of prescribed fire until the air temperature has warmed to 50°F. This will allow bats to have warmed sufficiently to become active enough to escape fire. However, if this is the only time in which suitable conditions occur for a burn, it is better to burn than to avoid burning.

## Section 5: Species Management Opportunities

The focal species approach taken here represents a science-based approach to ecosystem management. Though this method relies on a suite of individual species, land management actions focused on these species directly benefit associated species. For some species, land management actions alone are insufficient in aiding recovery. These include species that are not present on a site and have limited dispersal capabilities or are unlikely to occupy a site without reintroduction once habitat restoration is complete. Additionally, species that are currently present but occur at low densities, have low reproduction potential, or have other limitations that inhibit recovery, may require species-specific management. This section provides species management recommendations ([Section 5.1](#)) as well as monitoring recommendations ([Section 5.2](#)) to assess species response to land management and to determine the need for additional species management. [Section 5.3](#) identifies research necessary to guide future management.

## 5.1: Species Management

Species management as used here refers to non-monitoring actions taken for a specific species. It can include actions such as translocation, restocking, installing artificial cavities, etc. Specific actions were identified for 1 species, however, additional actions may become necessary following documentation of certain species such as the southeastern American kestrel. [Section 5.2](#) covers monitoring related actions, including banding or tagging. [Section 2](#) and [Section 4](#) provide information on land management actions, such as prescribed fire or mechanical treatments.

### 5.1.1: Southeastern American Kestrel Nest Box Program

If southeastern American Kestrels are determined to be present on AWMA, staff should begin a kestrel nest box program. The number of nest boxes and their location will be determined after the species presence is confirmed. These boxes will be maintained and monitored by area staff according to protocol developed by FWRI as part of a statewide effort to erect and monitor southeastern American kestrel nest boxes. This effort will collect data on habitat structure around these boxes to gain a greater understanding of preferred nesting habitat. The purpose of monitoring southeastern American kestrel nest boxes on AWMA is to promote nesting opportunities and track kestrel use of the nest boxes.

## 5.2: Species Monitoring

Monitoring is critical to evaluating the impact of the management actions described in this Strategy. While we are unable to monitor all of the focal species on AWMA and JCWEA, the recommended monitoring will assess species in all actively managed communities, select wetland dependant species, and includes opportunistic monitoring for uncommon or hard to monitor species. Data collected will be reported to the regional conservation biologist for inclusion in the appropriate database developed for the WCPR program. We will make monitoring data available to cooperating agencies and organizations such as FNAI ([Section 6](#)).

This section provides the list of monitoring actions recommended for the area, and provides the purpose for the monitoring. The FWC is in the process of standardizing monitoring protocols for a number of these species. Approved protocols are available at [Monitoring Protocol Section of the WCPR SharePoint Site](#). When protocols are finalized, they will be implemented in accordance with the timeframe described in this Strategy.

### 5.2.1: Gopher Frog Monitoring

The purpose of gopher frog monitoring is to determine the presence or absence of the species on the area. Call surveys will be completed following a THCR standard protocol. The gopher frog typically breeds following heavy rains. Therefore, surveys should occur at potential wetlands after major rain events during the winter/early spring months. If gopher frogs are not detected either in the baseline

surveys or in a second survey 2-5 years later, the surveys should be discontinued, and we will presume absence of the species from the area.

#### *5.2.2: Gopher Tortoise Monitoring*

The purpose of monitoring gopher tortoises on the area is to determine the effect sandhill restoration activities had on abundance. A survey using the protocol outlined in the gopher tortoise management plan was completed in 2010 as a requirement of the restoration grant. To provide an adequate comparison, staff should complete a follow-up survey using the same methodology including conducting the survey during the same time of year as the original survey, and this should occur in FY 2014/2015. Additionally, the width of each burrow should be measured as this information can be used to determine the demographic makeup of the population. Staff should coordinate with the regional conservation biologist for assistance with the protocol and survey.

#### *5.2.3: Avian Spring Call Count Survey*

Bachman's sparrows and brown-headed nuthatches have been identified as 'indicator' species; species whose continued presence is an indicator of good upland pine communities. The purpose of monitoring Bachman's sparrows, brown-headed nuthatches, and other grassland birds is to establish a baseline and track relative abundance and distribution of these species across the area over time to ensure management is having the desired effect. These surveys will use a standardized point count protocol currently under development. If necessary to achieve results, it may be appropriate to incorporate the use of callback tapes to illicit responses from Bachman's sparrows and brown-headed nuthatches. These surveys should be completed every 3 years.

#### *5.2.4: Northern Bobwhite Fall Covey Call Survey*

The purpose of monitoring northern bobwhites is to determine if management is having the desired effect, to determine progress towards reaching objectives for the species, and to determine if additional hunting regulations are necessary. Survey stations should occur throughout potential habitat on the area using the protocol used on AWMA since 2007. In order to determine the response of northern bobwhite to management activities in the northern bobwhite SMA, staff should coordinate with the regional conservation biologist to add additional survey points within these areas.

#### *5.2.5: Bat Monitoring on AWMA*

AWMA contains suitable foraging habitat for both gray and southeastern bats. Bats have been seen emerging from large hollowed-out snags, and lime rock outcroppings occur on the area that may contain caves capable of providing adequate roost conditions for both species. Staff should use bat detectors to determine what species are using the hollowed-out snags, and what species if any are using the lime

rock outcroppings. The purpose of the monitoring is to identify the species of bats using these areas so managers can determine if there are other management implications, or actions required. Area staff will work with the conservation biologist and could seek assistance from FWRI and SCP staff to complete these surveys.

#### *5.2.6: Opportunistic Monitoring*

The purpose of opportunistic monitoring is to document the presence of specific species. Opportunistic monitoring is the process of recording important information as it is encountered. Staff will document opportunistic sightings by recording information including the species, approximate lat/long or appropriate MU, number of individuals, behavior, and habitat type. Record encounters with or sign of the following focal species:

- Cooper's hawk (nesting activity)
- Florida Pine Snake (presence)
- Southeastern American kestrel (presence mid-April – June)
- Southern bald eagle (nesting activity)
- Wading bird (colony locations and composition)
- Florida black bear
- Road kills of rare, listed, and focal species
- Any listed species not mentioned in this section

### **5.3: Species Research Needs**

Species management recommendations in other sections of this document are based on the most current information regarding management strategies for a given species. However, cases arise when little or no information is available to guide management. This section outlines research needs identified through the WCPR process. Workshop participants did not identify any research needs on AWMA or any research needs in addition to those identified in the Cave Protection and Research SMA ([Section 4.1.1](#)) on JCWEA.

## **Section 6: Intra/Inter Agency Coordination**

Throughout the WCPR process, there were many recommendations regarding possible management strategies for focal species. THCR staff can handle most proposed management actions; however, cases may arise when coordination with other sections in FWC or other agencies is necessary or increases efficiency. This section identifies cases in which coordination is necessary outside of THCR, identifies the entity to coordinate with, and provides position contacts for these entities.

We attempt to provide the name, position and contact information for the people holding the position when this Strategy is drafted. As positions experience turnover, when in doubt, contact the current Section Leader/supervisor to determine the appropriate individual.

## **6.1: Florida Fish and Wildlife Conservation Commission (FWC)**

### *6.1.1: Species Conservation Planning Section (SCP)*

Monitoring animal populations on a WMA/WEA gives managers a way to gauge animal response to management. If this information is not shared with others, valuable data that can be used to assess statewide conservation efforts often is lost. Therefore, share monitoring data with the appropriate taxa coordinator and program coordinator for species in which conservation initiatives or other management programs have been developed. The regional SCP biologist is a good source of information on the regional status of non-game species. Additionally, FWC staff is authorized to handle federally listed species if it is done consistent with the requirements of the agency's Endangered Species Act Section 6 Cooperative Agreement. To meet these requirements, staff will provide reporting as outlined in the Agreement to the agency's Endangered Species Coordinator. Please note some contacts will also be covered under [Section 6.1.3: FWRI](#), and [Section 6.1.5: Florida's Wildlife Legacy Initiative](#).

#### Contacts:

Elsa Haubold, Species Conservation Planning Section Leader: (850) 488-3831  
Robin Boughton, Avian Taxa Coordinator: (352) 732-1225  
Michelle Vandeventer, Bald Eagle Management Plan Coordinator: (941) 894-6675  
Deborah Burr, Gopher Tortoise Plan Coordinator: (850) 921-1019  
Melissa Tucker, Mammalian Taxa Coordinator: (386) 758-0525 ext 114  
Bill Turner, Herp Taxa Coordinator: (850) 921-1143  
John Himes, Regional Biologist: (850) 767-3623  
Brad Gruver, Endangered Species Coordinator: (850) 488-3831

### *6.1.2: Hunting and Game Management (HGM)*

As the FWC has a statewide northern bobwhite strategy, information collected on northern bobwhite should be shared with the small game coordinator. Staff should keep informed with monitoring protocol for northern bobwhite and other grassland birds (e.g., Bachman's sparrow) being developed via the UERP and Tall Timbers Research Station. The FWC small game coordinator is the current contact for this program. Additionally, questions pertaining to possible changes to hunting regulations for northern bobwhite should be directed to the regional public hunting areas coordinator.

#### Contacts:

Paul Schulz, Section Leader: (850) 488-3831  
Chuck McKelvy, Small Game Program Coordinator: (850) 342-0256  
Roger Shields, Regional Public Hunting Areas Coordinator: (850) 767-3611

### *6.1.3: Fish and Wildlife Research Institute (FWRI)*

Area staff should share any new eagle nest locations and wading bird colonies with the appropriate contact listed below. Staff should also coordinate with Jeff Gore regarding cave protection efforts at JCWEA as well as bat surveys using bat detectors on AWMA.

#### Contacts:

Tim O'Meara, Section Leader: (850) 488-3831  
Janell Brush, FWRI Wildlife Biologist (bald eagle): (352) 955-2081  
Jim Rodgers, FWRI Wildlife Biologist (wading birds): (352) 955-2081  
Danny Caudill, FWRI Wildlife Biologist (upland game birds): (352) 955-2081  
Jeff Gore, FWRI Wildlife Biologist (southeastern bat, gray bat): (850) 767-3624  
Karl Miller, FWRI Wildlife Biologist (kestrel, Bachman's sparrow): (352) 955-2081

### *6.1.4: Habitat Conservation Scientific Services (HCSS)*

Private lands biologists within FWCs HCSS section work to provide technical and financial assistance to landowners interested in managing their properties. These biologists are able to write management plans for landowners and can get them enrolled in cost-share programs that will offset some of the financial costs associated with land management. If private landowners near AWMA or JCWEA express an interest in management of their lands, HCSS biologists should be contacted and given the landowners information.

#### Contacts:

Scott Sanders, HCSS Section Leader: (850) 488-3831  
Arlo Kane, HCSS Regional Coordinator: (850) 767-3616

### *6.1.5: Florida's Wildlife Legacy Initiative (FWLI)*

Monitoring animal populations on a WMA gives managers a way to gauge animal response to management. If staff does not share this information with others, valuable data that can be used to assess statewide conservation efforts often is lost. FWLI can be helpful in identifying and assisting with partnering efforts, and might be a source of funding via the State Wildlife Grants program. Therefore, regular communication with this section will be a priority.

#### Contacts:

Katherine Haley, Florida's Wildlife Legacy Initiative: (850) 617-9503  
Heather Hitt, Northwest Region Legacy Biologist: (850) 767-3617

### *6.1.6: Invasive Plant Management Section (IPM)*

The Invasive Plant Management Section provides technical and financial assistance to assist in the control of upland invasive exotic plants. The Invasive Plant

Management Section may serve as a critical resource in determining appropriate solutions to and identifying funding for exotic plant issues.

**Contacts:**

Bill Caton, Section Leader: (850) 617-9428

Jeff Schardt, Aquatics sub-section administrator: (850) 245-2815

Greg Jubinsky, Uplands sub-section administrator: (850) 245-2821

*6.1.7: Division of Law Enforcement (LE)*

The most important factor relating to the persistence of bat maternity colonies occurring at JCWEA is protecting the cave from disturbance. If trespass or disturbance of the cave is determined to be a problem, coordination with law enforcement will be necessary to ensure enhanced patrols are conducted in the area.

**Contacts:**

Mark Clements, Lieutenant: (850) 233-5175

**6.2: Florida Park Service**

The only county in Florida where maternity colonies of gray bats have been documented is Jackson County. Florida Caverns State Park, which is located just a few miles away from JCWEA, has historically contained gray bats. It is likely bats move between caves on Florida Caverns State Park and JCWEA. FWRI researchers have collaborated in the past with Florida Park Service staff on bat research projects, and will likely continue to do so in the future. Coordination between the 2 agencies is important, as factors that impact one cave may have indirect impacts on the other

**Contacts:**

Mark Ludlow, Wildlife Biologist: (850) 643-2674

**6.3: Jackson County and the City of Marianna**

Currently, trespass and cave disturbance are not significant problems on JCWEA. However, a proposed trail linking Florida Caverns State Park and the Marianna Greenway may be located very close to JCWEA, thereby increasing the risk of disturbance. It is recommended that area staff keep informed about the planning process and attempt to mitigate any problems and share our concerns prior to the trail being completed.

**Contacts:**

Chuck Hatcher, Jackson County Parks and Recreation Director: (850) 718-0437

**6.4: United States Fish and Wildlife Service (USFWS)**

AWMA contains by far the largest population of the federally endangered plant gentian pinkroot. This species occurs in many areas of AWMA within upland mixed-

woodland natural communities. Area staff should coordinate with ACOE and USFWS staff concerning the legalities and protection measures necessary when planning to harvest timber in stands that contain this species.

Contacts:

Dr. Vivian Negron-Ortiz, Botanist: (850) 769-0552 x231

**6.5: United States Army Corps of Engineers (ACOE)**

AWMA is leased to FWC by the ACOE. FWC staff conducts all management on the area, with the exception of timber harvest. Currently, ACOE staff takes recommendations from AWMA's lead area biologist regarding which stands to consider for timber harvest. This working relationship should continue, and close coordination will be necessary with both the ACOE and USFWS staff when planning timber-thinning operations in areas that contain gentian pinkroot.

