



A Management Plan for the Lake Stone Fish Management Area 2019 - 2029

Escambia County, Florida



Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, Florida 32399-1600



FLORIDA DEPARTMENT OF Environmental Protection

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Tallahassee, FL 32399

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Secretary

October 21, 2019

Mr. Thomas Houston
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, FL 32399-1600

RE: Lake Stone Fish Management Area (FMA) – Lease No. 2786

Dear Mr. Houston:

On **October 18, 2019**, the Acquisition and Restoration Council (ARC) recommended approval of the **Lake Stone FMA** management plan. Therefore, Division of State Lands, Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves **Lake Stone FMA** management plan. The next management plan update is due October 18, 2029.

Pursuant to s. 253.034(5)(a), F.S., each management plan is required to describe both short-term and long-term management goals and include measurable objectives to achieve those goals. Short-term goals shall be achievable within a 2-year planning period, and long-term goals shall be achievable within a 10-year planning period. Upon completion of short-term goals, please submit a signed letter identifying categories, goals, and results with attached methodology to the Division of State Lands, Office of Environmental Services.

Pursuant to s. 259.032(8)(g), F.S., by July 1 of each year, each governmental agency and each private entity designated to manage lands shall report to the Secretary of Environmental Protection, via the Division of State Lands, on the progress of funding, staffing, and resource management of every project for which the agency or entity is responsible.

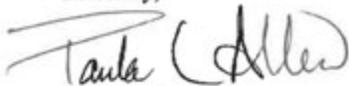
Pursuant to s. 259.036(2), F.S., management areas that exceed 1,000 acres in size, shall be scheduled for a land management review at least every 5 years.

Pursuant to s. 259.032, F.S., and Chapter 18-2.021, F.A.C., management plans for areas less than 160 acres may be handled in accordance with the negative response process. This process requires small management plans and management plan amendments be submitted to the Division of State Lands for review, and the Acquisition and Restoration Council (ARC) for public notification. The Division of State Lands will approve these

plans or plan amendments submitted for review through delegated authority unless three or more ARC members request the division place the item on a future council meeting agenda for review. To create better efficiency, improve customer service, and assist members of the ARC, the Division of State Lands will notice negative response items on Thursdays except for weeks that have State or Federal holidays that fall on Thursday or Friday. The Division of State Lands will contact you on the appropriate Friday to inform you if the item is approved via delegated authority or if it will be placed on a future ARC agenda by request of the ARC members.

Approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities. Pursuant to the conditions of your lease, please forward copies of all permits to this office upon issuance.

Sincerely,

A handwritten signature in black ink that reads "Paula L. Allen". The signature is written in a cursive style with a large, sweeping initial "P".

Paula L. Allen
Office of Environmental Services
Division of State Lands
Department of Environmental Protection

**A Management Plan
for the
Lake Stone Fish Management Area**

Escambia County, Florida

Owned by the Board of Trustees of the Internal Improvement Trust Fund
Managed by the Florida Fish and Wildlife Conservation Commission and Escambia
County



June 2019

Approved 
Jon Fury, Director
Division of Freshwater Fisheries Management

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Lead Agency: Florida Fish and Wildlife Conservation Commission (FWC)

Common Name of Property: Lake Stone Fish Management Area

Location: Escambia County, Florida

Acreage Total: 249 acres

Acreage Breakdown:

| Land Cover Classification | Acres | Percent of Total Area |
|----------------------------------|--------------|------------------------------|
| Bottomland Forest | 17.82 | 7.2% |
| Developed | 19.10 | 7.7% |
| Impoundment | 98.48 | 40.0% |
| Road | 9.52 | 4.0% |
| Successional Hardwood Forest | 44.45 | 18.0% |
| Upland Pine | 58.65 | 23.6% |

*GIS-calculated acreage for land cover classification varies slightly from actual total acreage.

Lease/Management Agreement No.: 2786 (Appendix 12.1)

Use: Single

Multiple X

Management Responsibilities:

Agency FWC

Responsibilities

FWC

CO-LEAD, LESSEE

Escambia County

CO-LEAD, SUBLESSEE

(Fish Management Area, resource protection, law enforcement)

Designated Land Use: Fish Management Area

Sublease (s): Escambia County Lease No. 91118

Encumbrances: List: None

Type Acquisition: Outdoor Recreational Development Council

Unique Features: Natural: Lake Stone, and other natural communities including bottomland forest, successional hardwood forest, and upland pine.

Archaeological/Historical: Two historical sites found within LSFMA.

Management Needs: Habitat restoration and improvement; public access and recreational opportunities; hydrological preservation and restoration; exotic and invasive species maintenance and control; imperiled species habitat maintenance, enhancement, and restoration.

Acquisition Needs/Acreage: 298 acres FWC Additions and Inholdings list (Figure 11).

Surplus Lands/Acreage: None

Public Involvement: Management Advisory Group consensus building meeting and Public Hearing (Appendix 12.3 and 12.4)

DO NOT WRITE BELOW THIS LINE (FOR DIVISION OF STATE LANDS USE ONLY)

ARC Approval Date _____ BTIITF Approval Date: _____

Comments: _____

Land Management Plan Compliance Checklist

Required for State-owned conservation lands over 160 acres

Section A: Acquisition Information Items

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------|
| 1 | The common name of the property. | 18-2.018 & 18-2.021 | iv; 1 |
| 2 | The land acquisition program, if any, under which the property was acquired. | 18-2.018 & 18-2.021 | 3 |
| 3 | Degree of title interest held by the Board, including reservations and encumbrances such as leases. | 18-2.021 | 3-4 |
| 4 | The legal description and acreage of the property. | 18-2.018 & 18-2.021 | 2-5 |
| 5 | A map showing the approximate location and boundaries of the property, and the location of any structures or improvements to the property. | 18-2.018 & 18-2.021 | 6-9 |
| 6 | An assessment as to whether the property, or any portion, should be declared surplus. <i>Provide information regarding assessment and analysis in the plan, and provide corresponding map.</i> | 18-2.021 | 30 |
| 7 | Identification of other parcels of land within or immediately adjacent to the property that should be purchased because they are essential to management of the property. <i>Please clearly indicate parcels on a map.</i> | 18-2.021 | 43-47 |
| 8 | Identification of adjacent land uses that conflict with the planned use of the property, if any. | 18-2.021 | 5; 26-27 |
| 9 | A statement of the purpose for which the lands were acquired, the projected use or uses as defined in 253.034 and the statutory authority for such use or uses. | 259.032(10) | 3 |
| 10 | Proximity of property to other significant State, local or federal land or water resources. | 18-2.021 | 23 |

Section B: Use Items

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------|
| 11 | The designated single use or multiple use management for the property, including use by other managing entities. | 18-2.018 & 18-2.021 | 28-29 |
| 12 | A description of past and existing uses, including any unauthorized uses of the property. | 18-2.018 & 18-2.021 | 26-27 |
| 13 | A description of alternative or multiple uses of the property considered by the lessee and a statement detailing why such uses were not adopted. | 18-2.018 | 28-30 |
| 14 | A description of the management responsibilities of each entity involved in the property's management and how such responsibilities will be coordinated. | 18-2.018 | 3-4; 45 |
| 15 | Include a provision that requires that the managing agency consult with the Division of Historical Resources, Department of State before taking actions that may adversely affect archeological or historical resources. | 18-2.021 | 26; 42 |

| | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------|
| 16 | Analysis/description of other managing agencies and private land managers, if any, which could facilitate the restoration or management of the land. | 18-2.021 | 33-50; 62 |
| 17 | A determination of the public uses and public access that would be consistent with the purposes for which the lands were acquired. | 259.032(10) | 27-29 |
| 18 | A finding regarding whether each planned use complies with the 1981 State Lands Management Plan, particularly whether such uses represent “balanced public utilization,” specific agency statutory authority and any other legislative or executive directives that constrain the use of such property. | 18-2.021 | 27-29 |
| 19 | Letter of compliance from the local government stating that the LMP is in compliance with the Local Government Comprehensive Plan. | BOT requirement | Appendix 12.14 |
| 20 | An assessment of the impact of planned uses on the renewable and non-renewable resources of the property, including soil and water resources, and a detailed description of the specific actions that will be taken to protect, enhance and conserve these resources and to compensate/mitigate damage caused by such uses, including a description of how the manager plans to control and prevent soil erosion and soil or water contamination. | 18-2.018 & 18-2.021 | 11-13; 23; 50 |
| 21 | *For managed areas larger than 1,000 acres, an analysis of the multiple-use potential of the property which shall include the potential of the property to generate revenues to enhance the management of the property provided that no lease, easement, or license for such revenue-generating use shall be entered into if the granting of such lease, easement or license would adversely affect the tax exemption of the interest on any revenue bonds issued to fund the acquisition of the affected lands from gross income for federal income tax purposes, pursuant to Internal Revenue Service regulations. | 18-2.021 & 253.036 | N/A less than 1,000 acres |
| 22 | If the lead managing agency determines that timber resource management is not in conflict with the primary management objectives of the managed area, a component or section, prepared by a qualified professional forester, that assesses the feasibility of managing timber resources pursuant to section 253.036, F.S. | 18-021 | 41-42 |
| 23 | A statement regarding incompatible use in reference to Ch. 253.034(10). | 253.034(10) | 29 |

*The following taken from 253.034(10) is not a land management plan requirement; however, it should be considered when developing a land management plan: The following additional uses of conservation lands acquired pursuant to the Florida Forever program and other state-funded conservation land purchase programs shall be authorized, upon a finding by the Board of Trustees, if they meet the criteria specified in paragraphs (a)-(e): water resource development projects, water supply development projects, storm-water management projects, linear facilities and sustainable agriculture and forestry. Such additional uses are authorized where: (a) Not inconsistent with the management plan for such lands; (b) Compatible with the natural ecosystem and resource values of such lands; (c) The proposed use is appropriately located on such lands and where due consideration is given to the use of other available lands; (d) The using entity reasonably compensates the titleholder for such use based upon an appropriate measure of value; and (e) The use is consistent with the public interest.

| Section C: Public Involvement Items | | | |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------|
| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
| 24 | A statement concerning the extent of public involvement and local government participation in the development of the plan, if any. | 18-2.021 | 5; Appendix 12.3 and 12.4 |
| 25 | The management prospectus required pursuant to paragraph (9)(d) shall be available to the public for a period of 30 days prior to the public hearing. | 259.032(10) | Appendix 12.4.3 |
| 26 | LMPs and LMP updates for parcels over 160 acres shall be developed with input from an advisory group who must conduct at least one public hearing within the county in which the parcel or project is located. <i>Include the advisory group members and their affiliations, as well as the date and location of the advisory group meeting.</i> | 259.032(10) | 5; Appendix 12.4 |
| 27 | Summary of comments and concerns expressed by the advisory group for parcels over 160 acres | 18-2.021 | Appendix 12.4.1 |
| 28 | During plan development, at least one public hearing shall be held in each affected county. Notice of such public hearing shall be posted on the parcel or project designated for management, advertised in a paper of general circulation, and announced at a scheduled meeting of the local governing body before the actual public hearing. <i>Include a copy of each County's advertisements and announcements (meeting minutes will suffice to indicate an announcement) in the management plan.</i> | 253.034(5) & 259.032(10) | Appendix 12.3 and 12.4 |
| 29 | The manager shall consider the findings and recommendations of the land management review team in finalizing the required 10-year update of its management plan. <i>Include manager's replies to the team's findings and recommendations.</i> | 259.036 | N/A; 34 |
| 30 | Summary of comments and concerns expressed by the management review team, if required by Section 259.036, F.S. | 18-2.021 | N/A; 34 |
| 31 | If manager is not in agreement with the management review team's findings and recommendations in finalizing the required 10-year update of its management plan, the managing agency should explain why they disagree with the findings or recommendations. | 259.036 | N/A; 34 |

| Section D: Natural Resources | | | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------|
| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
| 32 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding soil types. <i>Use brief descriptions and include USDA maps when available.</i> | 18-2.021 | 11-13; 17-18; Appendix 12.6 |
| 33 | Insert FNAI based natural community maps when available. | ARC consensus | 19 |