Contacts:

Don Morgan, Project Manager: (850) 662-2001

Jody Timmons, Natural Resource Manager: (850) 662-2001

Angela Griffin, Natural Resource Specialist: (850) 662-2001

**6.6: Florida Natural Areas Inventory (FNAI)**

The FNAI collects, interprets, and disseminates ecological information critical to the conservation of Florida's biological diversity. The FNAI's database and expertise facilitate environmentally sound planning and natural resource management to protect the plants, animals, and communities that represent Florida's natural heritage. The FNAI maintains a database of rare and listed species that often is used for planning purposes. As such, staff should share information about element occurrences on the WMA with FNAI to ensure this information is included in their database. FWC also has a contract with FNAI for plant and animal surveys if the need exists and resources are available.

Contacts:

Dan Hipes, Chief Scientist: (850) 224-8207

Amy Jenkins, Senior Botanist (Spigelia): (850) 224-8207

**Section 7: Beyond the Boundaries Considerations**

There is enough potential habitat to support many of AWMA's focal species under an appropriate management regime. AWMA can support a viable population of several species, including northern bobwhites, Bachman's sparrows, brown-headed nuthatches, and gopher tortoises. Wide-ranging species such as Cooper's hawks, bald eagles, and wading birds will continue to exist on AWMA as long as regional conditions are conducive to their persistence. While AWMA can play a role in supporting the regional population of many focal species, ultimately, the continued existence of these species on AWMA is dependent on what happens to the regional populations, and continuation of funding for management.

Due to the extremely small size of JCWEA, it is not large enough to support viable populations of any of the focal species. Regardless, the importance of Judges Cave to the regional persistence of the southeastern bat and possibly the gray bat cannot be overstated. Judges Cave is 1 of only 4 caves documented to contain a maternity colony of gray bats in Florida, and is 1 of only 9 caves in Florida used as a maternity colony by southeastern bats. Though protection of Judges Cave is the focal point of management for the area, the wooded areas contained within the boundaries of JCWEA are essential to the persistence of these species on the area. The area surrounding JCWEA will continue to become more developed, increasing the importance of the wooded areas within JCWEA. These areas provide a buffer to Judges Cave and provide a natural corridor for emerging bats to travel to foraging habitats. If future development continues at past rates, the land encompassed within the boundaries of JCWEA may provide the only natural corridor left for emerging bats.

The current management boundaries identified for AWMA and JCWEA do not include all important habitat for focal species, such as the lands identified as Strategic Habitat Conservation Areas (SHCAs) for the gray bat, Cooper's hawk, and Florida black bear. The FWC originally identified SHCAs in the [Closing the Gaps in Florida's Wildlife Habitat Conservation System report](#) (Cox et al. 1994). The goal of SHCAs is to identify the minimum amount of land needed in Florida to ensure long-term survival of key components to Florida's biological diversity. The SHCAs identify important remaining habitat conservation needs. New SHCAs have been identified in recent FWC efforts to update the Closing the Gaps entitled "[Wildlife Habitat Conservation Needs in Florida: Updated Recommendations for Strategic Habitat Conservation Areas](#)". Although it is unlikely Florida will acquire all property identified in SHCAs, property acquisition and encouraging land use and management that is compatible with the needs of AWMA and JCWEA's focal species should be a priority in the area.

While the current conditions and management of JCWEA and AWMA and neighboring lands provide an opportunity to further the conservation of many focal and imperiled species, significant changes in management or land use beyond the boundaries may have a significant impact on some species. As many of the area's species are dependent upon fire-maintained habitat, any change beyond the boundaries that impedes the ability of area staff to conduct prescribed fire would be detrimental to the persistence of species such as northern bobwhite and gopher tortoise. Much of the land surrounding AWMA is used for agriculture, and remaining intact wooded areas are overgrown due to fire exclusion. If these lands could be enrolled in conservation programs, or if the landowners actively managed their woodlands, the effective acreage of potential habitat for many focal species on AWMA would increase. Alternatively, if these lands were cleared for more agriculture or development, species that require large home ranges or are dependent on dispersal for maintaining a population would be negatively affected.

**Document Map**

Species	Species Assessment	Land management actions	Species management actions	Species monitoring	Research needs	Intra/inter agency coordination
Gopher frog	3.2.1	4.3.1		5.2.1		
Florida pine snake	3.2.2	4.3.2		5.2.6		
Gopher tortoise	3.2.3	4.3.3		5.2.2		6.1.1
Bachman's sparrow	3.2.4			5.2.3		6.1.2, 6.1.3
Brown-headed nuthatch	3.2.5	4.3.4		5.2.3		6.1.2
Cooper's hawk	3.2.6	4.3.5		5.2.6		
Northern bobwhite	3.2.7	4.1.1		5.2.4		6.1.2, 6.1.3
Southeastern American kestrel	3.2.8	4.3.6	5.1.1	5.2.6		6.1.3
Southern bald eagle	3.2.9	4.3.7		5.2.6		6.1.1, 6.1.3
Wading birds	3.2.10	4.3.8		5.2.6		6.1.3
Fox squirrel	3.2.11	4.3.9				
Gray bat	3.2.12	4.1.2		5.2.5	4.1.2	6.1.1, 6.1.3, 6.1.7, 6.2, 6.3
Southeastern bat	3.2.13	4.1.2, 4.3.10		5.2.5	4.1.2	6.1.1, 6.1.3, 6.1.7, 6.2, 6.3
Limited opportunity species	3.2.14			5.2.6		
Other imperiled species	3.2.15			5.2.6		

## 13.11 ARSA Memorandum of Understanding

**MEMORANDUM OF  
UNDERSTANDING (MOU)**

**APALACHICOLA REGIONAL  
STEWARDSHIP ALLIANCE**

Participating Agencies/Organizations

Florida Fish and Wildlife Conservation Commission  
Florida Department of Environmental Protection  
Florida Division of Forestry  
The Nature Conservancy  
Northwest Florida Water Management District  
U. S. Fish and Wildlife Service  
U. S. Forest Service  
Bureau of Land Management  
National Interagency Prescribed Fire Training Center

**I. Background**

The Parties agree to collectively initiate and implement a strategy for the conservation and stewardship of the natural resources managed by the participants within the alliance known as the Apalachicola Regional Stewardship Alliance (ARSA) in northwest Florida. ARSA is a unique public/private landowner collaboration seeking to address conservation needs and opportunities on over one million acres in northwest Florida. Northwest Florida has been identified by The Nature Conservancy as a national "hot spot" of biodiversity due to the region's remarkable assemblage of plants and animals and the threats posed by incompatible development and habitat fragmentation. This area encompassed by ARSA consists of the Apalachicola River corridor, barrier islands, a large portion of the Big Bend, and hundreds of thousands of acres of longleaf pine and wiregrass habitats (i.e. sandhill, mesic flatwoods, wet flatwoods and upland pine). This diverse and complex landscape is host to Department of Defense installations, a National Forest, two National Wildlife Refuges, State Forests and Wildlife Management Areas, State Parks and Coastal/Aquatic Managed Areas, Northwest Florida Water Management District properties and abundant forested privately owned properties.

Due to the complex and resource intensive nature of land management in the region, no one landowner or agency consistently has the capacity to address all of the stewardship issues that arise. However, it is recognized that within the group of participants, meaningful partnerships could be made for mutual benefit to address these land management challenges. Chief among these challenges for all Partners is prescribed fire. Not only is this activity complex and resource intensive, but also it is the most important ecological process for the majority of the ARSA

region. With few exceptions, Florida's plant and animal communities have co-evolved with the presence of routine and wide ranging fires. Once a product of natural ignitions, fire has in recent history been utilized as a tool first by the Native Americans, then by the European settlers. Because of this familiarity with fire, many of our native plant and animal species are now dependent upon the presence of various cycles of fire from the two to three year burning rotation of a longleaf pine-wire-grass savannah to the burn cycles of scrub and basin swamps which are measured in decades.

As responsible environmental managers, it is our mission to keep the natural process of fire within our remaining natural areas. Fire can be used as a method of ecosystem maintenance, to maintain a population of threatened plants or animals and as a successful method to reduce the natural buildup of flammable vegetation. The positive results of prescribed fire are consistently observed as large wildfires lose momentum when they spread into areas recently treated with prescribed fire. Also, cost relationships associated with fighting wildfire vs. applying prescribed fire have been estimated conservatively to be 50 to 1.

Although restoring the natural fire regime to partner lands is an important focus of ARSA; we also recognize that there are many other areas of land management expertise that could potentially be shared between alliance partners including the following:

- Ground cover restoration
- Hydrologic restoration
- Invasive exotic species control
- Rare species management
- Ecological monitoring
- Law enforcement
- Timber and/or vegetation management
- Cultural resources
- Visitor management
- Outreach and Public Affairs
- Volunteer Opportunities

Therefore all parties to this MOU may not necessarily be involved in fire management, or be able to participate in collaborative fire events, as discussed in a subsequent section of this MOU.

## II. Objectives

This Memorandum of Understanding (MOU) is hereby entered into this \_\_\_\_ day of \_\_\_\_\_, 2010 between The Florida Department of Agriculture, Division of Forestry (FDOF), Florida Department of Environmental Protection, (DEP), the Florida Fish and Wildlife Conservation Commission (FWC), the US Fish and Wildlife Service (USFWS), US Forest Service (USFS), Bureau of Land Management (BLM), National Interagency Prescribed Fire Training Center, (PFTC), Northwest Florida Water Management District (NFWFMD) and The Nature Conservancy (TNC), (collectively, "Parties" or "Partners"), covering reciprocal fire use, as well as providing mutual assistance for other land management activities, sharing information, and communicating to the public our mutual management successes in meeting both individual and common goals related to this MOU. This MOU establishes the Apalachicola Regional

Stewardship Alliance (ARSA), which will provide staffing and equipment to conduct prescribed fires on lands administered by the participating Parties, cooperate with fire training and education opportunities, and will promote public understanding and acceptance of prescribed fire in this region. In many instances a prescribed burning program is limited by its personnel, equipment, or local weather. It is the intent of this cooperative effort that by uniting skills, tools, and abilities that the combined burning accomplished by the ARSA will exceed the sum total of the respective agencies and entities on their own. This MOU also provides for the sharing of information concerning land management and ecosystem restoration techniques. Lastly, it is the intent that this MOU serve as a vehicle for sharing of resources to promote ground cover restoration. These resources could include but would not be limited to seed collecting and planting equipment, personnel, as well as providing sites for the collection of native ground cover seed.

### III. Goals

- (1) Protect, restore and manage lands that will sustain the high biodiversity of the region.
- (2) Conduct biannual meetings (location to rotate amongst Partners) to share information concerning the land management expertise identified above, share updates related to ongoing projects and to discuss/schedule potential resource needs.
- (3) Increase the fire management capacity of all Partners involved with this MOU.
- (4) Continuously maintain a chairperson whose term will not exceed one year. Chair will rotate amongst participating Partners. Nominations and voting will be conducted at the end of each chairperson's one-year term.

To achieve these goals within the ARSA, the Parties will, subject to each Party's legal authorities, regulations, policies, programmatic priorities and availability of funding:

- Freely share land management expertise and resources as practicable and per agency/landowner policy.
- Enhance communication and coordination among participants and other interested parties to identify opportunities for collaborative fire events. Among other benefits, this will facilitate coordination and operational success during emergency incidents such as wildfire and tropical weather.
- Seek federal, state, regional, local and private funding to support prescribed fire activities and training.
- Promote the education of interested private individuals and corporate landowners on fire management activities.
- Work to achieve landscape-level conservation through increased sharing of ecosystem management goals across agency boundaries.

- Provide opportunities for both prescribed fire and wildfire training for all participants in the form of standardized National Wildfire Coordinating Group (NWCG) training and on the ground mentoring.

#### **IV. Statement of Mutual Benefit and Interest**

The U. S. Fish and Wildlife Service desires to work with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. The Service desires to fulfill this mission by working in cooperation with agencies, individuals, non-profit organizations and other entities.

The U.S. Forest Service desires to support acquisition and management initiatives to deal more effectively with fire and fuels build up, invasive species, loss and fragmentation of open spaces, and unmanaged recreation as they relate to the adjoining Apalachicola National Forest and the Florida National Scenic Trail corridor.

The Florida Department of Environmental Protection desires to sustain biodiversity, protect water resources, link protected natural areas, and provide outdoor recreation opportunities to a growing population of residents and tourists.

The Florida Department of Agriculture and Consumer Services, Division of Forestry, desires to protect and manage Florida's forest resources through a stewardship ethic assuring these natural resources will be restored, conserved and maintained so as to provide sustainable forest management, sound resource protection, and maximum responsible public access for recreational opportunities now and for future generations.

The Florida Fish and Wildlife Conservation Commission desires to create a sustainable and healthy future for Florida's fish, wildlife, and their habitats and to provide recreational opportunities that foster stewardship of natural resources. FWC will contribute to a landscape-level approach by integrating its habitat management into the landscape matrix, leveraging partnerships and collaborating with other scientific disciplines.

The Northwest Florida Water Management District desires to conserve and protect water resources, including aquifer recharge area, wetlands, springs, lakes and streams, while providing public access, general public recreation and restoration and protection of habitats in their natural state and condition.

The Nature Conservancy desires to preserve the plants, animals, and natural communities that represent global diversity of life by protecting the lands and waters they need to survive. The Nature Conservancy will work with partners to preserve and manage high priority conservation areas and functioning natural systems across the ecoregion by cooperating in joint prescribed fires and joint fire training sessions.

The Bureau of Land Management desires to support partnerships and management initiatives that enhance habitat improvement for native and special status species, promote species recovery, use fire to restore and maintain fire dependent plant communities, use effective integrated pest management techniques to control invasive species, and reduce excessive fuels on forest lands.

The National Interagency Prescribed Fire Training Center desires to participate with hosting agencies and organizations to train prescribed fire specialists, and conduct prescribed fire operations in accordance with prescribed fire plans that address a wide-range of land management objectives set forth in Land Management Plans.

## **V. Liability**

Each Party agrees that it will be responsible for any and all risks of personal injury and property damage attributable to the negligent acts or omissions of itself and its officers, employees, and agents acting within the scope of their employment to the extent provided by law. Nothing herein shall constitute a waiver of sovereign immunity under Florida Statute 768.28 or the Federal Tort Claims Act.

Each Party agrees that it will be responsible for repairs to its own equipment which may become damaged through negligent acts or normal wear and tear during the course of a prescribed burn or other land management activities or as a result of their employee's actions. Damage to its equipment through negligent acts by another Partner's employees will be reimbursed for the cost of repair to the equipment by the damaging Partner.

No Party, just by entering into this agreement, shall create or increase its liability. This provision is solely for the benefit of the Parties signing and shall not confer any rights to any persons not signing.

## **VI. Prescribed Burning Operations and Responsibilities**

### **A. Common Responsibilities**

1. All prescribed burns performed under this MOU will be conducted in complete compliance with all laws regulating the use of prescribed fire; specifically Chapter 590.125(3) F.S., Chapter 51-2.006 F.A.C. and, when applicable, the specific policies regarding prescribed burning of a Party. Specific prescribed burning policies of the Parties are listed in Appendix B. (Specific Agency/Organization Requirements)
2. Each Party to the MOU will be responsible for providing its own Personal Protective Equipment (PPE) for its participating employees.
  - a. Required PPE minimums must be National Fire Protection Agency (NFPA) certified:
    - Nomex clothing
    - Hardhat
    - Leather gloves

- Leather boots
- Eye protection
- Fire shelter
- Hand held radio

These minimums are for the general MOU only. More stringent requirements may apply on prescribed burns at sites of certain Parties to this MOU. See Appendix B (Specific Agency/Organization Requirements) for additional PPE needed for burns conducted with that specific Party to the MOU.

3. Minimum Training Requirements for Parties:  
National Wildfire Coordinating Group (NWCG) Courses

- a.
- S130 – Basic Wildland Fire Suppression
  - S190 – Introduction to Wildland Fire Behavior
  - I100 – Introduction to the Incident Command System
  - L180 – Human Factors on the Fire Line
- Or
- Florida Inter-agency Basic Prescribed Fire Training Course

b. Burn boss must be state of Florida certified burner that has participated in at least 10 prescribed burns.

Specific training requirements may be needed to participate on prescribed burns at sites of certain Parties to this MOU. See Appendix B (Specific Agency/Organization Requirements) for training required for burns conducted with that specific Party to the MOU.

Parties to this MOU are encouraged to involve trainees in prescribed burning operations. In all cases, however, such persons will be identified as trainees and will work under the direct supervision of qualified personnel.

4. Prescribed burning assistance conducted under this MOU will not be reimbursable to any Party participating in ARSA unless otherwise provided through separate interagency agreements. Each Party will absorb the costs incurred by it in performing tasks associated with this initiative. Nothing contained herein shall be construed to limit any Party's ability to apply for or receive any federal or state grants for work hereunder.

B. Responsibility of Requesting Party

1. The requesting Party will assume all responsibilities for prescribed burns conducted on its property or property for which it has management authority, including:
- Preparing burn prescriptions
  - Preparing smoke screening plans and smoke mitigation

- Preparing site for burning and managing the burn
  - Obtaining Prescribed Burn Permits or Authorizations
2. Prior to the burn, the requesting Party must supply the following to other Parties providing assistance with the burn:
    - Burn operations plan and site map(s). Burn prescription will be provided if requested
    - Safety and operational briefings
    - Radio access for each person as deemed appropriate by the Burn Manager
  3. The requesting Party will make every effort to have its own Certified Burn Manager in charge of the burn.
  4. Any rented or contracted private sector resources (equipment or personnel) will be paid for by the Party ordering those resources.
  5. Subject to the liability provisions of Section V, suppression costs for escaped prescribed burns conducted under this MOU will be paid by the Requesting Party.

**C. Responsibility of Assisting Party**

1. It shall be the goal of this working group that all Parties to this MOU will attempt to participate in at least two interagency prescribed burns per year. Participation is defined as providing available personnel and equipment to burn operations.
2. Parties providing assistance agree to work under the direction of the requesting Party or their designee(s) and will perform their duties in a safe and efficient manner.

**VII. Publicity & Media Relations**

Public relations and media contacts associated with any ARSA burning operations will be managed by the Party to this MOU managing the burn. During media events, every effort will be made to promote the cooperative, inter-agency nature of any burn being conducted by the ARSA. In order for one Party to use another Party's name, logo or insignia on any published media, such as Web page, printed publication or audiovisual production, permission must be granted from such other Party. A written request must be submitted and approval granted in writing.

**VIII. Miscellaneous**

1. Nothing in this MOU authorizes any of the Parties to obligate or transfer any funds. Specific work projects or activities that involve the transfer of funds, or property among the various agencies and offices will require execution of separate agreements and be contingent upon the availability of appropriated funds. Such activities must be

independently authorized by appropriate statutory authority. This MOU does not provide such authority. Negotiation, execution, and administration of each such agreement must comply with all applicable statutes and regulations. Each party operates under its own laws, regulations, and policies, subject to the availability of appropriated funds. Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authority.

2. This MOU takes effect upon the signature of all parties and shall remain in effect for five years from the date of execution. Modifications within the scope of this MOU must be made by mutual consent of the parties, by the issuance of a written modification signed and dated by all properly authorized, signatory officials, prior to any changes being performed. Requests for modification should be made, in writing, at least 30 days prior to implementation of the requested change. Any Party to this MOU may terminate or withdraw membership at any time before the date of expiration by providing written notice to all other Parties to this MOU at the addresses set forth in Appendix A.
3. The terms and conditions contained in the MOU will be reviewed annually by participating Parties in order to consider possible changes to the MOU, including the addition of new Parties. Amendments to this MOU must be in writing and signed by all of the Parties hereto.
4. Any information furnished to any government agency under this instrument is subject to the Freedom of Information Act (5 U.S.C. 552) and the public records laws of the State of Florida. This MOU in no way restricts any of the Parties from participating in similar activities with other public or private agencies, organizations, and individuals. All Parties will handle their own activities and utilize their own resources, including the expenditure of their own funds, in pursuing these objectives. Each Party will carry out its separate activities in a coordinated and mutually beneficial manner. This MOU is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by a Party against the United States, its agencies, its officers, or any person.
5. Any communications affecting the operations covered by this MOU given by any of the parties is sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:  
  
To the Program Manager listed for that agency, at the address specified in Appendix A of this MOU.  
  
Notices are effective when delivered in accordance with this provision, or on the effective date of the notice (if specified therein), whichever is later.
6. Pursuant to 41 U.S.C. 22, no United States member of, or United States delegate to, Congress shall be admitted to any share or part of this MOU, or benefits that may arise therefrom, either directly or indirectly.

7. **AUTHORIZED REPRESENTATIVES.** By signature below, the Partner certifies that the individuals listed in this document as representatives of the Partner are authorized to act in their respective areas for matters related to this MOU.

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**Appendix A: Participating Agency / Organization Contacts and \*Addresses**

**Florida Division of Forestry**

Ken Weber  
Tallahassee Forestry Center Manager  
865 Geddie Road  
Tallahassee, FL 32304  
850-414-1131

**Bureau of Land Management**

Bruce Dawson  
Field Manager, Jackson Field Office  
411 Briarwood Drive, Suite 404  
Jackson, MS. 39206  
601-977-5400

**Florida Department of Environmental Protection**

Parks Small  
Mail Station 530  
3900 Commonwealth Blvd.  
Tallahassee, FL 32399  
850-245-3104

**Florida Fish and Wildlife Conservation Commission**

Philip (Phil) D. Manor  
Apalachicola River WEA Field Office  
558 South Murphy Road  
Wewahitchka, FL 32465  
850-827-2934 (Office)  
850-819-9534 (Mobile)

**Northwest Florida Water Management District**

Tyler Macmillan  
Chief, Bureau of Land Management Operations  
81 Water Management Drive  
Havana, FL 32333-4712  
850-539-5999

**US Fish and Wildlife Service**

James Burnett  
North Florida Refuges Complex Manager  
P. O. Box 68  
St. Marks, FL 32355  
850-925-6121

**U.S. Forest Service**

Marcus Beard  
Apalachicola National Forest District Ranger  
57 Taff Drive  
Crawfordville, FL 32327  
850-926-3561 (Office)  
850-570-9103 (Mobile)

**The Nature Conservancy**

Zachary Prusak  
222 S. Westmonte Drive; Suite 300  
Altamonte Springs, FL 32714  
407-682-3664 (Office)

**National Interagency Prescribed Fire Training Center**

Mike Dueitt  
Center Director  
3250 Capital Circle SW  
Tallahassee, FL 32310  
850-523-8631

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\*Address of where the document will be controlled.

**Appendix B:  
Specific Agency/Organization Requirements.**

**Agency/Organization Name:** Florida Division of Forestry

**Primary Point of Contact for Party:**

Name: Ken Weber

Position Title: Tallahassee Forestry Center Manager

Address: 865 Geddie Road  
Tallahassee, FL 32304

Phone: 850-414-1131

**Additional PPE requirements (for parties helping your agency/organization).**

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**Training requirements (for parties helping your agency/organization).**

S130 – Basic Wildland Fire Suppression, S190 – Introduction to Wildland Fire Behavior, I100 – Introduction to the Incident Command System, and L180 – Human Factors on the Fireline (collectively)

Or

Florida Inter-agency Basic Prescribed Fire Training Course

**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

- o Prescribed fires conducted on DOF properties will require a DOF employee as burn boss and they must be qualified as a Certified Burn Manager
- o When burn parameters seem extreme or unsafe, DOF may opt out of participating in scheduled burns

- DOF existing agreements will not be superseded by the ARSA agreement. However any DOF participation in prescribed burns, in which fees are not assessed, will be considered as fulfilling the ARSA agreement
- DOF aircraft is not offered for inclusion as potential shared resources.

**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

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**Appendix B:  
Specific Agency/Organization Requirements.**

**Agency/Organization Name:** Florida Department of Environmental Protection (DEP)

**Primary Point of Contact for Party:**

Name: Parks Small

Position Title: Chief, Bureau of Natural and Cultural Resources

Address: Division of Recreation and Parks  
Mail Station 530  
3900 Commonwealth Blvd.  
Tallahassee, FL 32399

Phone: 850-245-3104

**Additional PPE requirements (for parties helping your agency/organization).**

Requirements outlined in Section 6.2.a are acceptable; additional requirements may be added on a case-by-case basis at the burn boss or site manager's discretion in accordance with DEP standards.

**Training requirements (for parties helping your agency/organization).**

Requirements outlined in Section 6.3.a are acceptable for crew; additional requirements for crew boss or burn boss may be added on a case-by-case basis at the burn boss or site manager's discretion in accordance with DEP standards.

**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

No DEP vehicles will be loaned unless operated by a DEP employee.

**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

None

**Appendix B:  
Specific Agency/Organization Requirements.**

**Agency/Organization Name:** FL Fish and Wildlife Conservation Commission

**Primary Point of Contact for Party:**

**Name:** Philip (Phil) D. Manor

**Position Title:** District Biologist – Northwest Region/Eastern District

**Address:** Apalachicola River WEA Field Office  
558 South Murphy Road  
Wewahitchka, FL 32465

**Phone:** 850-827-2934 (Office)  
850-819-9534 (Mobile)

**Additional PPE requirements (for parties helping your agency/organization).**

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**Training requirements (for parties helping your agency/organization).**

S130 – Basic Wildland Fire Suppression, S190 – Introduction to Wildland Fire Behavior,  
I100 – Introduction to the Incident Command System, and Standards for Survival (collectively)

Or

Florida Inter-agency Basic Prescribed Fire Training Course

**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

Any loan of motor-operated equipment by the Florida Fish and Wildlife Conservation  
Commission must be accompanied by an agency employee-operator.

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**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

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**Appendix B:  
Specific Agency/Organization Requirements**

**Agency/Organization Name:** Northwest Florida Water Management District

**Primary Point of Contact for Party**

Name: Tyler Macmillan

Position Title: Chief, Bureau of Land Management Operations

Address: 81 Water Management Drive  
Havana, FL 32333-4712

Phone: (850) 539-5999

**Additional PPE requirements (for parties helping your agency/organization).**

Same as listed in Section IV.A.2a.

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**Training requirements (for parties helping your agency/organization).**

S130 – Basic Wildland Fire Suppression, S190 – Introduction to Wildland Fire Behavior,  
I100 – Introduction to the Incident Command System, and Standards for Survival (collectively)

Or

Florida Inter-agency Basic Prescribed Fire Training Course

**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

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**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

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**Appendix B:  
Specific Agency/Organization Requirements**

**Agency/Organization Name:** Apalachicola National Forest

**Primary Point of Contact for Party**

Name: Marcus Beard

Position Title: District Ranger

Address: 57 Taff Drive, Crawfordville, FL 32327

Phone: 850-926-3561

**Additional PPE requirements (for parties helping your agency/organization).**

Standard PPE requirements required for all resources. Handheld radios are issued for in accordance with "Redbook" (Interagency Standards for Fire and Fire Aviation Operations NFES 2424) guidance on supervisory span of control, but not all personnel will have a radio.

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**Training requirements (for parties helping your agency/organization).**

S130 – Basic Wildland Fire Suppression, S190 – Introduction to Wildland Fire Behavior, I100 – Introduction to the Incident Command System, and Standards for Survival. Only NWCG PMS 310-1 fully-qualified personnel and trainees shall be engaged in interagency wildland and prescribed fire operations.

**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

Prescribed fires conducted on USFS lands will require a USFS employee as burn boss.

When two or more burn parameters are extreme, USFS may opt out of participating in scheduled burn.

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USFS aircraft or leased aircraft is not offered for inclusion as potential shared resources.

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**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

The parties shall acknowledge U.S. Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this MOU.

Any of the parties' contributions made under this MOU do not by direct reference or implication convey U.S. Forest Service endorsement of that party's products or activities.

Any of the parties shall immediately inform the U.S. Forest Service if they or any of their principals are presently excluded, debarred, or suspended from entering into covered transactions with the federal government according to the terms of 2 CFR Part 180. Additionally, should any of the parties or any of their principals receive a transmittal letter or other official Federal notice of debarment or suspension, then they shall notify the U.S. Forest Service without undue delay. This applies whether the exclusion, debarment, or suspension is voluntary or involuntary.