| | | | |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------|
| 34 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding outstanding native landscapes containing relatively unaltered flora, fauna and geological conditions. | 18-2.021 | 11-26 |
| 35 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding unique natural features and/or resources including but not limited to virgin timber stands, scenic vistas, natural rivers and streams, coral reefs, natural springs, caverns and large sinkholes. | 18-2.018 & 18-2.021 | 11-26 |
| 36 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding beaches and dunes. | 18-2.021 | 23 |
| 37 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding mineral resources, such as oil, gas and phosphate, etc. | 18-2.018 & 18-2.021 | 23 |
| 38 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding fish and wildlife, both game and non-game, and their habitat. | 18-2.018 & 18-2.021 | 20-23 |
| 39 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding State and Federally listed endangered or threatened species and their habitat. | 18-2.021 | 22-23 |
| 40 | The identification or resources on the property that are listed in the Natural Areas Inventory. <i>Include letter from FNAI or consultant where appropriate.</i> | 18-2.021 | 22-23 |
| 41 | Specific description of how the managing agency plans to identify, locate, protect and preserve or otherwise use fragile, nonrenewable natural and cultural resources. | 259.032(10) | 33-57 |
| 42 | Habitat Restoration and Improvement | 259.032(10) & 253.034(5) | |
| 42-A. | Describe management needs, problems and a desired outcome and the key management activities necessary to achieve the enhancement, protection and preservation of restored habitats and enhance the natural, historical and archeological resources and their values for which the lands were acquired. | ↓ | 33-57 |
| 42-B. | Provide a detailed description of both short (2-year planning period) and long-term (10-year planning period) management goals, and a priority schedule based on the purposes for which the lands were acquired and include a timeline for completion. | | 51-57 |
| 42-C. | The associated measurable objectives to achieve the goals. | | 51-57 |
| 42-D. | The related activities that are to be performed to meet the land management objectives and their associated measures. <i>Include fire management plans - they can be in plan body or an appendix.</i> | | 33-57 |
| 42-E. | A detailed expense and manpower budget in order to provide a management tool that facilitates development of performance measures, including recommendations for cost-effective methods of accomplishing those activities. | | 59-61; Appendix 12.12 |
| 43 | ***Quantitative data description of the land regarding an inventory of forest and other natural resources and associated acreage. <i>See footnote.</i> | 253.034(5) | 13-19 |

| | | | |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------|
| 44 | Sustainable Forest Management, including implementation of prescribed fire management | | |
| 44-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | 18-2.021, 253.034(5) & 259.032(10) ↓ | 33-57 |
| 44-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | | 51-57 |
| 44-C. | Measurable objectives (see requirement for #42-C). | | 51-57 |
| 44-D. | Related activities (see requirement for #42-D). | | 33-57 |
| 44-E. | Budgets (see requirement for #42-E). | | 59-61; Appendix 12.12 |
| 45 | Imperiled species, habitat maintenance, enhancement, restoration or population restoration | | 259.032(10) & 253.034(5) |
| 45-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 33-57 |
| 45-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | | 51-57 |
| 45-C. | Measurable objectives (see requirement for #42-C). | | 51-57 |
| 45-D. | Related activities (see requirement for #42-D). | | 33-57 |
| 45-E. | Budgets (see requirement for #42-E). | | 59-61; Appendix 12.12 |
| 46 | ***Quantitative data description of the land regarding an inventory of exotic and invasive plants and associated acreage. <i>See footnote.</i> | | 253.034(5) |
| 47 | Place the Arthropod Control Plan in an appendix. If one does not exist, provide a statement as to what arrangement exists between the local mosquito control district and the management unit. | BOT requirement via lease language | Appendix 12.13 |
| 48 | Exotic and invasive species maintenance and control | 259.032(10) & 253.034(5) | |
| 48-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 33-57 |
| 48-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | | 51-57 |
| 48-C. | Measurable objectives (see requirement for #42-C). | | 51-57 |
| 48-D. | Related activities (see requirement for #42-D). | | 33-57 |
| 48-E. | Budgets (see requirement for #42-E). | | 59-61; Appendix 12.12 |

Section E: Water Resources

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|--------|-------------|--------------|------------------------------|
|--------|-------------|--------------|------------------------------|

| | | | |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------|
| 49 | A statement as to whether the property is within and/or adjacent to an aquatic preserve or a designated area of critical state concern or an area under study for such designation. <i>If yes, provide a list of the appropriate managing agencies that have been notified of the proposed plan.</i> | 18-2.018 & 18-2.021 | 23; 40-41 |
| 50 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding water resources, including water classification for each water body and the identification of any such water body that is designated as an Outstanding Florida Water under Rule 62-302.700, F.A.C. | 18-2.021 | 23; 40-41 |
| 51 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding swamps, marshes and other wetlands. | 18-2.021 | 23; 40-41 |
| 52 | ***Quantitative description of the land regarding an inventory of hydrological features and associated acreage. <i>See footnote.</i> | 253.034(5) | 23; 40-41 |
| 53 | Hydrological Preservation and Restoration | 259.032(10) & 253.034(5) | |
| 53-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 33-57 |
| 53-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | | 51-57 |
| 53-C. | Measurable objectives (see requirement for #42-C). | | 51-57 |
| 53-D. | Related activities (see requirement for #42-D). | | 33-57 |
| 53-E. | Budgets (see requirement for #42-E). | | 59-61; Appendix 12.12 |

Section F: Historical, Archeological and Cultural Resources

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------|
| 54 | **Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding archeological and historical resources. <i>Include maps of all cultural resources except Native American sites, unless such sites are major points of interest that are open to public visitation.</i> | 18-2.018, 18-2.021 & per DHR's request | 26; 42; Appendix 12.10 and 12.11 |
| 55 | ***Quantitative data description of the land regarding an inventory of significant land, cultural or historical features and associated acreage. | 253.034(5) | 26; 42; Appendix 12.10 and 12.11 |
| 56 | A description of actions the agency plans to take to locate and identify unknown resources such as surveys of unknown archeological and historical resources. | 18-2.021 | 26; 42; Appendix 12.10 and 12.11 |
| 57 | Cultural and Historical Resources | 259.032(10) & 253.034(5) | |
| 57-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 33-57 |
| 57-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | | 51-57 |
| 57-C. | Measurable objectives (see requirement for #42-C). | | 51-57 |
| 57-D. | Related activities (see requirement for #42-D). | | 33-57 |

| | | | |
|-------|--------------------------------------|--|-----------------------|
| 57-E. | Budgets (see requirement for #42-E). | | 59-61; Appendix 12.12 |
|-------|--------------------------------------|--|-----------------------|

**While maps of Native American sites should not be included in the body of the management plan, the DSL urges each managing agency to provide such information to the Division of Historical Resources for inclusion in their proprietary database. This information should be available for access to new managers to assist them in developing, implementing and coordinating their management activities.

| Section G: Facilities (Infrastructure, Access, Recreation) | | | |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------|
| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
| 58 | ***Quantitative data description of the land regarding an inventory of infrastructure and associated acreage. <i>See footnote.</i> | 253.034(5) | 42-43 |
| 59 | Capital Facilities and Infrastructure | 259.032(10) & 253.034(5) | |
| 59-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 33-57 |
| 59-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | | 51-57 |
| 59-C. | Measurable objectives (see requirement for #42-C). | | 51-57 |
| 59-D. | Related activities (see requirement for #42-D). | | 33-57 |
| 59-E. | Budgets (see requirement for #42-E). | | 59-61; Appendix 12.12 |
| 60 | *** Quantitative data description of the land regarding an inventory of recreational facilities and associated acreage. | 253.034(5) | 42-43; 57 |
| 61 | Public Access and Recreational Opportunities | 259.032(10) & 253.034(5) | |
| 61-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 33-57 |
| 61-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | | 51-57 |
| 61-C. | Measurable objectives (see requirement for #42-C). | | 51-57 |
| 61-D. | Related activities (see requirement for #42-D). | | 33-57 |
| 61-E. | Budgets (see requirement for #42-E). | | 59-61; Appendix 12.12 |

| Section H: Other/ Managing Agency Tools | | | |
|-----------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------|
| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
| 62 | Place this LMP Compliance Checklist at the front of the plan. | ARC and managing agency consensus | v-xii |
| 63 | Place the Executive Summary at the front of the LMP. Include a physical description of the land. | ARC and 253.034(5) | iv |

| | | | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------|
| 64 | If this LMP is a 10-year update, note the accomplishments since the drafting of the last LMP set forth in an organized (categories or bullets) format. | ARC consensus | 30-33 |
| 65 | Key management activities necessary to achieve the desired outcomes regarding other appropriate resource management. | 259.032(10) | 33-57 |
| 66 | Summary budget for the scheduled land management activities of the LMP including any potential fees anticipated from public or private entities for projects to offset adverse impacts to imperiled species or such habitat, which fees shall be used to restore, manage, enhance, repopulate, or acquire imperiled species habitat for lands that have or are anticipated to have imperiled species or such habitat onsite. The summary budget shall be prepared in such a manner that it facilitates computing an aggregate of land management costs for all state-managed lands using the categories described in s. 259.037(3) which are resource management, administration, support, capital improvements, recreation visitor services, law enforcement activities. | 253.034(5) | 59-61; Appendix 12.12 |
| 67 | Cost estimate for conducting other management activities which would enhance the natural resource value or public recreation value for which the lands were acquired, include recommendations for cost-effective methods in accomplishing those activities. | 259.032(10) | 59-61; Appendix 12.12 |
| 68 | A statement of gross income generated, net income and expenses. | 18-2.018 | 59-61; Appendix 12.12 |

*** = The referenced inventories shall be of such detail that objective measures and benchmarks can be established for each tract of land and monitored during the lifetime of the plan. All quantitative data collected shall be aggregated, standardized, collected, and presented in an electronic format to allow for uniform management reporting and analysis. The information collected by the DEP pursuant to s. 253.0325(2) shall be available to the land manager and his or her assignee.

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Management Plan Acronym Key

| | |
|--------|----------------------------------------------------------|
| ADA | Americans with Disabilities Act |
| ARC | Acquisition and Restoration Council |
| BEBR | Bureau of Economic and Business Research |
| BOT | Board of Trustees of the Internal Improvement Trust Fund |
| CAS | Conservation Action Strategy |
| CLC | Florida Cooperative Land Cover Map |
| CLIP | Critical Lands and Waters Identification Project |
| DACS | Department of Agriculture and Consumer Services |
| DEP | Department of Environmental Protection |
| DHR | Florida Department of Historical Resources |
| DSL | Division of State Lands |
| FAC | Florida Administrative Code |
| FFS | Florida Forest Service |
| FLEPPC | Florida Exotic Pest Plant Council |
| FLUE | Florida Land Use Element |
| FNAI | Florida Natural Areas Inventory |
| FS | Florida Statute(s) |
| FWC | Florida Fish and Wildlife Conservation Commission |
| FWRI | Fish and Wildlife Research Institute |
| FWHAP | FWC's Fish and Wildlife Habitat Acquisition Program |
| GFC | Florida Game and Freshwater Fish Commission |
| GIS | Geographic Information Systems |
| IMPP | Internal Management Policies and Procedures |
| IPCC | Intergovernmental Panel on Climate Change |
| IWHRS | Integrated Wildlife Habitat Ranking System |
| LAP | Landowner Assistance Program |
| LMR | Land Management Review |
| LPIGD | Land Parcel Inventory of Geo-Database and Process |
| NRCS | Natural Resources Conservation Service |
| NWFWMD | Northwest Florida Water Management District |
| OBVM | Objective-Based Vegetation Management |
| OCPB | Optimal Conservation Planning Boundary |
| OFW | Outstanding Florida Waters |
| ORB | Optimal Resource Boundary |
| PUD | Planned Unit Development |
| RSPH | Rare Species Potential Habitat |
| SCHA | Strategic Habitat Conservation Areas |
| WCPR | Wildlife Conservation Prioritization and Recovery |

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1 Introduction and General Information

The Lake Stone Fish Management Area (LSFMA) is one of six freshwater fishing lakes constructed by the Florida Fish & Wildlife Conservation Commission (FWC) in cooperation with other governmental agencies for the sole purpose of increasing freshwater fishing opportunities in the western panhandle. The LSFMA is located approximately 40 miles north of Pensacola and has become a very popular recreational retreat for fishermen and campers.

The LSFMA is owned by the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees). The FWC has lead management authority and has an established sublease with Escambia County for management of recreational activities on the area. The LSFMA is approximately 249 acres, with Lake Stone, and its accompanying structure and spillways, encompassing approximately 130 acres with the remaining 119 acres consisting of upland habitat (Figure 1). The LSFMA is managed to provide high-quality opportunities for fishing and wildlife viewing and other fish and wildlife-based public outdoor recreation opportunities, including hiking, fishing, camping and boating, and to conserve and restore important natural communities and wildlife habitat for imperiled and more common wildlife species.