**Appendix B:  
Specific Agency/Organization Requirements**

**Agency/Organization Name:** The Nature Conservancy

**Primary Point of Contact for Party**

**Name:** Zachary Prusak  
**Position Title:** Fire Manager  
**Address:** 222 S. Westmonte Dr, Suite 300  
Altamonte Springs, Fl, 32714  
**Phone:** (407) 682-3664

**Additional PPE requirements (for parties helping your agency/organization).**

Standard PPE requirements needed for all resources.  
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**Training requirements (for parties helping your agency/organization).**

S130 – Basic Wildland Fire Suppression, S190 – Introduction to Wildland Fire Behavior,  
I100 – Introduction to the Incident Command System, and Standards for Survival (collectively)  
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**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

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**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

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**Appendix B:  
Specific Agency/Organization Requirements**

**Agency/Organization Name:** Bureau of Land Management

**Primary Point of Contact for Party**

**Name:** Bruce Dawson  
**Position Title:** Field Manager, Jackson Field Office  
**Address:** 411 Briarwood Drive, Suite 404  
Jackson, MS. 39206  
**Phone:** 601-977-5400

**Additional PPE requirements (for parties helping your agency/organization).**

Standard PPE requirements required for all resources. Handheld radios are issued for in accordance with "Redbook" (Interagency Standards for Fire and Fire Aviation Operations NFES 2424) guidance on supervisory span of control, but not all personnel will have a radio.

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**Training requirements (for parties helping your agency/organization).**

- S130- Basic Fire Suppression
- S190- Introduction to Wildland Fire Behavior
- I100- Introduction to the Incident Command System
- L180 Human Factors on the Fireline
- Standards for Survival
- At least one certified burner acting as a burn boss that has participated in at least 10 prescribed burns.
- One certified ignition specialist.

**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

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**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

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**Appendix B:  
Specific Agency/Organization Requirements**

**Agency/Organization Name:** US Fish & Wildlife Service

**Primary Point of Contact for Party**

Name: James Burnett  
Position Title: North Florida Refuges Complex Manager  
Address: P. O. Box 68, St. Marks, FL 32355  
Phone: 850-925-6121

**Additional PPE requirements (for parties helping your agency/organization).**  
Standard PPE requirements required for all resources. Handheld radios are issued for  
in accordance with "Redbook" (Interagency Standards for Fire and Fire Aviation Operations  
NFES 2424) guidance on supervisory span of control, but not all personnel will have a  
radio.

**Training requirements (for parties helping your agency/organization).**  
S130 – Basic Wildland Fire Suppression, S190 – Introduction to Wildland Fire Behavior,  
I100 – Introduction to the Incident Command System, and Standards for Survival  
(Collectively). Only NWCG PMS 310-1 fully-qualified personnel and trainees shall be  
engaged in interagency wildland and prescribed fire operations. Signatories to the  
NWCG recognize the qualifications of the other signing agency's or organization's  
personnel. Contractors and consultants hired by the USFWS must meet PMS 310-1  
qualifications for the position they will be filling.

**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

When a USFWS employee is requested to serve as a Prescribed Burn Boss for a cooperating organization, a written Prescribed Burn Plan is required, and must meet the content requirements of the Interagency Prescribed Burn Plan Template. The written Prescribed Burn Plan shall contain a listing of contingency resources and the standard operating procedures for converting or transitioning a prescribed burn to a wildfire.

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**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

The FWS can treat fuels on private lands under the authority of the Wyden Amendment which is Codified in the Title 16, Chapter 18, Section 1011 of the Code of Federal Regulations or the Interior Appropriation Act. To comply with the CFR there must be a signed agreement between the FWS and the specific private landowner. The roles, responsibilities, and risk and liability concerns need to be reflected in an appropriate formal agreement between the FWS and the specific landowner.

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The FWS's Partners for Fish & Wildlife program under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), Fish and Wildlife Coordination Act 16 U.S.C. 742a-j), and partners for Fish and Wildlife Act of 2006 (16 U.S.C. 3771 et seq.) provides opportunity for additional prescribed burning assistance and an appropriate funding mechanism to private landowners under appropriate formal agreement.

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**Federal personnel engaged in fire operations must be supervised by NWCG-qualified individuals or by individuals authorized to perform such duties by an organization that is a signatory to the NWCG.**

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**Appendix B:  
Specific Agency/Organization Requirements**

**Agency/Organization Name:** National Interagency Prescribed Fire Training Center

**Primary Point of Contact for Party**

**Name:** Mike Dueitt

**Position Title:** Center Director

**Address:** 3250 Capital Circle SW, Tallahassee, FL 32310

**Phone:** 850-523-8631      **Cell Phone:** 850-766-1254

**Additional PPE requirements (for parties helping your agency/organization).**

Standard PPE requirements required for all resources. Handheld radios are issued for in accordance with "Redbook" (Interagency Standards for Fire and Fire Aviation Operations NFES 2424) guidance on supervisory span of control, but not all personnel will have a radio.

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**Training requirements (for parties helping your agency/organization).**

NWCG PMS 310-1.

S130 – Basic Wildland Fire Suppression, S190 – Introduction to Wildland Fire Behavior, I100 – Introduction to the Incident Command System, and Standards for Survival (Collectively). Only NWCG PMS 310-1 fully-qualified personnel and trainees shall be engaged in interagency wildland and prescribed fire operations. Signatories to the NWCG recognize the qualifications of the other signing agency's or organization's personnel.

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**Additional rules or stipulations regarding equipment/personnel lending to other agencies/organizations.**

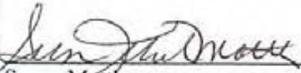
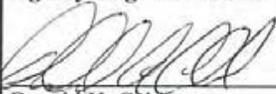
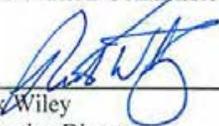
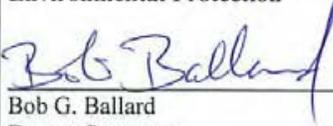
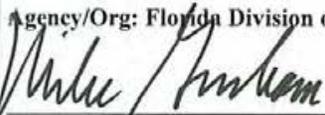
When a NIPFTC team member is requested to serve as a Prescribed Burn Boss for a cooperating organization, a written Prescribed Burn Plan is required, and must meet the content requirements of the Interagency Prescribed Burn Plan Template. The written Prescribed Burn Plan shall contain a listing of contingency resources and the standard operating procedures for converting or transitioning a prescribed burn to a wildfire.

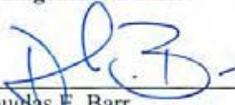
**Further Partner specific concerns, regulations, requirements, or information not addressed or mentioned in main body of MOU document.**

NIPFTC teams will have a designated Chief of Party. In the event that the Chief of Party determines that the prescribed burn project can not be safely implemented, or has serious concerns about the advisability of burning, and is unable to reach agreement to rectify the situation, he or she reserves the right to decline participation.

**Federal personnel engaged in fire operations must be supervised by NWCG-qualified individuals or by individuals authorized to perform such duties by an organization that is a signatory to the NWCG.**

**Signature Page**

<p><b>Approved:</b></p> <p><b>Agency/Org: US Forest Service</b></p> <p> 8-24-10          Susan Matthews Date          Forest Supervisor National Forests in Florida</p> <p>USDA Forest Service National Forests in Florida          325 John Knox Road          Suite F-100          Tallahassee, FL 32303</p>	<p><b>Approved:</b></p> <p><b>Agency/Org: US Fish &amp; Wildlife Service</b></p> <p> 8-25-10          Donald H. Calder Date          Chief, Division of Contracting &amp; General Services</p> <p>US Fish &amp; Wildlife Service          Southeast Region          1875 Century Blvd NE, Suite 400          Atlanta, GA 30345</p>
<p><b>Approved:</b></p> <p><b>Agency/Org: Florida Fish and Wildlife Conservation Commission</b></p> <p> 8-16-10          Nick Wiley Date          Executive Director</p> <p>Florida Fish and Wildlife Conservation Commission          620 S. Meridian St.          Tallahassee, FL 32399-1600</p>	<p><b>Approved:</b></p> <p><b>Agency/Org: Florida Department of Environmental Protection</b></p> <p> 8/30/10          Bob G. Ballard Date          Deputy Secretary</p> <p>Office of Land and Recreation          Douglas Bldg. 1021 D          3900 Commonwealth Blvd.          Tallahassee, FL 32399-3000</p>
<p><b>Approved:</b></p> <p><b>Agency/Org: Florida Division of Forestry</b></p> <p> 9/15/2010          Mike Gresham Date          Director of Administration</p> <p>Florida Department of Agriculture and Consumer Services – Division of Forestry          407 South Calhoun Street          Tallahassee, FL 32399-0800</p>	<p><b>Approved:</b></p> <p><b>Agency/Org: The Nature Conservancy</b></p> <p> 7/24/10          Jeff Dantler Date          State Director</p> <p>The Nature Conservancy          222 South Westmonte Drive, Suite 300          Altamonte Springs, FL 32714-4269          Legal Review: J.Wilson – 5/4/10</p>

<p><b>Approved:</b></p> <p><b>Agency/Org: Northwest Florida Water Management District</b></p> <p> 09/04/10  Date</p> <p>Douglas E. Barr  Executive Director</p> <p>81 Water Management Drive  Havana, FL 32333-4712</p>	<p><b>Approved:</b></p> <p><b>Agency/Org: National Interagency Prescribed Fire Training Center</b></p> <p> 8/30/2010  Date</p> <p>Mike Ducitt  Center Director</p> <p>3250 Capital Circle SW  Tallahassee, FL 32310</p>
<p><b>Approved:</b></p> <p><b>Agency/Org: Bureau of Land Management</b></p> <p> 10/8/2010  Date</p> <p>Bruce Dawson  Field Manager, Jackson Field Office</p> <p>411 Briarwood Drive, Suite 404  Jackson, MS. 39206</p>	

First Amendment to

FDACS CONTRACT #

Memorandum of Understanding

016599

Apalachicola Regional Stewardship Alliance

Participating Agencies/Organizations

Florida Fish and Wildlife Conservation Commission  
Florida Department of Environmental Protection  
Florida Forest Service  
The Nature Conservancy  
Northwest Florida Water Management District  
U.S. Fish and Wildlife Service  
U.S. Forest Service  
Bureau of Land Management  
National Interagency Prescribed Fire Training Center  
Tyndall Air Force Base

THIS FIRST AMENDMENT TO MEMORANDUM OF UNDERSTANDING BETWEEN THE MEMBERS OF THE APALACHICOLA REGIONAL STEWARDSHIP ALLIANCE (the "Parties" and/or "Partners") is made this 16<sup>th</sup> day of APRIL, 2013.

WITNESSETH:

WHEREAS, the Parties hereto entered into that certain Memorandum of Understanding; and

WHEREAS, the Parties desire to add a new party to the Apalachicola Regional Stewardship Alliance and insert the date the Memorandum of Understanding was entered into;

NOW, THEREFORE, for and in consideration of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. The Air Force at Tyndall Air Force Base, Florida (hereinafter "Tyndall AFB") shares the desire of the collective group to initiate and implement a strategy for the conservation and stewardship of the natural resources managed by the participants within the alliance known as the Apalachicola Regional Stewardship Alliance (ARSA) in Northwest Florida.
2. It is the desire of Tyndall AFB to adopt and participate in the objectives and goals identified by the members of this alliance. By signing below Tyndall AFB agrees to and adopts the terms of the attached Memorandum of Understanding for the Apalachicola Regional Stewardship Alliance and becomes a member of the Alliance.

1

3. The authorized representative(s) for Tyndall AFB shall be:

Daniel L. Childs

Gwendolyn A. Jones

Theron R. Turner

4. The Article II, Objectives, shall be amended as follows:

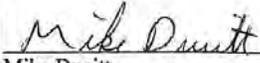
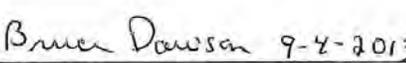
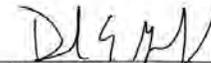
**“II. Objectives**

This Memorandum of Understanding (MOU) is hereby entered into this \_\_\_\_ day of \_\_\_\_\_, 2013 between The Florida Department of Agriculture, Florida Forest Service (FFS), Florida Department of Environmental Protection, (DEP), the Florida Fish and Wildlife Conservation Commission (FWC), the US Fish and Wildlife Service (USFWS), US Forest Service (USFS), Bureau of Land Management (BLM), National Interagency Prescribed Fire Training Center, (PFTC), Northwest Florida Water Management District (NFWFMD), The Nature Conservancy (TNC), and the Air Force at Tyndall Air Force Base, Florida (Tyndall AFB) (collectively, “Parties” or “Partners”), covering reciprocal fire use, as well as providing mutual assistance for other land management activities, sharing information, and communicating to the public our mutual management successes in meeting both individual and common goals related to this MOU. This MOU establishes the Apalachicola Regional Stewardship Alliance (ARSA), which will provide staffing and equipment to conduct prescribed fires on lands administered by the participating Parties, cooperate with fire training and education opportunities, and will promote public understanding and acceptance of prescribed fire in this region. In many instances a prescribed burning program is limited by its personnel, equipment, or local weather. It is the intent of this cooperative effort that by uniting skills, tools, and abilities that the combined burning accomplished by the ARSA will exceed the sum total of the respective agencies and entities on their own. This MOU also provides for the sharing of information concerning land management and ecosystem restoration techniques. Lastly, it is the intent that this MOU serve as a vehicle for sharing of resources to promote ground cover restoration. These resources could include but would not be limited to seed collecting and planting equipment, personnel, as well as providing sites for the collection of native ground cover seed.”

5. All other terms of the Contract for Services remain unchanged and in full force and effect and are hereby ratified and confirmed as of this Amendment date.

IN WITNESS WHEREOF, the parties have hereunto set their hands as of the day and year first above written.

<p><b>Approved:</b></p> <p>Agency/Org: US Forest Service</p> <p><i>Susan Matthews</i> 7-1-13          Susan Matthews Date          Forest Supervisor National Forests in Florida</p> <p>USDA Forest Service National Forests in Florida          325 John Knox Road          Suite F-100          Tallahassee, FL 32303</p>	<p><b>Approved:</b></p> <p>Agency/Org: US Fish &amp; Wildlife Service</p> <p><i>Donald H. Calder</i> 8/24/2013          Donald H. Calder Date          Chief, Division of Contracting &amp; General Services</p> <p>US Fish &amp; Wildlife Service          Southeast Region          1875 Century Blvd NE, Suite 400          Atlanta, GA 30345</p>
<p><b>Approved:</b></p> <p>Agency/Org: Florida Fish and Wildlife Conservation Commission</p> <p><i>Nick Wiley</i> 7-30-13          Nick Wiley Date          Executive Director</p> <p>Florida Fish and Wildlife Conservation Commission          620 S. Meridian St.          Tallahassee, FL 32399-1600</p>	<p><b>Approved:</b></p> <p>Agency/Org: Florida Department of Environmental Protection</p> <p><i>Alfred P. Dougherty</i> 6/21/13          Alfred Dougherty Date          Deputy Secretary</p> <p>Office of Land and Recreation          Douglas Bldg. 1021 D          3900 Commonwealth Blvd.          Tallahassee, FL 32399-3000</p>
<p><b>Approved:</b></p> <p>Agency/Org: Florida Forest Service</p> <p><i>Mike Gresham</i> May 9, 2013          Mike Gresham Date          Director of Administration</p> <p>Florida Department of Agriculture and Consumer Services – Florida Forest Service          407 South Calhoun Street          Tallahassee, FL 32399-0800</p>	<p><b>Approved:</b></p> <p>Agency/Org: The Nature Conservancy</p> <p><i>Michelle Lakly</i> 5/2/2013          Michelle Lakly, Ph.D. Date          State Director</p> <p>The Nature Conservancy          222 South Westmonte Drive, Suite 300          Altamonte Springs, FL 32714-4269          Legal Review: <u>Geoff Rich</u> 3/9/2012</p>

<p><b>Approved:</b></p> <p><b>Agency/Org: Northwest Florida Water Management District</b></p> <p> 6/6/13 Date</p> <p>Jon Stevenson Executive Director</p> <p>81 Water Management Drive Havana, FL 32333-4712</p>	<p><b>Approved:</b></p> <p><b>Agency/Org: National Interagency Prescribed Fire Training Center</b></p> <p> 5/16/2013 Date</p> <p>Mike Ducitt Center Director</p> <p>3250 Capital Circle SW Tallahassee, FL 32310</p>
<p><b>Approved:</b></p> <p><b>Agency/Org: Bureau of Land Management</b></p> <p> 9-4-2013 Date</p> <p>Bruce Dawson Field Manager, Jackson Field Office</p> <p>411 Briarwood Drive, Suite 404 Jackson, MS. 39206</p>	<p><b>Approved:</b></p> <p><b>Agency/Org: 325th Fighter Wing at Tyndall AFB, FL</b></p> <p> APR 16 2013 Date</p> <p>David E. Graff, Colonel, USAF Commander, 325th Fighter Wing</p> <p>501 Illinois Ave., Suite 1 Tyndall AFB, FL 32403</p>

## 13.12 GRASI Memorandum of Understanding

MEMORANDUM OF AGREEMENT BETWEEN  
THE PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR  
INSTALLATIONS, ENVIRONMENT AND LOGISTICS  
PENTAGON, WASHINGTON, D.C. 20330  
AND  
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
TALLAHASSEE, FL 32399  
FOR THE PROVISION OF MILITARY TRAINING ON STATE LANDS

THIS MEMORANDUM OF AGREEMENT (hereafter, the "Agreement") is made and entered into by and between Office of the Principal Deputy Assistant Secretary of the Air Force for Installations, Environment and Logistics (hereinafter, "Air Force") and Florida Fish and Wildlife Conservation Commission (hereinafter, "Commission").

WITNESSETH:

WHEREAS, the Air Force, in order to successfully accomplish mission requirements has a need for expanded training opportunities in Northwest Florida beyond the current Department of Defense lands and training areas, and

WHEREAS, the Commission is responsible for managing, protecting, maintaining, and developing over 1.4 million acres of state conservation land ("Commission Lead-Managed Lands"), and

WHEREAS, the Parties have mutually concluded that it is desirable, practicable, and beneficial for the Parties to enter this Agreement to the mutual benefit of both and the goal is to work together in an effort to enhance both Parties' ability to carry out their respective missions.

NOW, THEREFORE, BE IT AGREED THAT:

1. Military training operations on the Commission Lead-Managed Lands in Northwest Florida can be compatible for both Parties without unreasonable impacts to resources if conducted with the proper planning and coordination.
2. Commission staff and Air Force personnel will work together to develop a detailed "Annual Operations Plan" that:
  - a. Establishes a framework through which military training exercises may be conducted on State-owned Commission Lead-Managed Lands. This framework may include other appropriate instruments within the jurisdiction of both Parties.
  - b. Identifies number and locations of compatible available sites in the Northwest Florida region, to be defined as "training sites".
  - c. Provides detailed maps showing boundaries delineating training areas.
  - d. Details limitations of liability between the parties.
  - e. Estimates the frequency of use of the sites.
  - f. Indicates the types of compatible training allowed and the training activities that are expected to be prohibited.
  - g. Establishes procedures for requesting, cancelling, coordinating and notification of the use of training sites.

- h. Identifies options for compensation or reimbursement for the Commission providing lands for training through cash payment or in-kind services.
- i. Establishes a feedback mechanism to assess the usefulness of the training site for the Air Force and the impact, if any, upon the mission of the Commission.
- j. Identifies and clarifies the Air Force's responsibility with regard to the National Environmental Policy Act (NEPA).

**EXECUTION OF THIS AGREEMENT:**

- 3. This Agreement shall become effective upon the date last signed below, and shall remain in full force and effect until cancelled by mutual agreement of the Parties, or upon the provision of at least sixty (60) days advance written notice from the Party desiring to terminate this Agreement to the other Party. Upon becoming effective, this Agreement shall supersede all previous agreements between the Parties on the same subject.
- 4. Unless a notice of change of address is given, any and all notices shall be delivered to the parties at the following addresses:

**Commission**

Mike Brooks  
 Section Leader  
 Wildlife and Habitat Management Section  
 620 South Meridian Street  
 Tallahassee, Florida 32399-1600  
 (850) 488-3831

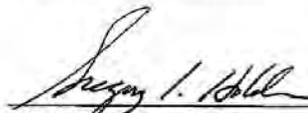
**Air Force**

Kathleen I. Ferguson, P.E.  
 Principal Deputy Assistant Secretary  
 (Installations, Environment & Logistics)  
 Pentagon, Washington, D.C.  
 (703) 697-6300

IN WITNESS WHEREOF, authorized representatives of the Parties have affixed their signatures hereto, in recognition and acceptance of the terms, conditions and obligations set forth and or assumed under this Agreement.

**Florida Fish and Wildlife  
 Conservation Commission:**

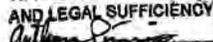
**Department of the Air Force:**

  
 Nick Wiley, Executive Director

\_\_\_\_\_  
 Kathleen I. Ferguson, P.E.  
 Principal Deputy Assistant Secretary  
 (Installations, Environment & Logistics)  
 Pentagon, Washington, D.C.

DATE: 3-25-13

DATE: \_\_\_\_\_

APPROVED AS TO FORM  
 AND LEGAL SUFFICIENCY  
  
 Commission Attorney

- h. Identifies options for compensation or reimbursement for the Commission providing lands for training through cash payment or in-kind services.
- i. Establishes a feedback mechanism to assess the usefulness of the training site for the Air Force and the impact, if any, upon the mission of the Commission.
- j. Identifies and clarifies the Air Force's responsibility with regard to the National Environmental Policy Act (NEPA).

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- 4. Unless a notice of change of address is given, any and all notices shall be delivered to the parties at the following addresses:

**Commission**

Mike Brooks  
 Section Leader  
 Wildlife and Habitat Management Section  
 620 South Meridian Street  
 Tallahassee, Florida 32399-1600  
 (850) 488-3831

**Air Force**

Kathleen I. Ferguson, P.E.  
 Acting Assistant Secretary  
 (Installations, Environment & Logistics)  
 Pentagon, Washington, D.C.  
 (703) 697-6300

IN WITNESS WHEREOF, authorized representatives of the Parties have affixed their signatures hereto, in recognition and acceptance of the terms, conditions and obligations set forth and or assumed under this Agreement.

**Florida Fish and Wildlife  
 Conservation Commission:**

**Department of the Air Force:**

\_\_\_\_\_  
 Nick Wiley, Executive Director

  
 Kathleen I. Ferguson, P.E.  
 Acting Assistant Secretary  
 (Installations, Environment & Logistics)  
 Pentagon, Washington, D.C.  
 MAR 22 2013

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

### **13.13 FWC Apiary Policy**

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

# Apiary Policy

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Division of Habitat and Species Conservation

Issued by:  
Terrestrial Habitat Conservation and Restoration Section  
9/1/2010

Enclosed is the HSC/THCR Apiary Policy for all Florida Fish and Wildlife Conservation Commission's Wildlife Management Areas and Wildlife and Environmental Areas.

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## DIVISION OF HABITAT AND SPECIES CONSERVATION POLICY

Issued September 2010

**SUBJECT: APIARY SITES ON FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
WILDLIFE MANAGEMENT AREAS AND WILDLIFE AND ENVIRONMENTAL AREAS**

**STATEMENT OF PURPOSE:** It is the intent of this policy to determine which Florida Fish and Wildlife Conservation Commission (FWC) Wildlife Management Areas or Wildlife and Environmental Areas (WMA/WEA) may have apiary sites, and provides direction on site location, management and administration of said apiaries.

### Definitions

**Apiary** – A place where bees and beehives are kept, especially a place where bees are raised for their honey.

**Apiary Site** – An area set aside on a WMA/WEA for the purpose of allowing a beekeeper to locate beehives in exchange for a fee as established by contract between the beekeeper and FWC.

**Apiary Wait List** – An apiary wait list will be maintained by the Terrestrial Habitat Conservation and Restoration (THCR) Section Leader's Office based on applications received from interested beekeepers. Only qualified apiarists will be added to the list. To become qualified the new apiarist must submit an application form and meet the criteria below under the section titled "Apiary Wait List and Apiary Application."

**Beekeeper/Apiarist** – A person who keeps honey bees for the purposes of securing commodities such as honey, beeswax, pollen; pollinating fruits and vegetables; raising queens and bees for sale to other farmers and/or for purposes satisfying natural scientific curiosity.

**Best Management Practices** – The Florida Department of Agriculture & Consumer Services (FDACS; Division of Plant Industry (DPI), Apiary Inspection Section, P.O. Box 147100, Gainesville, FL 332614-1416) provides Best Management Practices (BMP) for maintaining European Honey Bee colonies and FWC expects apiarists to follow the BMP.

**Hive/Colony** – Means any Langstroth-type structure with movable frames intended for the housing of a bee colony. A hive typically consists of a high body hive box with cover, honey frames, brood chambers and a bottom board and may have smaller super hive boxes stacked on top for the excess honey storage. A hive/colony includes one queen, bees, combs, honey, pollen and brood and may have additional supers stacked on top of a high body hive box.

### Establishment of Apiary Sites on WMA/WEA

During the development of an individual WMA/WEA Management Plan, apiaries will be considered under the multiple-use concept as a possible use to be allowed on the area. "Approved" uses are deemed to be in concert with the purposes for state acquisition, with the Conceptual State Lands Management Plan, and with the FWC agency mission, goals, and objectives as expressed in the agency strategic plan and priorities documents. Items to consider when making this determination can also include:

- Were apiaries present on the area prior to acquisition?
- Are there suitable available sites on the WMA/WEA?
- Will the apiary assist in pollination of an onsite FWC or offsite (adjacent landowner) citrus grove or other agricultural operation?

For those WMA/WEAs that have not considered apiaries in their Management Plan, upon approval of this policy Regional Staff will work with the Conservation Acquisition and Planning (CAP) staff and THCR Section leadership to determine if apiaries are an approved use on the area. If apiaries are considered an approved use then a request will be made to the Division of State Lands to allow this use as part of an amended Management Plan. This request will be made through the THCR's Section Leader's office and coordinated by the CAP.

Determination of apiary site locations on WMA/WEAs should be done using the following guidelines:

- Apiary sites should be situated so as to be at least one-half mile from WMA/WEA property boundary lines, and at least one mile from any other known apiary site. Exceptions to this requirement must be reviewed by the Area Biologist and presented to the THCR Section Leader for approval.
- Site should be relatively level, fairly dry, and not be prone to flooding when bees would normally be present.
- Site should be accessible by roads which allow reasonable transfer of hives to the site by vehicle.
- If a site is to be located near human activity, such as, an agricultural field, food plot, wildlife opening, campsites, etc., or if the site may be manipulated by machinery at a time when bees would be present, then the apiary site should be located at a minimum of 150 to 200 yards from the edge of that activity. This will ensure minimal disturbance to the bees and minimize incidents with anyone working in the area.

- It is preferable to have apiary sites located adjacent to or off roads whenever possible. If traditional apiary sites were located on roads and the Area Biologist determines that the site will not impact use of the road by visitors then it will be allowed.
- FWC Area Biologist shall select apiary site(s) and the site(s) selected should not require excessive vegetation clearing (numerous large trees, dense shrubs) or ground disturbance (including fill).

#### WMA/WEA Staff Responsibilities

Area Biologist on WMAs/WEAs with approved apiary sites will forward a GIS shapefile depicting all the apiary site polygon(s), including a name or number with coordinates for each apiary site, to the THCR Contract Manager.

Area Biologist will monitor each apiary site no less than once a year to determine if the beekeeper is abiding by the contract requirements. If violations are noted, staff should bring them to the attention of the beekeeper for correction. If violations continue staff should notify the THCR Contract Manager who will determine if or what additional action is warranted.

Area Biologist will establish and maintain firelines around the apiary site to ensure the apiary site is ready when a planned burn is scheduled.

Area Biologist will advise the beekeeper of burn plans, road work, gate closures, or other site conditions and management activities that may affect the beekeeper's ability to manage or access the apiary site.

Area Biologist is not responsible to ensure access roads are in condition suitable for beekeepers to access their hives with anything other than a four wheeled drive vehicle. (The site of the apiary may be high and dry, but the roads accessing them may be difficult to impossible to get a two wheeled drive vehicle into during extreme weather, e.g., heavy rainfall events.)

#### Apiary Wait List and Apiary Application

An electronic waiting list for apiary sites will be maintained by the THCR's Contract Manager for each WMA/WEA. To be placed on the waiting list an interested beekeeper must submit an apiary application form to the contract manager (See Enclosed Application Form). Each applicant will be considered based on the following criteria:

- Proof of a valid registration with the FDACS/DPI.
- Proof of payment of outstanding special inspection fees for existing sites.
- A validated history of being an apiary manager.
- Three references that can attest to the applicant's beekeeping experience.