1.1 Management Plan Purpose

This Management Plan serves as the basic statement of policy and direction for the management of the LSFMA. It provides information including the past usage, conservation acquisition history and descriptions of the natural and historical resources found on the LSFMA. Furthermore, it identifies FWC's future management intent, goals and associated short and long-term objectives, as well as identifying challenges and solutions. This Management Plan has been developed to guide each aspect of the LSFMA's resource and operational management for the next ten years.

This Management Plan is submitted for review to the Acquisition and Restoration Council (ARC) acting on behalf of the Board of Trustees of the State of Florida through the Florida Department of Environmental Protection's Division of State Lands (DSL), in compliance with paragraph seven of Lease No. 2786 (Appendix 12.1) and pursuant to Chapters 253 and 259, Florida Statutes (FS), and Chapters 18-2 and 18-4, Florida Administrative Code (FAC). Format and content were drafted in accordance with ARC requirements for management plans and the model plan outline provided by the staff of DSL. Terms (Appendix 12.5) used in this Management Plan describing management activities and associated measurable goals and objectives conform to those developed for the Land Management Uniform Accounting Council Biennial Land Management Operational Report.

1.1.1 FWC Planning Philosophy

The FWC’s planning philosophy includes emphasizing management recommendation consensus-building among stakeholders and input from user groups and the general public at the beginning of the planning process. The FWC engages stakeholders by convening a Management Advisory Group and solicits additional input from user groups and the general public at a public hearing (Appendix 12.3 and 12.4). The FWC also engages area, district and regional agency staff, as well as other FWC staff expertise, in developing this Management Plan, thereby facilitating area biologist and manager “ownership” of the Management Plan, and thus the development of meaningful management intent language, goals with associated measurable objectives, timelines for completion and the identification of challenges and solution strategies for inclusion in the LSFMA Management Plan (Sections 5 – 7).

Further management planning input is received through Land Management Reviews (LMR) conducted every five years, which includes a review of the previous Management Plan, as well as a field review of the LSFMA. The LMR report (Section 5.1) provides FWC staff with important information and guidance provided by a diverse team of land management auditors and communicates the recommendations of the LMR team to the FWC so they may be adequately addressed in this Management Plan, and thus guide the implementation of the LMR team recommendations on the LSFMA.

Furthermore, the FWC maintains transparency and accountability throughout the development and implementation of this Management Plan. A “living document” concept, linking this updated Management Plan to the previous one, is accomplished by reporting on the objectives, management activities and projects accomplished over the last planning timeframe (previous ten years; see Section 4), thereby ensuring agency accountability through time. Also, in an effort to remain adaptive for the duration of this Management Plan, continuous input and feedback will be collected from FWC staff, stakeholders, user groups and other interested parties and individuals. As needed, amendments to this Management Plan will be presented to the DSL and the ARC for review and consideration.

1.2 Location

The LSFMA is located approximately 40 miles north of Pensacola, with Blackwater River State Forest to the east, and Ft. Pickens and Ft. Barrancas within Gulf Islands National Seashore to the south. Access roads to the Lake Stone boat ramp and campgrounds are located on S.R. 4, approximately one and a half miles west of U.S. Highway 29.

The LSFMA is approximately two miles south of the Florida-Georgia state line, about two miles west from the town of Century, Florida and approximately two and a half miles west

of the Escambia River (Figure 2). The LSFMA is located within Township 5N, Range 30W and 31W and Sections 12 and 7 (Figure 3).

1.3 Acquisition

1.3.1 Purpose for Acquisition of the Property

The LSFMA was purchased primarily for the creation of public fishing opportunities. The LSFMA is managed by the FWC and Escambia County for the purpose of operating a Fish Management Area, while creating ecological diversity, by management of habitat for both common and imperiled wildlife and for providing the public with fish and wildlife-oriented outdoor recreational opportunities.

1.3.2 Acquisition History

In 1965, the Outdoor Recreational Development Council authorized funds for the acquisition of 205 acres for the construction and establishment of the LSFMA. The property was then leased to the FWC for 99 years by the Board of Trustees in 1969 under lease number 2786. Property description inequities were found in the original 1969 lease from the Board of Trustees to the FWC requiring the lease to be renegotiated and amended in 1975. In 1988, an additional 44-acre acquisition was added to the area's lease bringing the area to its current size of 249 acres. In 1992, the upland areas were subleased to Escambia County under contract number 91118 for further development of outdoor recreational facilities.

1.4 Management Authority

The FWC is the designated lead managing agency for the LSFMA under the authority granted by Lease Number 2786 from the Board of Trustees agent, DSL. The FWC and the Board of Trustees have also granted authority under sublease agreement 91118 to Escambia County for management of the recreational activities on the area. Further management authority derives from Article IV, Section 9 of the Florida Constitution as well as the guidance and directives of Chapters 253, 259, 327, 370, 373, 375, 378, 379, 403, 487, 597 and 870 of the Florida Statutes (F.S). These constitutional provisions and laws provide the FWC the authority to protect, conserve and manage the State's fish and wildlife resources.

1.5 Management Directives

The 99-year Board of Trustees' Lease Agreement Number 2786 with the FWC directs the FWC to manage the area "...for the purpose of preserving, developing, improving, operating, maintaining and otherwise managing land for public outdoor recreational, park, conservation and related purposes..."

1.6 Title Interest and Encumbrances

As State-owned lands, title to the LSFMA is vested in the Board of Trustees (Governor and Cabinet). In December 1969, the DSL, as staff to the Board of Trustees, entered into Lease Agreement Number 2786, a 99-year lease agreement, granting the FWC management authority for the LSFMA. As mentioned previously, Escambia County holds a sublease with the FWC for the management of recreational activities on the area. There are no known encumbrances, outstanding mineral rights or other interests within the established boundary.

1.7 Proximity to Other Public Conservation Lands

The LSFMA is located in the vicinity of a network of conservation lands, including lands managed by the Northwest Florida Water Management District (NFWFMD) and Florida Forest Service (FFS). Several Florida Forever projects (Figure 4) are also located in the vicinity of the area.

Tables 1 and 2 list the Florida Forever projects and conservation lands within a 15-mile radius of the LSFMA including lands managed by public and private entities that conserve cultural and natural resources within this region of Florida.

Most of the conservation lands listed in Table 2 are owned in full-fee by a public entity. However, some of these areas fall within a less-than-fee ownership classification where the land is owned and being managed by a private landowner while a public agency or not-for-profit organization holds a conservation easement on the land.

Table 1. Florida Forever Projects in a 15-mile Vicinity of the LSFMA

| Project Name | GIS Acres |
|------------------------------------|------------------|
| Coastal Headwaters Longleaf Forest | 99,544.4 |

Table 2. Conservation Lands in a 15-mile Vicinity of the LSFMA

| State of Florida | Managing Agency |
|--------------------------------------------|------------------------|
| Blackwater River State Forest | DACS-FFS |
| Water Management District | Managing Agency |
| Lower Escambia River Water Management Area | NFWFMD |
| Watson Conservation Easement | NFWFMD |

| Acronym Key | Agency Name |
|--------------------|---------------------------------------------------------------------------|
| DACS-FFS | FL Department of Agriculture and Consumer Services-Florida Forest Service |
| NFWFMD | Northwest Florida Water Management District |

1.8 Adjacent Land Uses

As described above, the LSFMA is located in the Florida panhandle, southwest of the town of Century in the northern portion of Escambia County. The LSFMA is located adjacent to several privately-owned lands.

The 2018 U.S. Census estimates that there are 318,560 people living in Escambia County. The Department of Economic Affairs, Bureau of Economic and Business Research's (BEBR) medium-range population projection indicates that in the year 2030, there will be 347,600 people living in Escambia County. The BEBR population projections for the adjacent Santa Rosa County for the year 2030 are 214,700.

The current future land use and zoning categories for the LSFMA are recreation. Escambia County operates a campground which contains a picnic area, playground, restroom, bath facilities, and a covered pavilion. According to Escambia County's comprehensive plan, recreation lands do not allow any new dwelling units, except caretaker residences. Nevertheless, the Escambia County's Recreation Master Plan allows the following activities: hiking, fishing, wildlife viewing, nature study, camping, paddling and geocaching. Escambia County's future land use maps indicate that the LSFMA will continue to be designated and zoned as recreation lands.

The current land use designations for areas in the vicinity of the LSFMA are public, rural residential, and agriculture.

The LSFMA is not within an area of critical state concern or presently under study for such a designation.

1.9 Public Involvement

The FWC conducted a Management Advisory Group (MAG) meeting in Pensacola, Florida on February 6th, 2019 to obtain input from both public and private stakeholders regarding management of the LSFMA. Results of this meeting were used by the FWC to develop management goals and objectives and to identify opportunities and strategies for inclusion in this Management Plan. A summary of issues and opportunities raised by the MAG, as well as a listing of participants, is included as Appendix 12.4. Further, a public hearing, as required by Chapter 259.032(10), FS, was held in Century on April 10th, 2019, to solicit input and comment from the general public regarding this Management Plan. The report of that hearing is also contained in Appendix 12.4. A website is also maintained for receipt of public input at <http://myfwc.com/conservation/terrestrial/management-plans/development/>. Further testimony and input are received at a public hearing held by the ARC. Input received from all public involvement efforts has been considered in the development of this Management Plan.