If an apiary site becomes available on a WMA/WEA and there are beekeepers on the waiting list interested in that particular area, those individuals meeting the criteria above will be given preference. If there is more than one beekeeper meeting the criteria with their name on the list then a random drawing will be held by the THCR Contract Manager to determine who will receive the site. Beekeepers on the waiting list will be notified in writing of the random drawing's date/location and will be invited to attend. The individual's name selected during this drawing will be awarded the contract.

Apiary agreements are non-transferable. Each agreement serves as a contract between a specific individual or company and FWC, and the rights and responsibilities covered by an individual agreement cannot be transferred.

#### Contracts

Apiary contracts are for five (5) years and renewals are contingent upon a satisfactory performance evaluation by Area Biologist and concurrence of the THCR Section Leader. Approval is based on apiarist performance, adherence to rules and regulations and general cooperation. If an Area Biologist decides an apiarist whose contract is expiring is unacceptable he may recommend not approving the new contract. If this transpires then the wait list process using random selection will be used. If there is no apiarist on a current wait list then the apiarists who are in good standing with existing contracts will be notified to see if any want to be put on the wait list for the drawing. If none are interested then the site will be put on hold pending a valid request.

#### Pricing of Apiary Site(s)

Cost of each apiary site will be \$40 annually which will include up to 50 beehives. Additional beehives will be charged at the rate of \$40 per 50 beehives.

Pricing examples:

- A beekeeper is leasing 2 apiary sites with up to 100 beehives - the fee per year is \$80.
- A beekeeper is leasing 3 apiary sites with up to 200 beehives - the fee per year is \$160.

Note: The maximum number of hives/colonies allowed on an apiary site will be at the discretion of the apiarist. However, the apiarist is strongly recommended to follow the BMP as recommended by the FDACS/DPI. In addition to providing the BMP, FDACS/DPI's management has recommended 50 hives per site in pineland communities and no more than 100 hives per site in areas with bountiful resources. However, FWC will not dictate the number of hives on a site unless they create land management issues.

#### Bear Depredation Control at Apiary Site(s)

Beekeepers are required to consult with the WMA/WEA Area Biologist to see if electric fencing is required for their apiary sites. If the Area Biologist requires electric fencing then the

Beekeeper shall construct and maintain electric fences for each apiary site. Numerous electric fence designs have been used to varying success and FWC as a courtesy provides an electric fence technical information bulletin with each Agreement. This bulletin is attached in order to assist the Beekeeper and/or provide a design that has been proven to be reasonable effective.

SUBJECT MATTER REFERENCES

Apiary Inspection Law - Chapter 586, Florida Statutes (see <http://www.leg.state.fl.us/Statutes/>), Rule Chapter 5B-54, Florida Administrative Code (see [www.flrules.org](http://www.flrules.org)).

The Board of Trustees of the Internal Improvement Trust Fund – Recommended Apiary Agreement Guidelines For Apiaries & Revisions to an Agreement for Apiary Activities on State Lands on September 23, 1986  
[S:\HSC\THCR\APIARY.BACKUP.POLICY\dlissupport@dos.state.fl.us\\_20100903\\_111446.pdf](S:\HSC\THCR\APIARY.BACKUP.POLICY\dlissupport@dos.state.fl.us_20100903_111446.pdf)

Senate Resolution 580, September 21, 2006: [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109\\_cong\\_bills&docid=f:sr580ats.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:sr580ats.txt.pdf)

Attachments

Sample Apiary Agreement W/Attachments (Map Placeholder & Electric Fence Bulletin)

Sample Apiary Site Application Form W/Mission Statement

Best Management Practices for Maintaining European Honey Bee Colonies

Sample of Random Selection Process Procedure

**APPROVED:**

\_\_\_\_\_  
**Division Director or Designee**

**DATE:** \_\_\_\_\_

## APIARY AGREEMENT

### AGREEMENT FOR APIARY ACTIVITIES ON STATE LANDS

THIS AGREEMENT is made by and between the Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600, hereinafter known as "the COMMISSION," and (Insert Name and Address of Apiarist Here), telephone number (Insert Phone Number of Apiarist Here), hereinafter known as "the USER."

#### WITNESSETH

In consideration of the mutual promises to be kept by each and the payments to be made by the USER, the parties agree as follows:

1. TERM: This Agreement will begin (Insert date here) or the date signed by both parties, whichever is later, and will end five (5) years from the date of execution. Issuance of a new five (5) year Agreement is contingent upon satisfactory performance evaluation by the Area Biologist and approval of the THCR Section Leader.
2. The COMMISSION Agrees:
  - a. To provide apiary sites on state lands, which will be identified by the COMMISSION staff and located on the property identified in (4)(f) below.
  - b. To provide technical assistance for bear-proofing, if required by Area Biologist, of sites made available under this Agreement.
  - c. To allow the USER to place a total number of (insert number of hive boxes here) hive boxes on the COMMISSION-managed property at the apiary site(s).
3. The USER Agrees:
  - a. To pay (Insert Total Dollars Here) on or before the execution date of this Agreement and each year thereafter on or before anniversary date of the original contract execution date, with check or money order payable to the Florida Fish and Wildlife Conservation Commission. All payments shall be remitted to The Florida Fish and Wildlife Conservation Commission, Finance and Budgeting, Accounting Section, PO Box 6150, Tallahassee, FL 32399-6150, and a copy of the check to The Florida Fish and Wildlife Conservation Commission, Terrestrial Habit Conservation and Restoration Section, Attn: Section Leader, 620 South Meridian Street, Tallahassee, Florida 32399-1600.

- b. To have no more than (Insert Number of Hive boxes here) hive boxes on the property at one time.
- c. To comply with the Florida Honey Certification and Honeybee Law, Chapter 586, Florida Statutes, and Rule 5B-54, Florida Administrative Code, and all other applicable federal, state, or local laws, rules or ordinances.
- d. To not damage, cut or remove any trees in the course of preparing for or conducting operations under this Agreement.
- e. To repair within 30 days of occurrence any damage to roads, trails, fences, bridges, ditches, or other public property caused by USER'S operations under this Agreement based on discretion of the COMMISSION to ensure the WMA/WEA management goals are met. All repairs will be coordinated with the Area Biologist to ensure management goals are met. If USER does not comply within the 30 day requirement, then the COMMISSION may use a third party to perform the repairs and charge the USER accordingly.
- f. To report any forest fires observed and to prevent forest fires during the course of operations under this Agreement.
- g. To abide by all WMA/WEA rules and regulations in addition to items in this Agreement.
- h. To notify the Area Biologist within 24 hours when a bear depredation event occurs.
- i. To post their name in an agreed upon location at each site covered by this Agreement or otherwise use an identifying system that is approved by the Area Biologist.
- j. To furnish proof of general liability insurance prior to starting apiary activities on state property or within 30 days of execution of this Agreement, whichever is earlier, and proof of annual renewal of the general liability insurance policy prior to or upon expiration date of the policy. The USER shall maintain continuous general liability insurance throughout the term of this Agreement for no less than \$300,000 for bodily injury and \$100,000 for property damage for each occurrence. Such a policy shall name the COMMISSION as the Certificate Holder. The USER's current certificate of insurance shall contain a provision that the insurance will not be canceled for any reason during the term of this Agreement except after thirty (30) days written notice to the COMMISSION.

- k. To be liable for all damage to persons or property resulting from operations under this Agreement, and to release, acquit, indemnify, save and hold harmless the COMMISSION, its officers, agents, employees and representatives from any and all claims, losses, damages, injuries and liabilities whatsoever, whether for personal injury or otherwise, resulting from, arising out of or in any way connected with activities under this Agreement or activities occurring from any other source not under this Agreement and the USER further agrees to assume all risks of loss and liabilities incidental to any natural or artificial condition occurring on state lands cover by this Agreement.
  - l. To construct and maintain electric fences, if required by the Area Biologist at the Area Biologist's discretion, to provide protection of apiaries from black bear depredation consistent with the technical information bulletin attached to this agreement, and, if so required, to maintain an open buffer around the fencing of five (5) feet or more. (See Attachment 1)
  - m. To remove all personal property from the site within thirty (30) days of termination or expiration of this Agreement. The USER understands that after this time, all the USER'S personal property remaining on the WMA/WEA shall be deemed abandoned and become the property of the COMMISSION, which will be utilized or disposed of at the sole discretion of the COMMISSION, and that reasonable storage and/or disposal fees and/or costs may be charged to the USER.
4. The parties mutually agree:
- a. This Agreement is not transferable.
  - b. The USER's failure to submit payment by the due date established herein may result in cancellation of the Agreement by the COMMISSION.
  - c. The USER's failure to submit proof of general liability insurance or proof of annual renewal in compliance with (3) (j) above may result in cancellation of this Agreement by the COMMISSION.
  - d. This Agreement shall be in effect for a period of five (5) years and issuance of a new agreement will be contingent upon a satisfactory performance evaluation and approval of the Area Biologist and THCR Section Leader.
  - e. Each apiary site shall be situated so as to be at least one-half (1/2) mile inward from state property lines and there shall be at least one (1) mile separation between sites. Exceptions to this rule must be reviewed by Area Biologist

presented to and approved by the Terrestrial Habitat Conservation and Restoration Section Leader.

- f. The property covered by this Agreement is described as follows: That the property sites (Insert Area Name) Wildlife Management Area are represented by Attachment 2.
- g. In accordance with Section 287.134, Florida Statutes, an entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal or reply on a contract to provide goods or services to any public entity; may not submit a bid, proposal or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant with any public entity; and may not transact business with a public entity.
- h. As part of the consideration of this Agreement, the parties hereby waive trial by jury in action brought by either party pertaining to any matter whatsoever arising out of or in any way connected with this Agreement. Exclusive venue for all judicial actions pertaining to this Agreement is in Leon County, Florida.
- i. This Agreement may be terminated by the COMMISSION upon thirty (30) days written notice to the USER in the event the continuation of the apiary activities are found to be incompatible with the COMMISSION'S management plans or for any other reason at the sole discretion of the COMMISSION.

**This Area Intentionally Left Blank**

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year last below written.

\_\_\_\_\_  
USER SIGNATURE

Date: \_\_\_\_\_

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness

FLORIDA FISH AND WILDLIFE  
CONSERVATION COMMISSION

\_\_\_\_\_  
Mike Brooks, Section Leader  
Terrestrial Habitat Conservation and  
Restoration

Date: \_\_\_\_\_

Approved as to form and legality

\_\_\_\_\_  
Commission Attorney

Date: \_\_\_\_\_

**AGREEMENT**  
**ATTACHMENT 1**

**Use of Electric Fencing to Exclude Bears  
And Prevent Property Damage**

Florida Fish and Wildlife Conservation Commission  
Technical Information Bulletin (2001)

Electric fencing has proven effective in deterring bears from entering landfills, apiaries (beehives), livestock pens, gardens, orchards, and other high-value properties. Numerous electrical fence designs have been used with varying degrees of success. Design, quality of construction, and proper maintenance determine the effectiveness of an electric fence. The purpose of this technical bulletin is to assist the property owner in understanding and implementing electrical fencing as a tool to exclude and prevent damage caused by black bears.

**Understanding Electric Fencing**

Electric fencing provides an electrical shock when an animal comes into contact with the electrically charged wires of the fence. People unfamiliar with electric fencing often are afraid that it will injure, permanently damage, or kill an individual or pet that contacts the fence. **This is not true!** A properly constructed electric fence is safe to people, pets, and bears.

**Components of Electric Fencing**

An electric fence is composed of four main elements: a charger, fence posts, wire, and the ground rod.

**Fence Charger.** On a small scale electric fence (like that typically needed for bear exclusion), the largest cost is normally the fence charger. A fence charger's job is to send an electrical pulse into the wire of the fence. Contrary to popular belief, there is not a continuous charge of electricity running through the fence. Instead the charger emits a short pulse or burst of electricity through the fence. The intensity and duration of the electrical pulse varies with the type of charger or controller unit. Chargers with a high-voltage, short duration burst capacity are the best because they are harder to ground out by tall grass and weeds. These types are also the safest, because, even though the voltage is high (5 kilovolts) the duration of the burst is very short (2/10,000 of a second) (FitzGerald, 1984).

Two basic energy sources for chargers are batteries (12-volt automotive type) and household current (110 volt). Battery-type chargers are typically cheaper to purchase but require more maintenance because of the necessity of charging the battery. The advantage of a battery powered charger is that it can be used in a remote location where 110-volt current is not available. Most units that are powered by a fully charged 12-volt deep-cycle batteries can last three weeks before needing a charge. Addition of a solar trickle charger will help prolong the duration of effective charge in 12-volt batteries.

Fence Posts. On small scale fences, the posts are normally the second largest expense involved in construction. Therefore, when planning an electric fence it is a good idea to utilize existing fencing in order to save money. If no existing fence is available, posts will need to be placed around the area needing protection. Posts may be wood, metal, plastic, or fiberglass. Wood and metal posts will need to have plastic insulators attached to them which prevent the electric wire from touching the post causing it to ground out. Plastic and fiberglass posts do not need insulators, the wire may be affixed directly to these posts. Wood and metal posts are typically more expensive and require the added expense of insulators, however, they are more durable and generally require less maintenance.

Wire. Fourteen to seventeen gauge wire is the most common size range used in electric fencing. Heavier wire (a lower gauge number) is more expensive but carries current with less resistance and is more durable (FitzGerald, 1984).

The two most common types of wire are galvanized and aluminum. Galvanized wire is simply a steel wire with a zinc coating to prevent rust, which makes the wire last longer. Some wire is more galvanized than others. The degree or amount of zinc coating that is around the core steel wire is measured in three classes. A class I galvanization means the wire has a thinner coating of zinc than a class II galvanization. Class III galvanized wire has the heaviest zinc coating and will last longer than the class I and class II wire (FitzGerald, 1984). In general, the cost of galvanized wire increases as the class or amount of galvanization increases.

Aluminum wire is typically more expensive than the galvanized wire. Some advantages of aluminum wire are: it will not rust, it conducts electricity four times better, and it weighs one-third less than steel wire.

The Ground Rod. The ground is an often overlooked, but critical part of an electric fence. Without a good ground, electricity will not flow through the wire. When an animal touches a charged wire, the body of the animal completes the electrical circuit and the animal feels the "shock". The current must travel from the charger through the wire to the animal and then back through the ground to the charger if the animal is to feel the shock. The soil acts as the return "wire" (ground) in the circuit. However, if a

bird was to land on a charged wire without touching the soil the bird would not complete the circuit and would be unaffected (FitzGerald, 1984). Some fence configurations use actual grounded wires within the fence to enhance the grounding system.

The ground may be a commercial ground rod or a copper tube or pipe driven six to eight feet in moist soil. Copper is expensive, so a copper coated steel pipe or any other good conducting metal pipe will work also. Very dry soil can effect the ability to create a good ground and has sometimes been a problem during drought conditions. Pipe may be a better choice than a solid rod during drought conditions, because water may be poured down the ground pipe to improve the ground. Some fence configurations use wires as the grounding system, rather than relying solely on the soil as a ground.

#### **Recommended Electric Fence to Deter Black Bears**

Conditions at fence sites will vary and will determine what the most effective fence configuration will be. Commission biologists welcome the opportunity to visit sites and provide custom tailored advice on constructing an effective electric fence. The following recommendation will cover most situations with low to moderate pressure from black bears. Use a five strand aluminum wire fence that is 40 inches high with wire spacing every eight inches apart using the previously mentioned wired grounding system (see Figure 1). The wire closest to the ground level (the lowest wire) should be a charged or "hot" wire. The second wire should be grounded. The third wire should be hot. The fourth wire should be grounded and the fifth wire should be hot. If using metal or wood posts, insulators must be used to keep the hot wires from grounding out. The cost of this type of electric fence utilizing fiberglass posts and a 110 volt fence charger is approximately \$200 for a 40' x 40' area (160 linear feet of fence).

#### **Materials:**

- 1 - 1, 312 foot roll (1/4 mile) 14 gauge aluminum electric fence wire
- 1 - 50 foot roll 12 gauge insulated wire
- 20 - 5 foot 5/8 inch dia fiberglass fence posts
- 5 - plastic gate handles
- 1 - 110 volt fence charger
- 1 - 10 foot ground pipe
- 4 - plastic electric fence signs

**Installation.** These instructions are for a square shape fence exclusion, but the process would be very similar for other applications. Drive 4 corner posts 1-foot deep into ground and stake with guy wires. Clip, rake, and keep clear any vegetation in a 15-inch wide strip under the fence and apply herbicide. Attach and stretch the aluminum wire at 8-inch increments starting 8 inches from ground level. A loop of wire should be left on each wire at the first corner post. Once the wire has been stretched around the outside of all the corner posts back to the first post a plastic gate handle should be attached to each wire and the gate handles should be attached to each

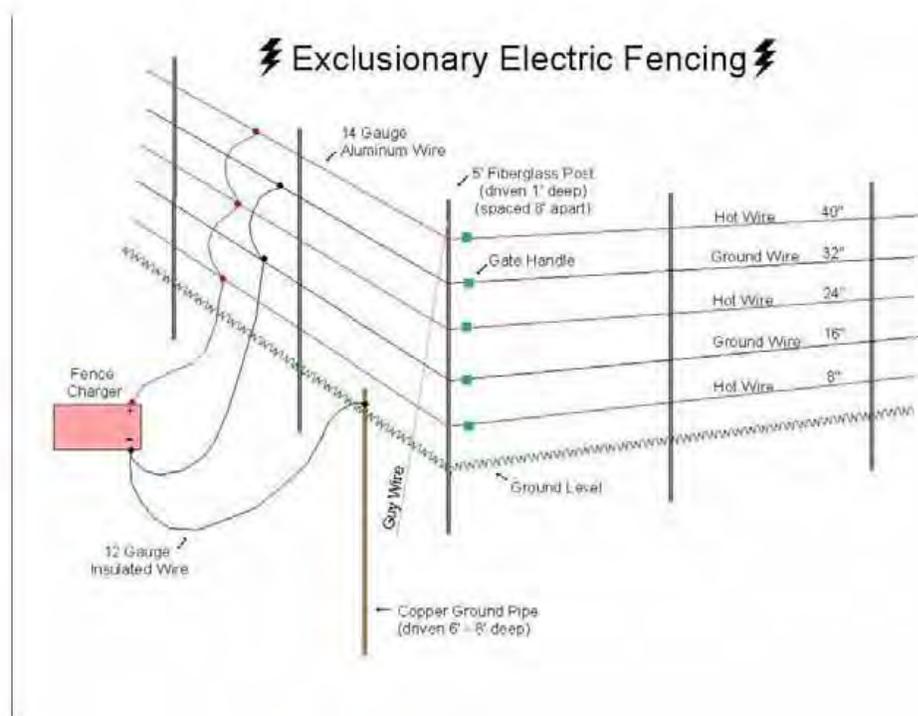
corresponding loop on the first corner post. Drive in the remaining 16 posts to the same depth at 8-foot intervals between corner posts. Secure each of the five wires to each of the posts with additional wire. Attach four plastic electric fence signs (one on each side) to the top wire of the fence. Attach a 12-gauge strand of insulated wire to the positive terminal of the fence charger and attach it to the first, third, and fifth wires of the fence. Attach another 12 gauge insulated wire to the negative terminal of the charger and attach this wire to the ground pipe which has been driven into the ground 6 to 8-feet deep. Attach another 12 gauge insulated wire from the negative terminal of the charger to the second and fourth wires on the fence. Plug the charger into a 110 volt power supply and the fence is in operation.

**Tips to improve the effectiveness of your electric fence to deter black bears:**

1. If using a 12-volt fence charger, ensure that the battery is charged; check every two weeks.
2. Make sure terminals on the charger and battery are free of corrosion.
3. Make sure hot wires are not being grounded out by tall weeds, fallen tree branches, broken insulators, etc.
4. If fence wires have been broken and repaired, make sure wires are corrosion free where they have been spliced together. Also, tighten the fence at each corner post as wires that have been spliced and are loose make poor connections.
5. Be sure to rake vegetation from under and around the outside of the fence as this may act as an insulator.
6. To improve the ground around the perimeter of the fence add a piece of 24 inch chicken wire laying on the ground around the outside of the fence. This should be connected to ground.
7. During periods of drought pour water down the ground pipe and around the ground pipe to improve the ground. Digging a 6 inch deep 6 inch diameter hole around the ground pipe and back filling with rock salt will also improve the ground. Additional ground pipes may also be added to portions of the fence farthest from the charger.
8. To ensure that the bear solidly contacts the charged portion of the fence, a bait like bacon strips, a can of sardines, or tin foil with peanut butter may be attached to one of the top hot wires. Make sure these do not contact the ground, thus shorting out the fence.
9. When protecting a specific structure (like a shed or rabbit hutch), the fence should be placed 3 to 5 feet away from the structure (rather than on it) so that the bear encounters the fence before reaching the attractant.
10. Protect the fence charger from the elements by covering it with a plastic bucket or a wooden box.
11. Place plastic electric fence signs around the perimeter of your fence to improve visibility and to warn other people.

**LITERATURE CITED**

FitzGerald, James (1984), *The Best Fences*. Storey Publishing Bulletin A-92, Pownal, Vermont. p. 14-16.



**AGREEMENT**  
**ATTACHMENT 2**

**Place Holder for Map**

**Of**

**Apiary Locations**

**At**

**WMA/WEA**

## APIARY SITE APPLICATION FORM

### Florida Fish and Wildlife Conservation Commission

**RETURN TO:** The Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600. Please print or type all information. Attach additional sheets if necessary.

Name \_\_\_\_\_ Telephone Number \_\_\_\_\_

Mailing Address \_\_\_\_\_

City or Town \_\_\_\_\_ County \_\_\_\_\_ Zip Code \_\_\_\_\_

Physical Address (If Different from Mailing Address) \_\_\_\_\_

Company Name: \_\_\_\_\_

Email Address \_\_\_\_\_

Requested Wildlife Management or Wildlife and Environmental Area(s)(see attached list of WMA/WEAs with apiary sites):

WMA/WEA \_\_\_\_\_ County \_\_\_\_\_ # of Sites \_\_\_\_\_

WMA/WEA \_\_\_\_\_ County \_\_\_\_\_ # of Sites \_\_\_\_\_

WMA /WEA \_\_\_\_\_ County \_\_\_\_\_ # of Sites \_\_\_\_\_

WMA /WEA \_\_\_\_\_ County \_\_\_\_\_ # of Sites \_\_\_\_\_

Planned Number of Hives Per Site: \_\_\_\_\_ Permanent: \_\_\_ Seasonal: \_\_\_

Member of Beekeepers Association: Yes \_\_\_ No \_\_\_

Number of Years a Member \_\_\_\_\_

Name of Beekeepers Association: \_\_\_\_\_

Are you registered with Florida Department of Agriculture and Consumer Services/Division of Plant Industry (FDACS/DPI): \_\_\_ Yes \_\_\_ No \_\_\_ N/A. If yes, please provide proof.

Are you current with any and all special inspection fees: \_\_\_ Yes \_\_\_ No \_\_\_ N/A. If yes, please provide proof.

Do you follow all recommended Best Management Practices from FDACS/DPI?: \_\_\_ Yes \_\_\_ No

If no, then please explain on a separate piece of paper.

Please provide below a chronological history of your beekeeping experience. If you need more space, please provide additional sheets:

**References:** If a new apiary contractor, please provide on a separate piece of paper at least 3 references who can verify your apiary experience. Provide each reference's name, address, phone number and email address (if applicable). Please attach reference sheet to this document and submit.

## **MISSION STATEMENT**

**Management  
Of  
Florida Fish and Wildlife Conservation Commission's  
Wildlife Management Areas  
And  
Wildlife and Environmental Areas**

The mission of the Florida Fish and Wildlife Conservation Commission (FWC) is to manage fish and wildlife resources for their long-term well-being and the benefit of the people. To aid in accomplishing this mission, one of FWC's management goals is to manage fire-adapted natural communities on our Wildlife Management and Environmental Areas (WMA/WEA) to support healthy populations of the plants and animal's characteristic of each natural community. In order to achieve this goal various habitat management techniques are used. These include prescribed burning, applications of herbicides and mechanical treatment of vegetation. These management efforts will take place at various times and locations on each of the FWC's WMA/WEAs. Staff on each WMA/WEA will work with and make users aware of these activities when necessary. Users must be aware and accept that these activities are necessary for the proper management of the area.

Note: This document is included as an attachment with each Application and executed Contract.

## **FDACS/DPI's BMP**

### **Florida Department of Agriculture & Consumer Services**

#### **BEST MANAGEMENT PRACTICES FOR**

#### **MAINTAINING EUROPEAN HONEY BEE COLONIES**

1. Beekeepers will maintain a valid registration with the Florida Department of Agriculture and Consumer Services/Division of Plant Industry (FDACS/DPI), and be current with any and all special inspection fees.
2. A Florida apiary may be deemed as European Honey Bee with a minimum 10% random survey of colonies using the FABIS (Fast African Bee Identification System) and/or the computer-assisted morphometric procedure (i.e., Universal system for the detection of Africanized Honey Bees (AHB) (USDA-ID) or other approved methods by FDACS on a yearly basis or as requested.
3. Honey bee colony divisions or splits should be queened with production queens or queen cells from EHB breeder queens following Florida's Best Management Practices.
4. Florida beekeepers are discouraged from collecting swarms that cannot be immediately re-queened from EHB queen producers.
5. Florida Beekeepers should practice good swarm-prevention techniques to prevent an abundance of virgin queens and their ready mating with available AHB drones that carry the defensive trait.
6. Maintain all EHB colonies in a strong, healthy, populous condition to discourage usurpation (take over) swarms of AHB.
7. Do not allow any weak or empty colonies to exist in an Apiary, as they may be attractive to AHB swarms.
8. Recommend re-queening with European stock every six months unless using marked or clipped queens and having in possession a bill of sale from an EHB Queen Producer.
9. Immediately re-queen with a European Queen if previously installed clipped or marked queen is found missing.
10. Maintain one European drone source colony (250 square inches of drone comb) for every 10 colonies in order to reduce supercedure queens mating with AHB drones.
11. To protect public safety and reduce beekeeping liability, do not site apiaries in proximity of tethered or confined animals, students, the elderly, general public, drivers on public roadways, or visitors where this may have a higher likelihood of occurring.
12. Treat all honey bees with respect.

**RANDOM**  
**SELECTION PROCESS**  
**FOR VACANT APIARY SITE**

When an apiary site becomes available the following procedure is used to randomly select the next apiarist (beekeeper) for an available apiary site on a WMA or WEA. Only those who have been evaluated and deemed qualified to be an apiarist on a WMA/WEA through the Apiary Application process will be eligible for this selection process. The steps below will be followed by the THCR Contract Manager when a site becomes available to be filled by a qualified apiarist:

1. The THCR Contract Manager will maintain an "Apiary Wait List Folder" on the THCR SharePoint for each WMA/WEA with apiary sites.
2. A wait list is either created or updated when an Apiary Application(s) is received by the THCR Contract Manager from a qualified apiarist.
3. Upon receipt of an apiary site application, the THCR Contract Manager will review the WMA/WEA folder to see if there is an "Apiary Wait List".
4. If a list exists then the qualified applicant will be added to the list.
5. When an apiary site becomes available if there are more than one qualified apiarist then these apiarists will be contacted by certified letter to determine their interest.
6. The letter will request a response within 10 working days to make them eligible for the random drawing.
7. If there is no response or is negative then that apiarist will not be included in the random drawing and the name will be removed from the waiting list\*.
8. If only one apiarist responds positively to the certified letter then the available site will be awarded to that interested apiarist.
9. If there are no apiarists on a wait list or all responses are negative then apiarists who currently have site(s) under Agreement and where not on the waiting list will be contacted to see if any have interest in the available site. If more than one responds then the random drawing process will be used to determine who will be awarded the site.

10. Steps to be performed by the THCR Contract Manager to execute the random selection for an available apiary site are listed below:

- a. The names of each interested apiarist will be noted on a 1" X 2" piece of paper and folded in half.
- b. The pieces of paper will be inserted into a "black film canister" which has a snap top and placed into a container and stirred up prior to the selection.
- c. A non-biased person will be selected to reach into the bowl (which will be held above the selection person's eyesight) and randomly select one of the canisters.
- d. The canister will be opened by the person performing the selection and the name is read aloud for those in attendance. Everyone in attendance will sign a witness sheet.
- e. The apiarist whose name is selected will be awarded the available site.
- f. A new Agreement will be developed by the THCR Contract Manager.