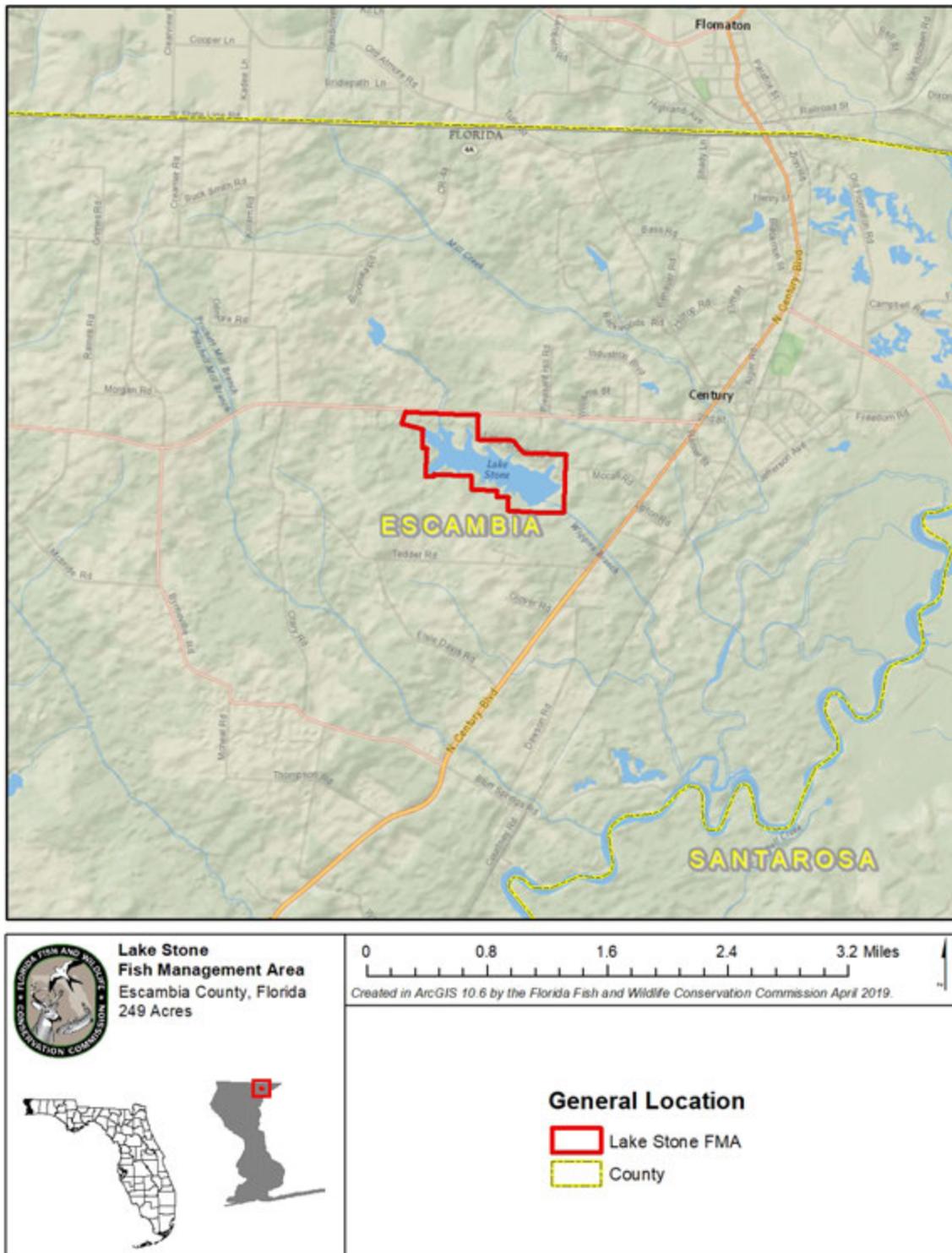


Figure 1. The LSFMA Location

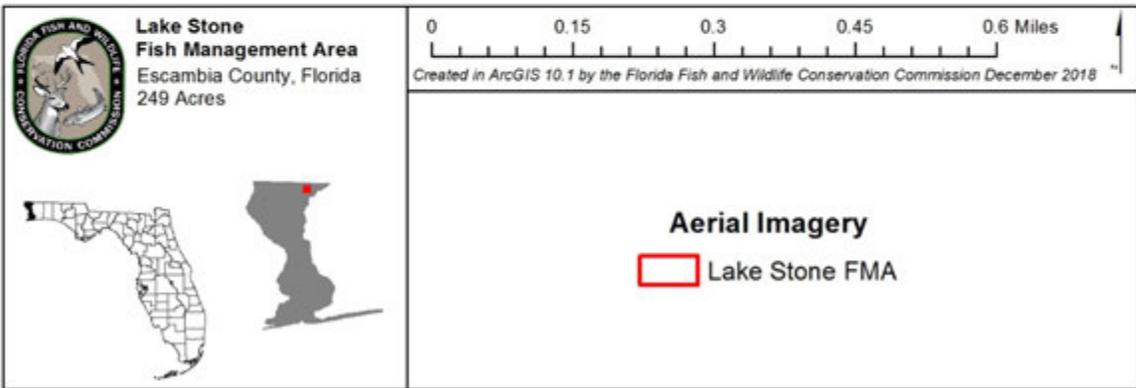


Figure 2. The LSFMA Aerial Imagery

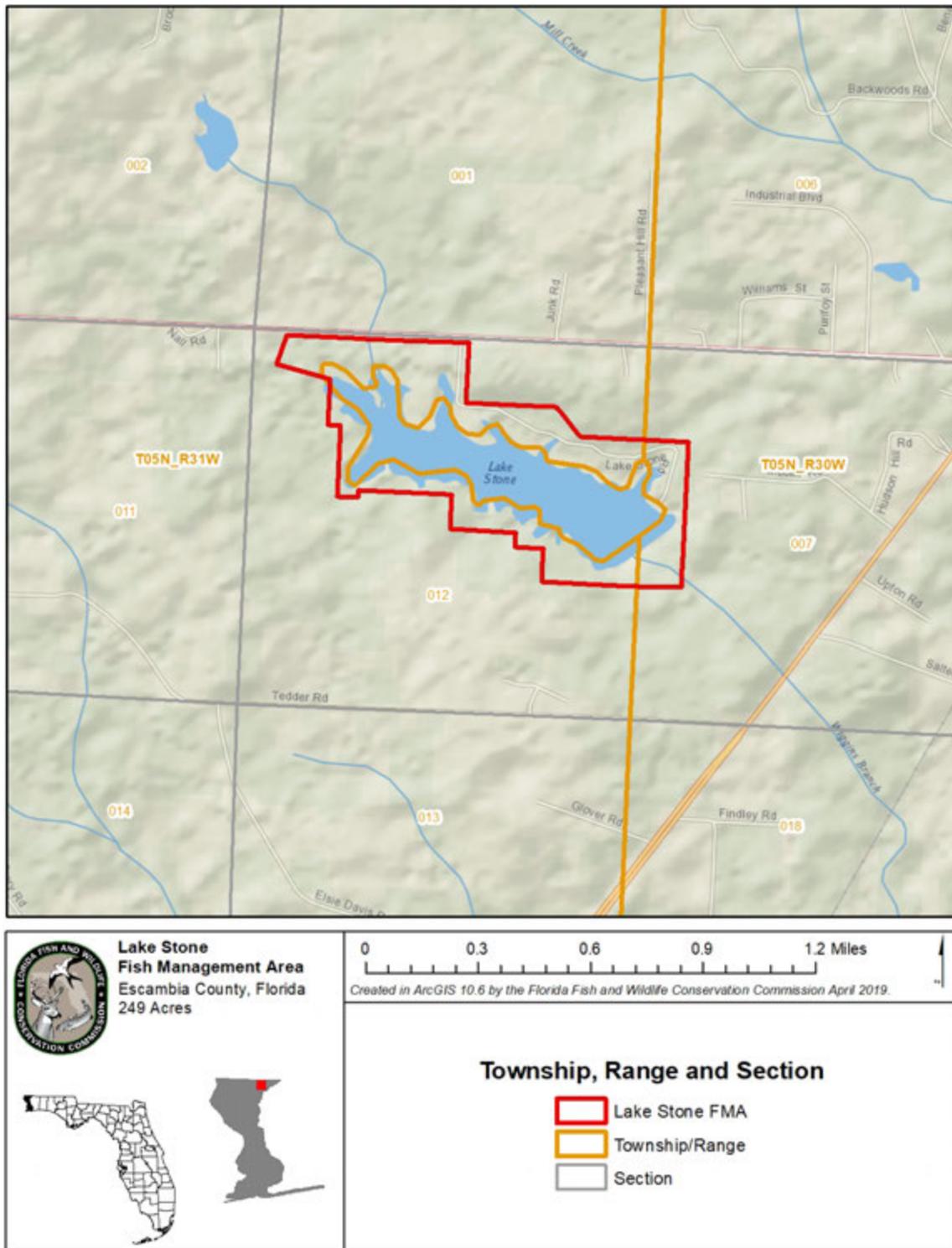


Figure 3. The LSFMA - Township, Range, and Section

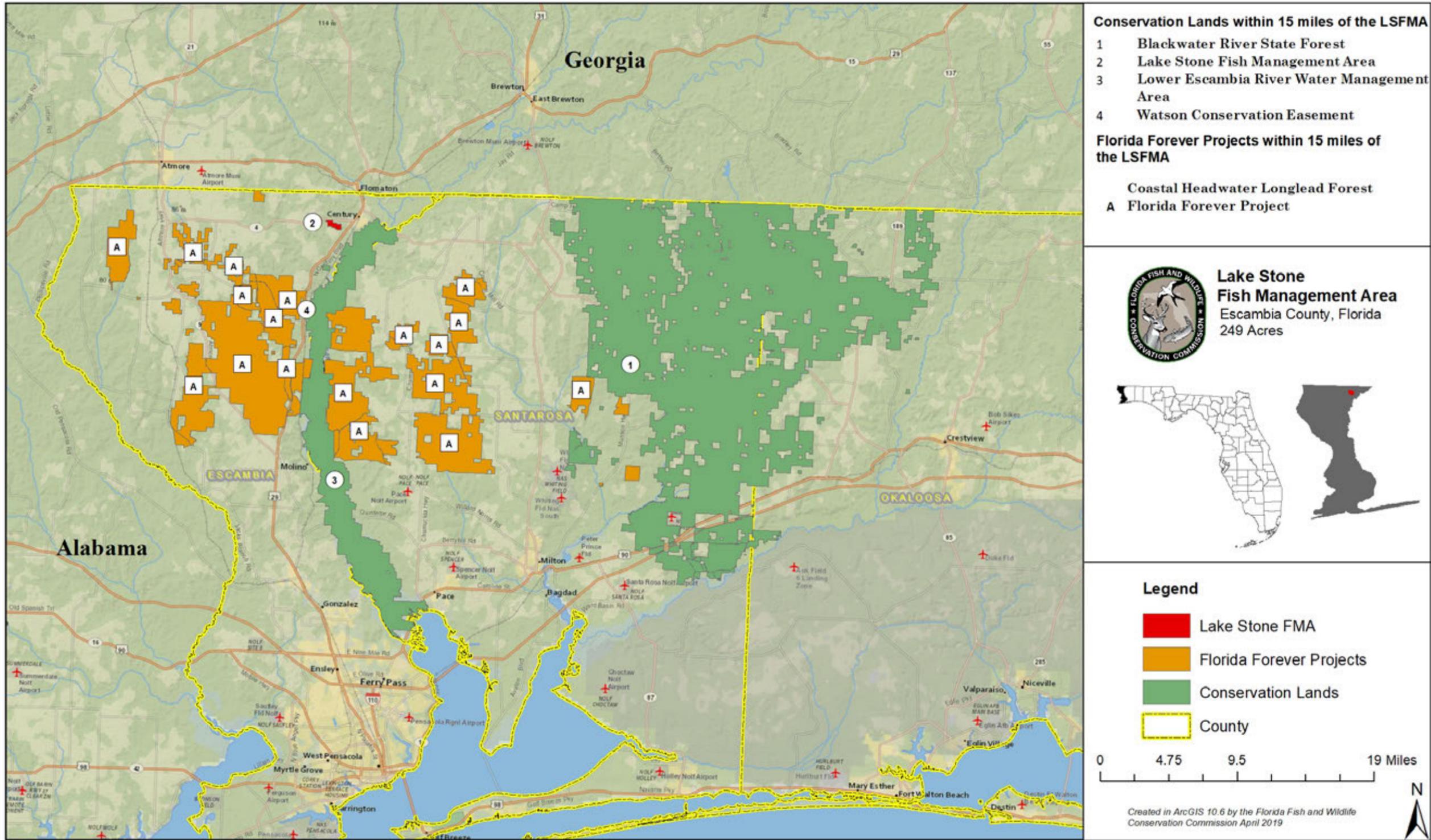


Figure 4. Conservation Land and Florida Forever Projects within a 15-mile Vicinity of the LSFMA

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2 Natural and Historical Resources

2.1 Physiography and Topography

The LSFMA is located in the Western Highlands physiographic province. The Western Highlands are comprised of rolling hills and ridges, a region characterized by elevations ranging from 100 feet to 280 feet above mean sea level (MSL). The LSFMA is not within or adjacent to any aquatic preserves or a designated area of critical state concern, nor is it under study for such designation. The majority of surface water on the LSFMA is a lake impoundment. Lake Stone is designated as open water. Most of the hydrology on the LSFMA is controlled by the water level of Lake Stone. Lake Stone has an average depth of 6 feet and a maximum depth of 22 feet, with the deepest area of the lake found near the dam and along the old stream bed. The lake contains flooded timber.

2.1.1 Climate

Escambia County experiences a warm temperate climate. The temperature record by the nearby Milton-Whiting Field Naval Air Weather Station during the period 1980 to 2016 ranged from an average of 86 degrees Fahrenheit (F) during the hottest months from May to September and 68 degrees F during the cooler months from December to February. Average total annual precipitation during the period 1980 to 2016 was approximately 66 inches, during which period rainfall was highest during the month of July (5.8 inches) and lowest in October (3.5 inches).

2.1.2 Soils

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) data were used to identify the LSFMA soil series and soil depth to water table (Figures 5 and 6). The map units described in the soil survey of the LSFMA are distributed as shown in Figure 5. Analyses of depth to water table for map units occurring within the LSFMA are also provided in Figure 6. The NRCS defines a soil map unit as: “a collection of soil areas or non-soil areas (miscellaneous areas) delineated in a soil survey.” Soil map units may contain multiple soil components, which are given names that are unique identifiers. Appendix 12.6 lists the names and official map unit descriptions of areas delineated on the detailed soil maps in a soil survey or by miscellaneous areas in the survey area as determined by the NRCS. Analysis of depth to water table for map units occurring within the LSFMA are also provided in Appendix 12.6.

Soils found within the LSFMA are generally those associated with the area’s mix of natural communities and are thus poorly to very poorly drained sandy or organic soils. While

almost half of the area is made up of water, Troup-Poarch complex soils make up approximately 43% of the area. Along with various other less prominent sands including, Bigbee-Garcon-Fluvaquents complex, Bonifay loamy sand, Dorovan muck and Fluvaquents, Escambia fine sandy loam and Poarch sandy loam. The LSFMA does not contain beaches, dunes or virgin timber.

2.1.3 Geologic Conditions

The surface geologic units at Escambia County are primarily the Citronelle Formation and Undifferentiated Quaternary sediments. The geology of Escambia County, as reflected on the U.S. Department of the Interior, United States Geological Survey's (USGS) website (<http://mrdata.usgs.gov/geology/state/fips-unit.php?code=f12033>) is as follows:

Citronelle Formation (Pliocene)

The Citronelle Formation is widespread in the Gulf Coastal Plain and makes up approximately 78% of Escambia County. The type section for the Citronelle Formation, named by Matson (1916), is near Citronelle, Alabama. The Citronelle Formation grades laterally, through a broad facies transition, into the Miccosukee Formation of the eastern Florida panhandle. Coe (1979) investigated the Citronelle Formation in portions of the western Florida panhandle. The Citronelle Formation is a siliciclastic, deltaic deposit that is lithologically similar to, and time equivalent with, the Cypresshead Formation and, at least in part, the Long Key Formation (Cunningham et al., 1998) of the peninsula. In the western panhandle, some of the sediments mapped as Citronelle Formation may be reworked Citronelle. The lithologies are the same and there are few fossils present to document a possible younger age. The Citronelle Formation consists of gray to orange, often mottled, unconsolidated to poorly consolidated, very fine to very coarse, poorly sorted, clean to clayey sands. It contains significant amounts of clay, silt and gravel which may occur as beds and lenses and may vary considerably over short distances. Limonite nodules and limonite-cemented beds are common. Marine fossils are rare but fossil pollen, plant remains, and occasional vertebrates are found. Much of the Citronelle Formation is highly permeable. It forms the Sand and Gravel Aquifer of the surficial aquifer system.

Pleistocene/Holocene

Undifferentiated Quaternary Sediments – Covering about 22% of Escambia County, much of Florida's surface is covered by a varying thickness of undifferentiated sediments consisting of siliciclastics, organics and freshwater carbonates. Where these sediments exceed 20 feet (6.1 meters) thick, they were mapped as discrete units. In an effort to subdivide the undifferentiated sediments, those sediments occurring in flood plains were mapped as alluvial and flood plain deposits (Qal). Sediments showing surficial expression of beach ridges and dunes were mapped separately (Qbd) as were the sediments composing

Trail Ridge (Qtr). Terrace sands were not mapped (refer to Healy [1975] for a discussion of the terraces in Florida). The subdivisions of the Undifferentiated Quaternary Sediments (Qu) are not lithostratigraphic units but are utilized in order to facilitate a better understanding of the State's geology. The siliciclastics are light gray, tan, brown to black, unconsolidated to poorly consolidated, clean to clayey, silty, unfossiliferous, variably organic-bearing sands to blue green to olive green, poorly to moderately consolidated, sandy, silty clays. Gravel is occasionally present in the panhandle. Organics occur as plant debris, roots, disseminated organic matrix and beds of peat. Freshwater carbonates, often referred to as marls in the literature, are scattered over much of the State. In southern Florida, freshwater carbonates are nearly ubiquitous in the Everglades. These sediments are buff colored to tan, unconsolidated to poorly consolidated, fossiliferous carbonate muds. Sand, silt and clay may be present in limited quantities. These carbonates often contain organics. The dominant fossils in the freshwater carbonates are mollusks.

2.2 Vegetation

Through the services of the Florida Natural Areas Inventory (FNAI), the FWC and the FNAI have mapped the current natural and anthropogenic communities of the LSFMA which describes six natural and anthropogenic community types existing on the LSFMA, (Table 3, and Figure 7). FWC biologists have not yet documented any rare plant species occurring on the area but have found three occurrences of exotic and invasive plant species (Table 5) as occurring on the LSFMA. Additionally, plant species found at the LSFMA have been recorded (Table 4).

Table 3. Natural Community Types on the LSFMA

| Community Type | GIS Acres | Percentage |
|------------------------------|-----------|------------|
| Bottomland Forest | 17.82 | 7.2% |
| Developed | 19.10 | 7.7% |
| Impoundment | 98.48 | 40.0% |
| Road | 9.52 | 4.0% |
| Successional Hardwood Forest | 44.45 | 18.0% |
| Upland Pine | 58.65 | 23.6% |

Table 4. Native Plant Species Know to Occur on the LSFMA

| Common Name | Scientific Name |
|--------------------|-----------------------------|
| American holly | <i>Ilex opaca</i> |
| Black titi | <i>Cliftonia monophylla</i> |
| Columned stinkhorn | <i>Clathrus columnatus</i> |
| Deer moss | <i>Cladina spp.</i> |

| | |
|----------------------|---------------------------------|
| Fetterbush | <i>Lyonia lucida</i> |
| Inkberry | <i>Ilex glabra</i> |
| Longleaf pine | <i>Pinus palustris</i> |
| Narrowleaf silkgrass | <i>Pityopsis graminifolia</i> |
| Redbay | <i>Persea borbonia</i> |
| Resurrection fern | <i>Pleopeltis polypodioides</i> |
| Sand blackberry | <i>Rubus cunefolius</i> |
| Slash pine | <i>Pinus ellitottii</i> |
| Southern dewberry | <i>Rubus trivialis</i> |
| Sparkleberry | <i>Vaccinium arboreum</i> |
| Sphagnum moss | <i>Sphagnum spp.</i> |
| Sweetbay | <i>Magnolia virginiana</i> |
| Sweetgum | <i>Liquidambar styraciflua</i> |
| Switchcane | <i>Arundinaria gigantea</i> |
| Titi | <i>Cyrilla racemiflora</i> |
| Tulip poplar | <i>Liriodendron tulipifera</i> |
| Water oak | <i>Quercus nigra</i> |
| Wax myrtle | <i>Morella cerifera</i> |
| Wild sarsaparilla | <i>Smilax glauca</i> |

Table 5. Exotic and Invasive Plant Species Know to Occur on the LSFMA

| Common Name | Scientific Name | FLEPPC Category |
|------------------------|------------------------------|------------------------|
| Chinese privet | <i>Ligustrum sinense</i> | <i>I</i> |
| Hydrilla | <i>Hydrilla verticillata</i> | <i>I</i> |
| Japanese climbing fern | <i>Lygodium japonicum</i> | <i>I</i> |

2.2.1 FNAI Natural Community Descriptions

Bottomland forest (~17.82 acres)

Bottomland forests occur within floodplain forests and swamps on higher ground that is rarely inundated except during unusual flood events. Found in areas intermediate between swamps and uplands, the canopy may be quite diverse with both deciduous and evergreen hydrophytic to mesophytic trees. Bottomland forest is a closed-canopy forest found on terraces and levees within riverine floodplains and in shallow depressions. Bottomland forests along smaller streams are prone to periodic flooding attributable to localized rainfall that increases seepage and runoff from surrounding uplands. In floodplains along larger rivers and tributaries, bottomland forests on higher terraces, ridges and levees are subject

to only short seasonal floods due to high relief or quickly drained sandy soils or both conditions. The water table in these forests is high in blackwater or spring-fed floodplains, but relatively low during dry periods in alluvial floodplains. Inundation occurs only during higher floods, regardless of the stream type.

Upland Pine (~58.65 acres)

Upland pine is a woodland of widely spaced pines with a sparse to moderate shrub layer and a dense, species-rich groundcover of grasses and herbs, occurring on gently rolling terrain. Soils are generally higher in loam or clay than soils of similar sandhills. The canopy is usually dominated by longleaf pine over an intermittent subcanopy layer of smaller pines and hardwoods, often including southern red oak. Though typically present as low shrubs and occasional midstory trees, these species can form a dense midstory in areas that have experienced a lack of fire for many years. Shrub cover can vary from sparse to dense and includes low-growing species such as dwarf huckleberry, running oak, gallberry and Darrow's blueberry. Wiregrass is often dominant, but a high diversity of grasses and forbs may be present.

Altered Community Descriptions

Developed (~19.10 acres)

This can include parking lots, buildings, maintained lawns (as part of recreational, business or residential areas), botanical or ornamental gardens, campgrounds, and recreational, industrial and residential areas. Developed communities on the LSFMA include the campground area, the office and caretaker residence, parking lots, maintained areas, the earthen dam structure, principal spillway, drawdown structure with drain valves and two emergency overflow spillways. This also includes nine earthen fishing fingers, a fishing pier, one paved public boat ramp and one crushed rock boat ramp.

Impoundment (~98.48 acres)

Stream or watershed impoundment. On the LSFMA this includes Lake Stone. The Lake Stone impoundment was constructed in 1967 by impounding Wiggins Branch with an earthen dam. The primary purpose of impounding Wiggins Branch was to create a public fishing lake.

Road (~9.52 acres)

Includes paved and unpaved roadways.

Successional Hardwood Forest (~44.45 acres)

Successional hardwood forests are closed-canopied forest dominated by fast growing hardwoods, and often with remnant pines. These forests are either invaded natural habitat (i.e., mesic flatwoods, sandhill, upland pine, upland mixed woodland) due to lengthy fire-suppression or old fields that have succeeded to forest. The subcanopy and shrub layers of these forests are often dense and dominated by smaller individuals of the canopy species. Remnant species of the former natural community may also be present.

2.2.2 Imperiled Plants

For the purposes of this Management Plan, the term “imperiled species” as it relates to plants refers to plant species that the DACS or the USFWS designated as endangered or threatened. This designation is commonly known as “listed species”, and all names and status determinations were derived from Florida’s Regulated Plant Index Rule (5B-40.0055 F.A.C.) that is maintained by the DACS.

The FWC manages the lands using a proactive natural community focused approach. As applied by the FWC, natural resource management starts by classifying lands into distinct natural communities. The FWC then conducts management activities to maintain or enhance each communities’ structure and function. Land management that has a positive influence on natural community conditions benefits the species occurring in these habitats.

Currently no imperiled plant species have been observed on the LSFMA, however it is possible imperiled species occur, and if encountered, staff will document these occurrences. Florida’s imperiled species are adapted to natural communities and should continue to benefit from the FWC's ongoing and planned management to maintain and enhance natural community structure and function.

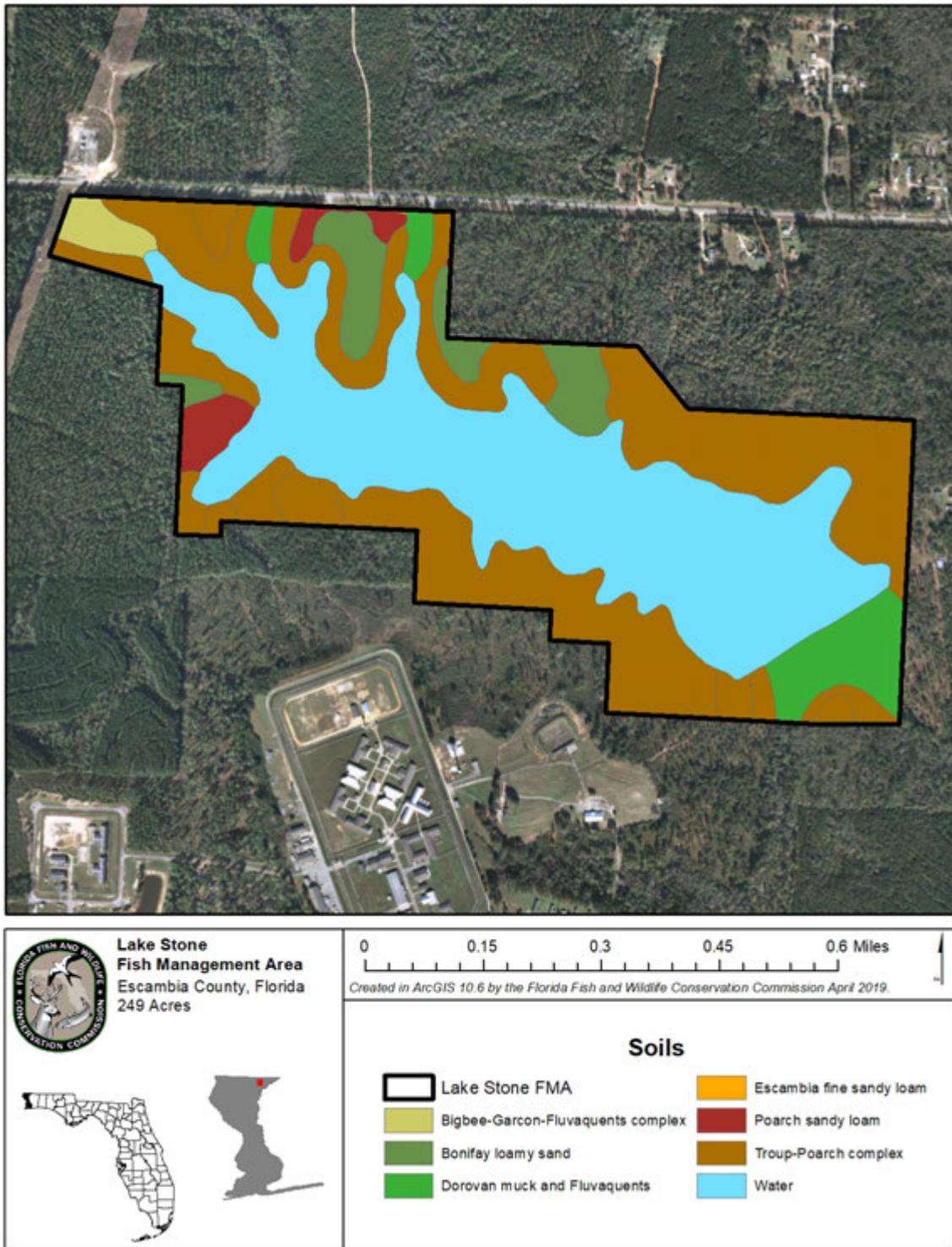


Figure 5. The LSFMA Soil Types

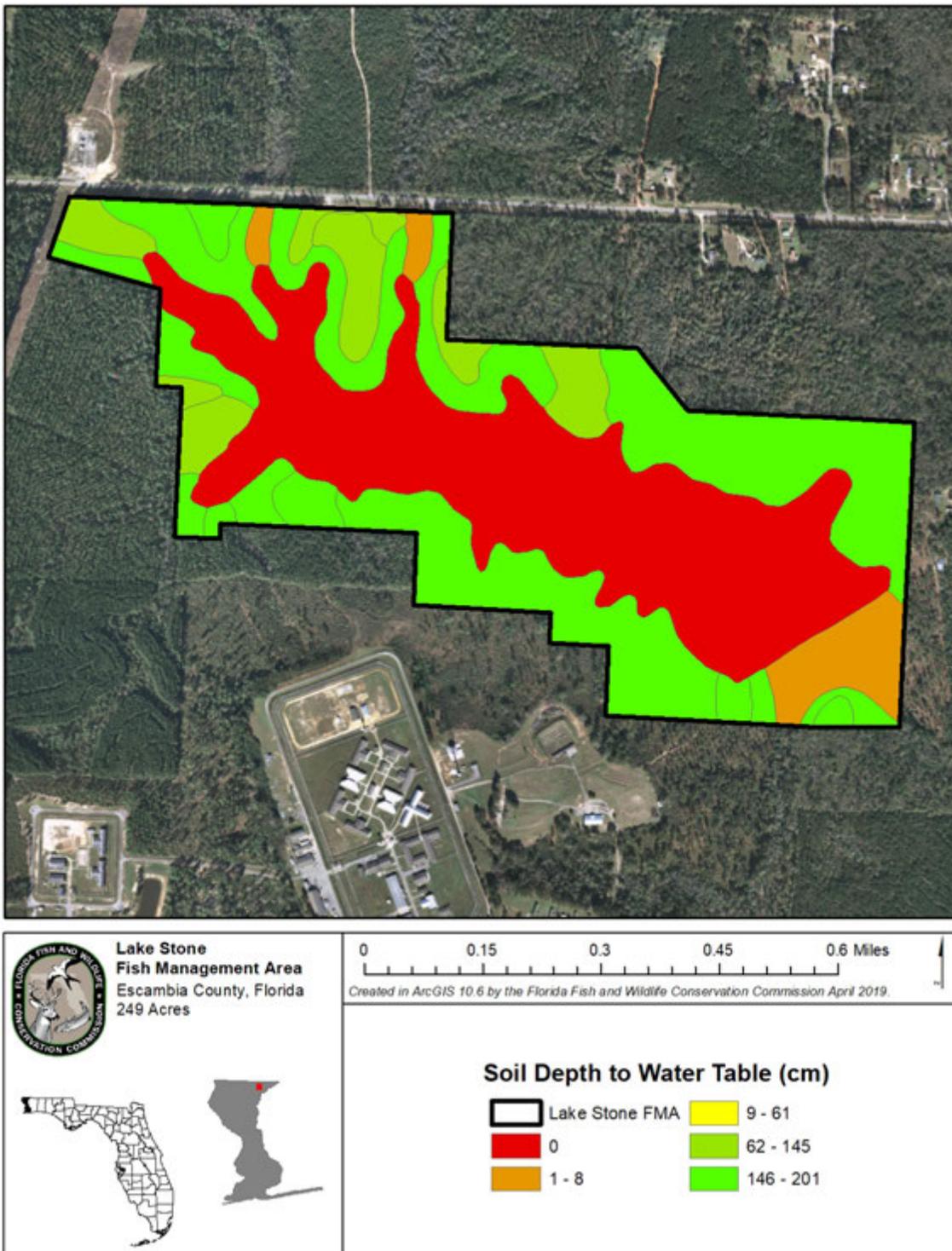


Figure 6. The LSFMA Soil Depth to Water Table

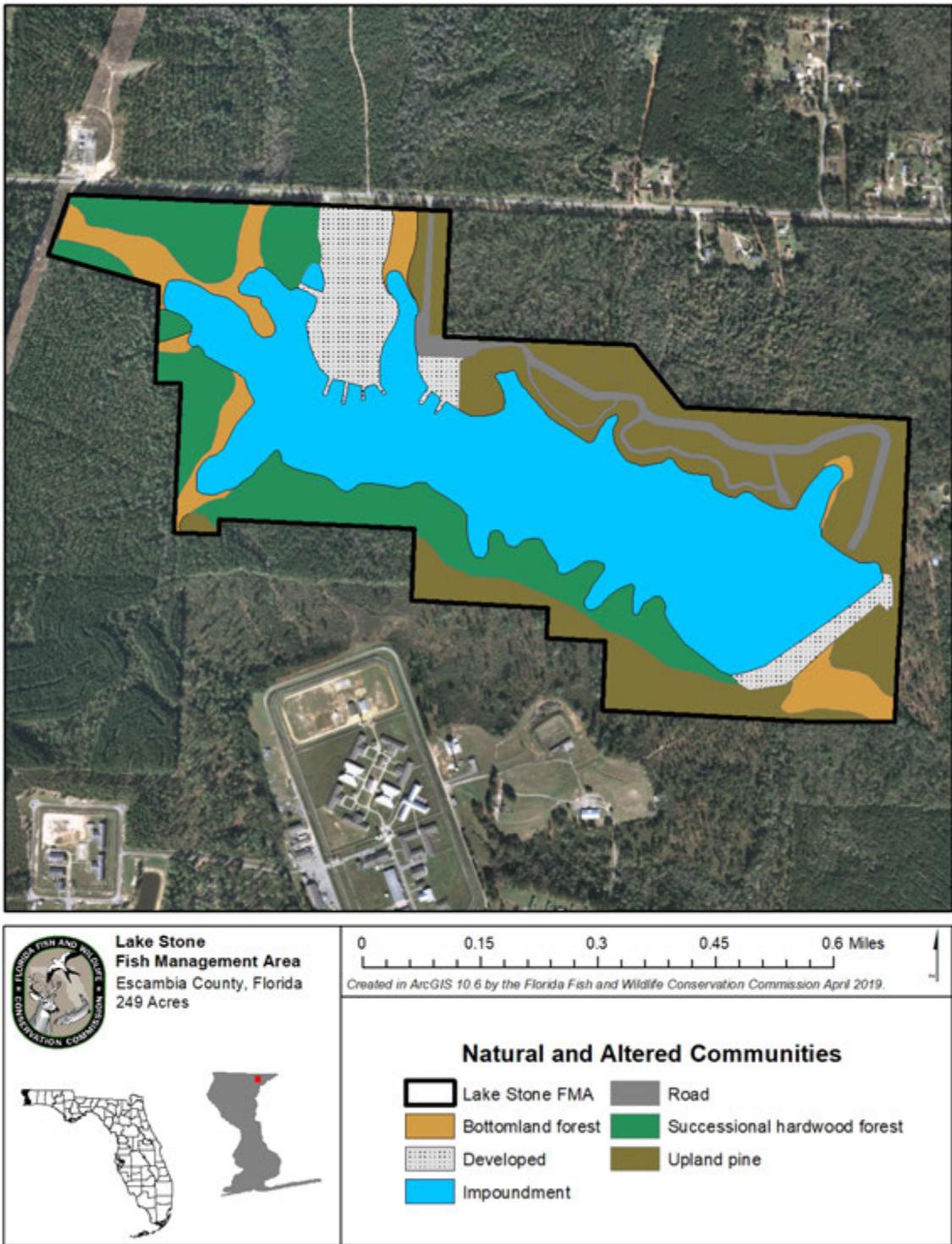


Figure 7. Natural Communities Found on the LSFMA

2.3 Fish and Wildlife Resources

As described above, the LSFMA has a variety of natural communities and habitat types that support an array of wildlife species. Active, ongoing wildlife management practices and the high quality of habitat make the LSFMA an excellent place to view wildlife. The LSFMA's Lake Stone, bottomland forest, and upland pine forest provide critical habitat for resident and migratory wildlife.

Additionally, the FWC maintains an inventory of fauna occurring on or near the LSFMA listed in the following tables, including amphibians and reptiles (Table 6), birds (Table 7), mammals (Table 8) and fish (Table 9). Currently, no exotic and invasive wildlife species have been documented on or near the LSFMA.

Table 6. Native Reptile and Amphibian Species Known to Occur on the LSFMA

| Common Name | Scientific Name |
|------------------------|----------------------------------|
| Common Snapping Turtle | <i>Chelydra serpentina</i> |
| Southern Leopard Frog | <i>Lithobates sphenocephalus</i> |
| Spring Peeper | <i>Pseudacris crucifer</i> |

Table 7. Native Bird Species Known to Occur on the LSFMA

| Common Name | Scientific Name |
|------------------------|------------------------------|
| American Robin | <i>Turdus migratorius</i> |
| Belted Kingfisher | <i>Megaceryle alcyon</i> |
| Blue Jay | <i>Cyanocitta cristata</i> |
| Blue-headed vireo | <i>Vireo solitarius</i> |
| Brown-headed Nuthatch | <i>Sitta pusilla</i> |
| Carolina Chickadee | <i>Poecile carolinensis</i> |
| Chipping Sparrow | <i>Spizella passerina</i> |
| Eastern Bluebird | <i>Sialia sialis</i> |
| Eastern Phoebe | <i>Sayornis phoebe</i> |
| House Finch | <i>Haemorhous mexicanus</i> |
| Lesser Scaup | <i>Aythya affinis</i> |
| Mourning Dove | <i>Zenaida macroura</i> |
| Northern Cardinal | <i>Cardinalis cardinalis</i> |
| Northern Mocking bird | <i>Mimus polyglottos</i> |
| Pied-billed Grebe | <i>Podilymbus podiceps</i> |
| Pine Warbler | <i>Setophaga pinus</i> |
| Red-bellied Woodpecker | <i>Melanerpes carolinus</i> |
| Ruby-crowned Kinglet | <i>Regulus calendula</i> |

| | |
|--------------------------|----------------------------|
| Swamp Sparrow | <i>Melospiza georgiana</i> |
| Turkey Vulture | <i>Cathartes aura</i> |
| Yellow-bellied Sapsucker | <i>Sphyrapicus varius</i> |
| Yellow-rumped Warbler | <i>Setophaga coronata</i> |

Table 8. Native Mammal Species Known to Occur on the LSFMA

| Common Name | Scientific Name |
|-----------------------|-------------------------------|
| Eastern gray squirrel | <i>Sciurus carolinensis</i> |
| Opossum | <i>Didelphis virginiana</i> |
| Raccoon | <i>Procyon lotor</i> |
| White-tailed deer | <i>Odocoileus virginianus</i> |

Table 9. Native Fish Species Known to Occur on the LSFMA

| Common Name | Scientific Name |
|---------------------|--------------------------------|
| Black crappie | <i>Pomoxis nigromaculatus</i> |
| Bluegill | <i>Lepomis macrochirus</i> |
| Brook silverside | <i>Labidesthes sicculus</i> |
| Brown bullhead | <i>Ameiurus nebulosus</i> |
| Channel catfish | <i>Ictalurus punctatus</i> |
| Golden shiner | <i>Notemigonus crysoleucas</i> |
| Largemouth bass | <i>Micropterus salmoides</i> |
| Mosquitofish | <i>Gambusia affinis</i> |
| Redear sunfish | <i>Lepomis microlophus</i> |
| Threadfin shad | <i>Dorosoma petenense</i> |
| Triploid grass carp | <i>Ctenopharyngodon idella</i> |
| Warmouth | <i>Lepomis gulosus</i> |
| Yellow bullhead | <i>Ameiurus natalis</i> |

2.3.1 Integrated Wildlife Habitat Ranking System

The FWC has developed the Integrated Wildlife Habitat Ranking System (IWHRS) as a Geographic Information Systems (GIS)-based assessment tool that incorporates a wide variety of land cover and wildlife species data. The IWHRS evaluates the Florida landscape based upon the habitat needs of wildlife as a way to identify ecologically significant lands in the state, and to assess the potential impacts of management and land-use changes. The IWHRS was developed to provide technical assistance to various local, regional, state, and federal agencies, and entities interested in wildlife needs and conservation in order to: (1) determine ways to avoid or minimize project impacts by evaluating alternative placements, alignments and transportation corridors during early planning stages, (2) assess direct,

secondary and cumulative impacts to habitat and wildlife resources, and (3) identify appropriate parcels for public land acquisition for wetland and upland habitat mitigation purposes. The IWHRS (2009) indicates that the LSFMA has a mean wildlife value of 6.0. The FWC's IWHRS map for the LSFMA is shown in Figure 8.

2.3.2 Imperiled Fish and Wildlife

For the purposes of this Management Plan, the term “Imperiled Species” refers to plant and animal species that are designated as Endangered, Threatened or a Species of Special Concern by the FWC, or that are designated as Endangered or Threatened by the U.S. Fish and Wildlife Service. This designation is also commonly known as “listed species.” At its November, 2016, Commission meeting, the FWC approved Florida's Imperiled Species Management Plan (<http://myfwc.com/wildlifehabitats/imperiled/plan/>), which included changes to the listing status for many wildlife species. Subsequent rule changes (68A-27.003 and 68A-27.005 FAC) came into effect in January 2017. All federally listed species that occur in Florida are included in Florida's Endangered and Threatened Species list (<https://myfwc.com/media/1945/threatened-endangered-species.pdf>) as federally-designated Endangered or federally-designated Threatened. Species that are not federally listed, but which have been identified by the FWC as being at some level of risk of extinction, are listed as state-designated Threatened. Additionally, the FWC continues to maintain a separate Species of Special Concern category. This category was reviewed as part of Florida's Imperiled Species Management Plan, with the majority of the species previously contained within the category either being removed from Florida's Endangered and Threatened Species list due to conservation success, or had their status changed to state-designated Threatened. Currently, FWC staff have not found any occurrences of imperiled fish and wildlife on the LSFMA.

2.3.3 FNAI Element Occurrences

A diversity of wildlife species is found near the LSFMA. The FNAI element occurrence records include two occurrences of the eastern chipmunk and capillaceous crayfish in the vicinity of the LSFMA. As defined by the FNAI, an “element” is any exemplary or rare component of the natural environment, such as a species, natural community, bird colony, spring, sinkhole, cave or other ecological feature. An element occurrence is a single extant habitat which sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element. The FNAI assigns a rank to each “element” occurrence. This ranking system was developed by The Nature Conservancy and the Natural Heritage Program Network based on the element's global rank (element's worldwide status) or state rank (status of element in Florida). The FNAI ranking system and definitions are located on the following website: www.fnai.org/ranks.cfm.

Known locations of FNAI element occurrences from the most recent GIS databases are displayed in Figure 9. Appendix 12.7 contains a letter from the FNAI authorizing the FWC to utilize their database for the purpose of displaying known plant and animal resources.

2.4 Native Landscapes

The predominate native landscapes occurring on the LSFMA are upland pine, bottomland forest, successional hardwood forest and Lake Stone. As described in detail above, complete descriptions of the natural and altered communities found on the LSFMA can be found in Section 2.2 of this Management Plan.

2.5 Water Resources

All surface waters of the State are classified by the DEP according to designated uses as described in Chapter 62-302.44 FAC.

The surface waters of the LSFMA are designated as Class III, and classified for fish consumption; recreation, as well as propagation and maintenance of a healthy, well-balanced population of fish and wildlife. Additionally, it is the policy of the DEP to afford the highest protection to Outstanding Florida Waters (OFW) and Outstanding



National Resource Waters (Chapter 62-302.700 FAC). No portions of the LSFMA, are designated as OFW. The only waterbody located on the LSFMA is Lake Stone. Lake Stone is an impoundment created to increase fishing opportunities in the area. Lake Stone is designated as open water. Most of the hydrology on the LSFMA is controlled by the water level of Lake Stone. Lake Stone has an average depth of six feet and a maximum depth of 22 feet, with the deepest area of the lake found near the dam and along the old stream bed. The lake also contains flooded timber.

2.6 Beaches and Dunes

There are no beach and dune resources on the LSFMA.

2.7 Mineral Resources

There are no known commercial mineral deposits on the LSFMA.

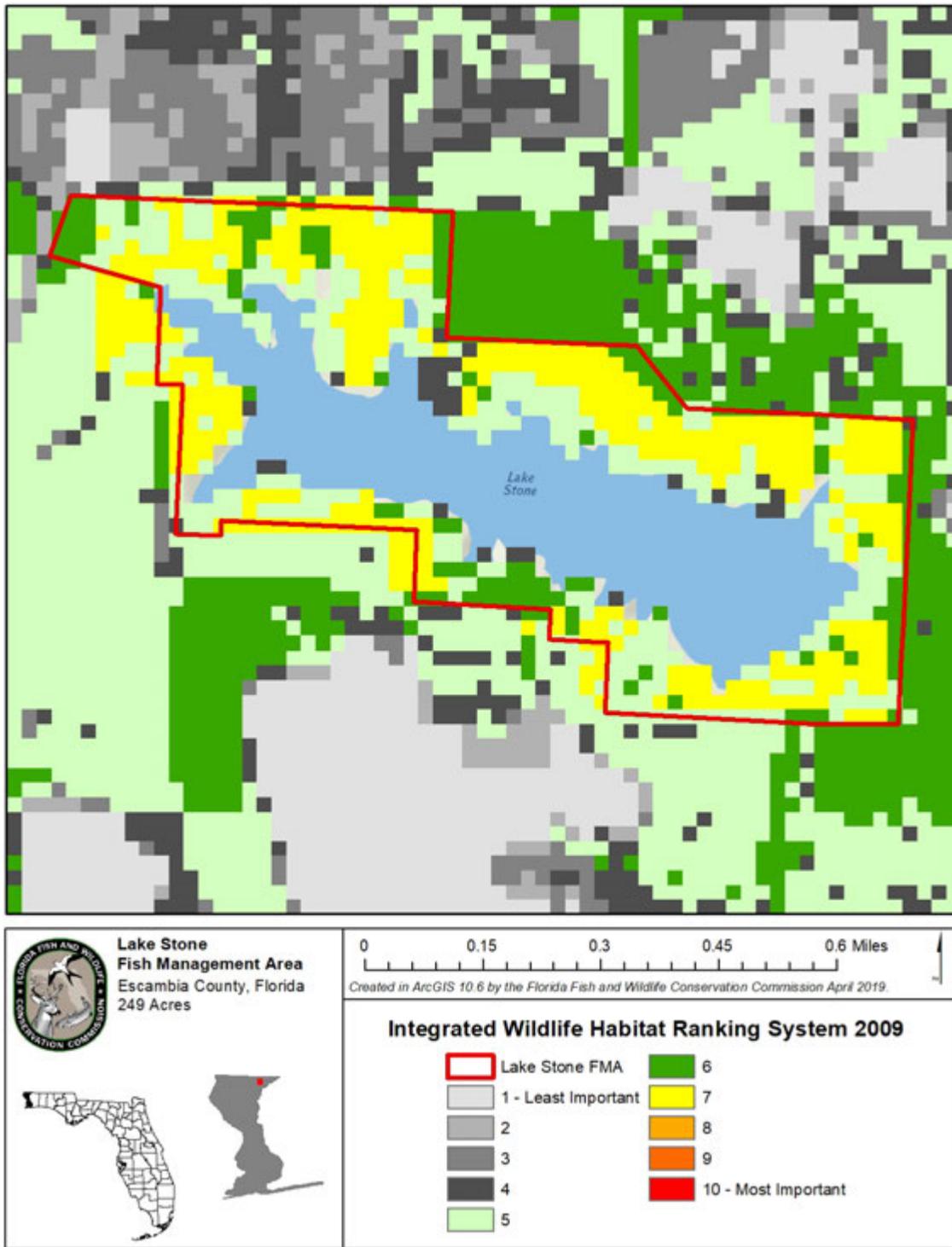


Figure 8. Integrated Wildlife Habitat Ranking for the LSFMA

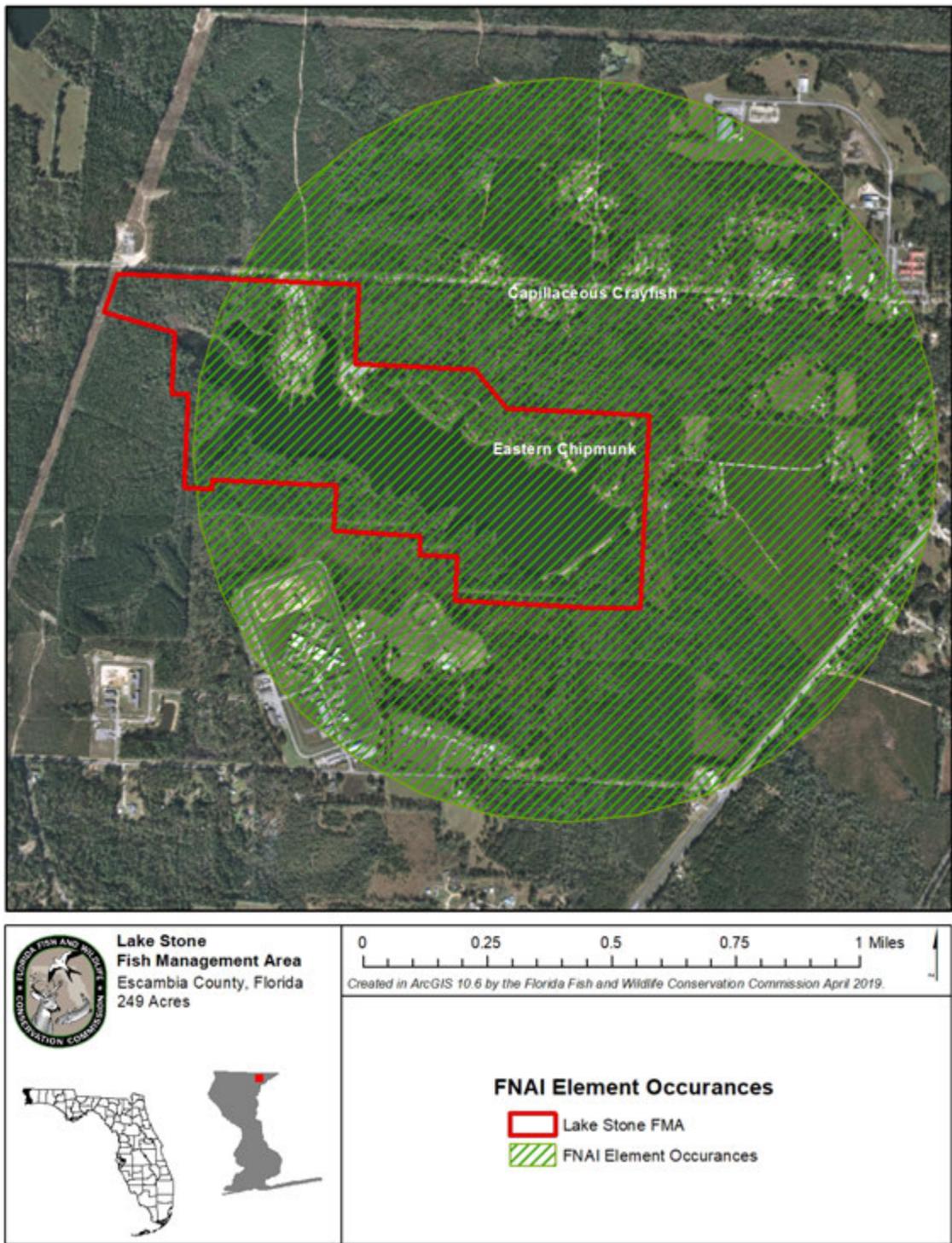


Figure 9. FNAI Element Occurrences in the vicinity of the LSFMA

2.8 Historical Resources

The DHR Master Site File indicates that there are two recorded historical sites within the boundaries of the LSFMA. The FWC and Escambia county will coordinate with the DHR to assess the need for conducting a historical resource survey during this planning period.

The FWC will also continue to consult with the DHR in an attempt to locate and preserve any other historical or archaeological features found on the area. As necessary, the FWC will also contact professionals from the DHR for assistance prior to any ground-disturbing activity on the area.

2.9 Scenic Resources

The LSFMA offers scenic views of upland pine forest, bottomland forest, successional hardwood forest and Lake Stone. As a result, the area has been valued for its scenic quality unaffected by development and most other human alterations of the landscape. Wildlife is abundant year-round throughout the area. The scenery of the LSFMA can be enjoyed by hiking the area's trails and fishing and paddling on Lake Stone. Some of the scenic sites on the LSFMA have also been developed with interpretive signage.

3 Uses of the Property

3.1 Previous Use and Development

Prior to European settlement, the landscape of Florida, including this area of the Florida panhandle, was settled and used by a variety of aboriginal peoples whose culture relied mainly on hunting, fishing and subsistence agriculture. Though some land alteration occurred, only minor alteration of the landscape is thought to have taken place until the advent of European settlement beginning with the Spanish occupation of Florida in the 16th century.

Along with more advanced agricultural practices, the Spanish and other settlers brought livestock, primarily cattle and hogs, as well as horses to Florida. This began an era of broad use of the landscape for agriculture. Rangeland cattle grazing and other agricultural practices began to be utilized in a more systematic way and occurred throughout much of the central Florida peninsula through most of the European settlement era from the 16th through the 20th centuries. Use of these agricultural practices began an era of increased alteration of the natural landscape. However, it wasn't until the 19th and 20th centuries that major settlement and more extensive alteration of the landscape in the area began with the widespread use of agriculture and associated development.

Lake Stone, formally known as Wiggins Branch, was impounded in 1967 and the infrastructure included a 1,100-foot-long earthen dam and concrete water control structure

with drawdown and drain valves. Currently, there is a primary spillway and two emergency spillways. After acquisition of the LSFMA in 1969, the area was opened to fishing, and the lake has been stocked with Largemouth Bass, Bluegill, Redear Sunfish (shellcracker), Black Crappie and Channel Catfish. The LSFMA contains nine earthen fishing fingers, one fishing pier, one paved public boat ramp and one crushed rock boat ramp.

3.2 Current Use of the Property

Currently, the LSFMA is managed for the conservation and protection of fish and wildlife habitat and fish and wildlife based public outdoor recreation. A wide range of operational and resource management actions are conducted on the LSFMA each year including activities such as wildlife habitat restoration and improvement; invasive and exotic species maintenance and control; road repairs and maintenance; imperiled species monitoring and protection; facilities and infrastructure maintenance and repair; conservation acquisition and stewardship activities; historical resources monitoring and protection; and research related activities.

The area also offers excellent opportunities for bird watching. The diversity of vegetation not only harbors a variety of bird species but also provides good opportunities for mammalian wildlife viewing. Other uses include hiking, paddling and fishing.

The LSFMA is being managed as a multiple-use conservation land. Multiple-use management strategies incorporate uses related to wildlife, fisheries and forest management and natural resource based public outdoor recreation. Provisions have been made for fish and wildlife-based public outdoor educational and recreational opportunities that are compatible with the original purposes for acquiring the LSFMA. The current land use designation as depicted in the Future Land Use Element (FLUE) for the LSFMA is listed as recreation and open space.

3.2.1 Visitation and Economic Benefits

Visitation and public use of the area for fish and wildlife based public outdoor recreational opportunities is the primary source of economic benefits from the LSFMA and contribute to the overall economy for the region of Northwest Florida. If the current maximum visitation level for fishing and lake access on the area reached the 144 visitors per day and the 77 campsites were utilized by visitors per day, a total of 108,770 visitors per year could be expected. If the area were at carrying capacity, the FWC economic analysis estimates indicate that the LSFMA could potentially generate an estimated economic impact of \$21,252,570 for the State and the Northwest region of Florida. This estimated annual economic impact would aid in the creation of an estimated 216 jobs. However, it should be

noted that the current visitation rates for the area are estimated to be far below the area’s established carrying capacity.

Further revenue generating potential of the LSFMA will depend upon future uses described in this Management Plan. Additional revenue from environmental lands such as the LSFMA might include sales of various permits and recreational user fees and ecotourism activities, if such projects could be feasibly developed. The annual area regulations can be consulted to clarify the necessary and required permits, fees and regulations. Additionally, the long-term value of ecosystem services, including the protection of air and water quality functions, are considered to be significant to local and regional land and water resources, as well as human health.

3.3 Single- or Multiple-use Management

The LSFMA will be managed under the multiple-use concept as a Fish Management Area. The LSFMA will provide fish and wildlife resource based public outdoor recreation and educational opportunities, while protecting the natural and historical resources found on the area. Any natural and historical resources of the LSFMA will be managed under the guidance of the ARC, the Conceptual State Lands Management Plan, and as outlined in the original purposes for acquisition.

3.3.1 Analysis of Multiple-use Potential

The following actions or activities have been considered under the multiple-use concept as possible uses to be allowed on the LSFMA. Uses classified as “Approved” are considered to be in accordance with the purposes for acquisition, as well as with the Conceptual State Lands Management Plan, and with the FWC agency mission, goals and objectives as expressed in the Agency Strategic Plan (Appendix 12.8). Uses classified as "Conditional" indicate that the use may be acceptable but will be allowed only if approved through a process other than the management plan development and approval process (e.g., special-use permitting, managed-area regulation and rule development). Uses classified as “Rejected” are not considered to be in accordance with the original purpose of acquisition or one or more of the various forms of guidance available for planning and management:

| | <u>Approved</u> | <u>Conditional</u> | <u>Rejected</u> |
|------------------------------------|-----------------|--------------------|-----------------|
| Apiaries | | ✓ | |
| Astronomy | | ✓ | |
| Bicycling | ✓ | | |
| Cattle grazing | | | ✓ |
| Citrus or other agriculture | | | ✓ |
| Ecosystem services and maintenance | ✓ | | |

| | | | |
|--------------------------------------|---|---|---|
| Ecotourism | | ✓ | |
| Environmental Education | ✓ | | |
| First-responder training | | ✓ | |
| Fishing | ✓ | | |
| Geocaching | | ✓ | |
| Hiking | ✓ | | |
| Horseback riding | | | ✓ |
| Hunting | | | ✓ |
| Linear facilities | | | ✓ |
| Military training | | ✓ | |
| Preservation of historical resources | ✓ | | |
| Primitive camping | ✓ | | |
| Protection of imperiled species | ✓ | | |
| Off-road vehicle use | | | ✓ |
| Shooting sports park | | | ✓ |
| Soil and water conservation | ✓ | | |
| Timber harvest | | ✓ | |
| Wildlife observation | ✓ | | |

3.3.2 Incompatible Uses and Linear Facilities

Consideration of incompatible uses and linear facilities on the LSFMA are made in accordance with the requirements of Section 253.034(10) FS, and other applicable Florida constitution, statute, rule and policy requirements, as well as other provisions governing applications for proposed incompatible uses or linear facilities on state-owned conservation lands. Upon approval and implementation of this management plan, any proposed future uses that have been classified herein as Rejected, or other proposed future uses that are determined to be incompatible with the purposes of acquisition or other management authorizations and guidance, will be forwarded for review and approval consideration to the DEP-DSL, the ARC and the Board of Trustees prior to any incompatible use or linear facility being authorized on the LSFMA.

3.3.3 Assessment of Impact of Planned Uses of the Property

To communicate the FWC’s planned uses and activities, specific management intentions, long- and short-term goals and with associated objectives, identified challenges and solution strategies have been developed for the LSFMA (Sections 5 -7). A detailed assessment of the benefits and potential impacts of planned uses and activities on natural and historical resources was an integral part of the development of the management activities and intent, goals, objectives, challenges and strategies sections of this Management Plan.

3.4 Acreage Recommended for Potential Surplus Review

On conservation lands where the FWC is the lead manager, the FWC evaluates and identifies recommended areas for a potential surplus designation by the DSL, the ARC and the Board of Trustees. This evaluation consists of GIS modeling and analysis, aerial photography interpretation, analysis of fish and wildlife resources, a review of resource and operational management needs and a review of public access and recreational use of the area. Also, the FWC considers recommendations for surplus lands as they relate to Florida’s “No Net Loss of Hunting Lands” legislation (Ch. 379.3001 F.S.), as well as surplus restrictions for lands acquired through the Federal Aid in Wildlife Restoration Act (Pittman-Robertson) or through other federal grant programs.

The evaluation of the LSFMA by the FWC has determined that all portions of the area are being managed and operated for the original purposes of acquisition and remain integral to the continued conservation of important fish and wildlife resources and continue to provide fish and wildlife resource based public outdoor recreational opportunities. Therefore, no portion of the LSFMA is recommended for potential surplus review.

4 Accomplished Objectives from the LSFMA Management Plan 2010-2020

This section is dedicated to reporting the extent to which the Objectives described in the LSFMA Management Plan 2010 – 2020 were successfully completed. Accomplishments for the LSFMA during the previous planning timeframe are further discussed in more comprehensive detail throughout **Section 5 Management Activities and Intent** of this Management Plan.

The following **Resource Management Goals and Objectives** from the 2010– 2020 the LSFMA Management Plan describe the planned activities for the LSFMA during this period. The degree to which the FWC was able to accomplish the planned activities during this period is reflected as **Percent Accomplished** for each associated Objective.

| <u>Goals and Objectives</u> | <u>Percent Accomplished</u> |
|----------------------------------------------------------------------------------------------------------|-----------------------------|
| Goal 1: Monitor and manage Lake Stone fish populations for sustained recreational use by anglers. | |

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Objective 1: Continue to monitor and maintain sportfish populations through the use of length-frequency histograms, age and growth data, condition indices, and creel survey data. These are ongoing activities. <i>Comment: The FWC continues to monitor and maintain all sportfish populations.</i> | 100% |
| Objective 2: Continue to develop and apply appropriate harvest regulations as needed for largemouth bass and panfish to promote optimum population densities and size structure. <i>Comment: FWC staff continues to develop and apply harvest regulators as needed for largemouth bass and panfish populations.</i> | 100% |
| Objective 3: Apply appropriate management strategies including liming/fertilization, supplemental stocking, habitat enhancement, water level manipulation, and vegetation control to provide high quality fishing opportunities. These are ongoing activities. <i>Comment: The FWC continues to apply liming/fertilization, stock Lake Stone as needed, and perform habitat enhancement, water level manipulation and vegetation control as needed and appropriate.</i> | 100% |
| Objective 4: Evaluate angler catch and effort data through a spring peak season creel survey at least once during the five-year reporting period to document fishing success rates and assess overall results of management strategies. <i>Comment: The FWC's Division of Freshwater Fisheries (DFFM) was temporarily short-staffed from 2010-2015, and the LSFMA was a low priority at the time for spring creel surveys. However, in 2018 a drop box survey was completed to assess efforts and public satisfaction.</i> | 50% |
| Goal 2: Preserve structural integrity of the dam and other facilities to ensure perpetual use opportunities by the general public. | |
| Objective 1: Continue annual inspections of the dam, fishing fingers, and water control structures, and coordinate necessary repairs with the FWC engineer. <i>Comment: FWC staff continues to inspect dam, fishing fingers and water control structures and perform repairs as necessary and funding allows.</i> | 100% |
| Objective 2: Correct erosion caused by wind and wave action on the fishing fingers using the most efficient and economical means available. <i>Comment: During this planning period FWC staff determined that minimal erosion had taken place, so no activities were determined necessary.</i> | 100% |
| Goal 3: Continue to provide public access and enhance bank