\*A new apiary application must be submitted once requestor's name is removed from a waiting list.

## **13.14 Operational Plan Fiscal Year 2014 – 2015**

**Apalachee WMA Operational Plan Cost Estimate Fiscal Year 2014-2015**

<b>Activity Title</b>	<b>Staff Days</b>	<b>Salary</b>	<b>FuelCost</b>	<b>Other</b>	<b>Total</b>
100 Administration	8.00	\$1,743.84	\$146.00	\$750.00	\$2,639.84
101 Project inspection	6.00	\$1,307.88	\$109.50	\$0.00	\$1,417.38
103 Meetings	8.00	\$1,743.84	\$146.00	\$0.00	\$1,889.84
104 Budget/purchasing/accounting	3.00	\$653.94	\$54.75	\$0.00	\$708.69
128 New Vehicle and Equipment Purchases	9.00	\$1,961.82	\$164.25	\$99,000.00	\$101,126.07
140 Report writing/editing/manuscript preparation	8.00	\$1,743.84	\$146.00	\$500.00	\$2,389.84
150 Personnel management	10.00	\$2,179.80	\$182.50	\$2,600.00	\$4,962.30
182 Data management	18.00	\$3,923.64	\$328.50	\$250.00	\$4,502.14
185 GIS	12.00	\$2,615.76	\$219.00	\$500.00	\$3,334.76
200 Resource Management	0.00	\$0.00	\$0.00	\$1,500.00	\$1,500.00
201 Cultural resource management	3.00	\$653.94	\$54.75	\$0.00	\$708.69
202 Timber management	3.00	\$653.94	\$54.75	\$150.00	\$858.69
203 Tree and shrub planting	2.00	\$435.96	\$36.50	\$400.00	\$872.46
204 Resource planning	5.00	\$1,089.90	\$91.25	\$40,000.00	\$41,181.15
206 Prescribed burning - growing season	20.00	\$4,359.60	\$365.00	\$1,500.00	\$6,224.60
207 Prescribed burning - dormant season	35.00	\$7,629.30	\$638.75	\$2,000.00	\$10,268.05
208 Firebreaks	7.00	\$1,525.86	\$127.75	\$500.00	\$2,153.61
212 Exotic plant control (chemical)	30.00	\$6,539.40	\$547.50	\$1,200.00	\$8,286.90
215 Hydrology Management	5.00	\$1,089.90	\$91.25	\$500.00	\$1,681.15
219 Upland restoration	23.00	\$5,013.54	\$419.75	\$500.00	\$5,933.29
221 Animal surveys	25.00	\$5,449.50	\$456.25	\$1,000.00	\$6,905.75
235 Vegetation and plant surveys	0.00	\$0.00	\$0.00	\$0.00	\$0.00
281 Other resource management	0.00	\$0.00	\$0.00	\$0.00	\$0.00
282 Herbaceous seeding	25.00	\$5,449.50	\$456.25	\$17,000.00	\$22,905.75
284 Feeding/watering	0.00	\$0.00	\$0.00	\$0.00	\$0.00
285 Nest structures	15.00	\$3,269.70	\$273.75	\$1,000.00	\$4,543.45
289 Native vegetation management (mechanical)	20.00	\$4,359.60	\$365.00	\$1,000.00	\$5,724.60
290 Native vegetation management (chemical)	5.00	\$1,089.90	\$91.25	\$1,000.00	\$2,181.15
291 Technical assistance	1.00	\$217.98	\$18.25	\$0.00	\$236.23
294 Program coordination and implementation	8.00	\$1,743.84	\$146.00	\$0.00	\$1,889.84
295 Biological data collection, analysis, and reporting	4.00	\$871.92	\$73.00	\$250.00	\$1,194.92
311 Boundary signs	2.00	\$435.96	\$36.50	\$150.00	\$622.46
312 Informational signs	6.00	\$1,307.88	\$109.50	\$500.00	\$1,917.38
341 Public use administration (hunting)	26.00	\$5,667.48	\$474.50	\$8,582.00	\$14,723.98
342 Public use administration (non-hunting)	5.00	\$1,089.90	\$91.25	\$250.00	\$1,431.15
920 FEM -- buildings/structures	8.00	\$1,743.84	\$146.00	\$21,000.00	\$22,889.84
921 FEM -- utilities	0.00	\$0.00	\$0.00	\$0.00	\$0.00

**Apalachee WMA Operational Plan Cost Estimate Fiscal Year 2014-2015**

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<b>Activity Title</b>	<b>Staff Days</b>	<b>Salary</b>	<b>FuelCost</b>	<b>Other</b>	<b>Total</b>
923 FEM -- vehicles/equipment	45.00	\$9,809.10	\$821.25	\$54,530.50	\$65,160.85
926 FEM -- roads/bridges	8.00	\$1,743.84	\$146.00	\$5,000.00	\$6,889.84
928 FEM -- fences	12.00	\$2,615.76	\$219.00	\$1,000.00	\$3,834.76

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All totals	430.00	\$93,731.40	\$7,847.50	\$264,112.50	\$365,691.40
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## **13.15 Arthropod Management Plan**



Florida Department of Agriculture and Consumer Services  
 Division of Agricultural Environmental Services

**ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS**

ADAM H. PUTNAM  
 COMMISSIONER

Section 388.4111, F.S.  
 Telephone: (850) 617-7997

For use in documenting an Arthropod Control Pan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein. Fill this form out if control work is necessary or planned.

Name of Designated Land:  
 Apalachee Wildlife Management Area

Is Control Work Necessary:  Yes  No

Location:  
 Apalachee WMA Field Office  
 7611 Butler Road  
 Sneads, FL 32460

Land Management Agency:  
 Florida Fish and Wildlife Conservation Commission

Are Arthropod Surveillance Activities Necessary?  Yes  No  
 If "Yes", please explain:

Which Surveillance Techniques Are Proposed?  
 Please Check All That Apply:

- |  |                                      |  |
|--|--------------------------------------|--|
| <input type="checkbox"/> Landing Rate Counts | <input type="checkbox"/> Light Traps | <input type="checkbox"/> Sentinel Chickens |
| <input type="checkbox"/> Citizen Complaints  | <input type="checkbox"/> Larval Dips | <input type="checkbox"/> Other             |

If "Other", please explain:

Arthropod Species for Which Control is Proposed:  
None

Proposed Larval Control:

Proposed larval monitoring procedure:  
Are post treatment counts being obtained:  Yes  No

Biological Control of Larvae:

Might predacious fish be stocked:  Yes  No  
Other biological controls that might be used:

Material to be Used for Larvaciding Applications:

(Please Check All That Apply.)

- Bti
- Bs
- Methoprene
- Non-Petroleum Surface Film
- Other, please specify:

Please specify the following for each larvacide:

Chemical or Common name:

Ground  Aerial

Rate of application:

Method of application:

Proposed Adult Mosquito Control:

Aerial adulticiding  Yes  No  
Ground adulticiding  Yes  No

Please specify the following for each adulticide:

Chemical or common name: None

Rate of application: N/A

Method of application: N/A

Proposed Modifications for Public Health Emergency Control: Arthropod control agency may request special exception to this plan during a threat to public or animal health declared by State Health Officer or Commissioner of Agriculture.

Proposed Notification Procedure for Control Activities:  
None

Records:

Are records being kept in accordance with Chapter 388, F.S.:

Yes  No

Records Location: N/A

How long are records maintained: N/A

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed?  
None

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed?  
No

Include proposed operational schedules for water fluctuations:

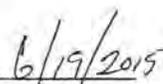
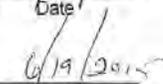
List any periodic restrictions, as applicable, for example peak fish spawning times.  
N/A

Proposed Modification of Aquatic Vegetation:  
N/A

Land Manager Comments:

Arthropod Control Agency Comments:

We not currently provide arthropod control services at this site and have no plans to do so unless requested. However, should a request be made our department will work with your agency on the development of a suitable control plan.

	
Signature of Lands Manager or Representative	Date
	
Signature of Mosquito Control Director / Manager	Date

## **13.16 Letter of Compliance with Jackson County Comprehensive Plan**



**JACKSON COUNTY COMMUNITY DEVELOPMENT**

4487 Lafayette Street  
Marianna, FL 32448

Phone: (850) 482-9637  
Fax: (850) 482-9846

October 7, 2015

David Alden  
Florida Fish and Wildlife Conservation Commission  
Bryant Building  
620 S. Meridian Street  
Tallahassee, Florida 32399-1600

Dear Mr. Alden,

At your request, we have reviewed the Management Plan for the Apalachee Water Management Area. We find the proposed management activities to be consistent with the Future Land Use designations associated with the properties as defined in the Jackson County Comprehensive Plan and Code of Ordinances. The County's Future Land Use Map identifies the properties within the designations of Conservation and Recreation; the Conservation classification is applied to areas with extremely limited development potential due to environmental sensitivity. Preservation/conservation activities or recreational uses such as hiking, jogging and bicycle trails, canoe launches, picnic areas, exercise stations, and other like uses are allowable. The Recreation land use designation is intended to provide adequate land for recreation facilities. Both passive and active recreational uses are permitted. Although agricultural uses are not expressly allowed within the Conservation designation, they are not prohibited outside the 75-foot vegetative buffer required by Sec. 74-103(8)(c) Code of Ordinances; any agricultural use that pre-dates our Future Land Use designations are considered to be grandfathered uses for Comprehensive Plan compliance purposes.

The County is pleased to note that one of the FWC goals is monitoring and protection of any cultural resources, known and unknown, within the AWMA boundaries. Especially near bodies of water, cultural resources are fragile and it is important that any discovered be properly documented and catalogued. We are equally pleased that the AWMA provides an excellent corridor of habitat in which wildlife may thrive and that none of the WMA is recommended for potential surplus designation.

If you need further assistance or have any questions regarding this determination, feel free to contact this office at (850)482-9637 or by e-mail at [wdaniels@jacksoncountyfl.com](mailto:wdaniels@jacksoncountyfl.com).

Sincerely,

Wilanne G. Daniels  
Director of Community Development

WGD/krcs

## 13.17 U.S. Army Corps of Engineers Review Correspondence

-----Original Message-----

From: Griffin, Angela H SAM [<mailto:Angela.H.Griffin@usace.army.mil>]  
Sent: Friday, July 31, 2015 10:24 AM  
To: Jacobson, Lance <[Lance.Jacobson@MyFWC.com](mailto:Lance.Jacobson@MyFWC.com)>  
Cc: Timmons, Jody D SAM <[Jody.D.Timmons@usace.army.mil](mailto:Jody.D.Timmons@usace.army.mil)>; Morgan, Donald M SAM <[Donald.M.Morgan@usace.army.mil](mailto:Donald.M.Morgan@usace.army.mil)>  
Subject: RE: FWC's Apalachee WMA Management Plan (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Yes, Lance, we would like to see the site name redacted as some of the names are indicative of the location.

Your plan looks great! Thanks for the opportunity to review.

Angela

-----Original Message-----

From: Jacobson, Lance [<mailto:Lance.Jacobson@MyFWC.com>]  
Sent: Friday, July 31, 2015 10:04 AM  
To: Griffin, Angela H SAM  
Subject: [EXTERNAL] RE: FWC's Apalachee WMA Management Plan (UNCLASSIFIED)

Angela,

The Management Plan will be available online for the public to view. We are very serious about protecting cultural resources found on all of our areas, which is why we work very closely with the Florida Department of State's Division of Historical Resources (DHR) when developing these plans. DHR has already reviewed the plan and was not concerned, but we can redact the site names if you feel they put the sites at risk. We never produce maps showing the locations of cultural sites.

Hope this helps,  
Lance

-----Original Message-----

From: Griffin, Angela H SAM [<mailto:Angela.H.Griffin@usace.army.mil>]  
Sent: Friday, July 31, 2015 9:27 AM  
To: Jacobson, Lance <[Lance.Jacobson@MyFWC.com](mailto:Lance.Jacobson@MyFWC.com)>  
Cc: Timmons, Jody D SAM <[Jody.D.Timmons@usace.army.mil](mailto:Jody.D.Timmons@usace.army.mil)>; Morgan, Donald M SAM <[Donald.M.Morgan@usace.army.mil](mailto:Donald.M.Morgan@usace.army.mil)>  
Subject: RE: FWC's Apalachee WMA Management Plan (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Hi, Lance. Can you clarify who will have access to this document? The only concern we have is that the cultural site name is included in the Cultural Site list. While the name of the site may not mean anything to a great number of people, it is feasible that locals would recognize the name and associated location of some. Just a couple of examples - Apalachee Boat Landing and Arnold Soybean Field...we generally do not share the location to protect the site except with those who need to know.

Thanks for your time.

Angela

Angela H. Griffin  
Natural Resources Specialist/Ranger  
U.S. Army Corps of Engineers  
P.O. Box 96  
2832 Booster Club Road  
Chattahoochee, Florida 32324  
Phone: 229-662-2001  
Fax: 229-662-2903  
[Angela.H.Griffin@usace.army.mil](mailto:Angela.H.Griffin@usace.army.mil)

-----Original Message-----

From: Jacobson, Lance [<mailto:Lance.Jacobson@MyFWC.com>]  
Sent: Monday, July 27, 2015 2:02 PM  
To: Griffin, Angela H SAM  
Subject: [EXTERNAL] FWC's Apalachee WMA Management Plan

Angela,

I have attached a PDF of the Apalachee WMA Management Plan. In order to meet our file size restrictions, I have used a lower quality setting, plus I removed some documents from the appendix (Soil descriptions, FWC Agency Strategic Plan, Apalachee WCPR Strategy, FWC's Apiary Policy, the Operational Plan, the Arthropod Management Plan, and the Jackson County Compliance letter). I can send these documents in a separate e-mail if you wish to view them.

Thanks again for reviewing the plan.

-Lance

Lance Jacobson

Conservation Planner

Florida Fish and Wildlife Conservation Commission

Division of Habitat and Species Conservation

Land Conservation and Planning

[lance.jacobson@myfwc.com](mailto:lance.jacobson@myfwc.com)

Phone: (850) 487-9767

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE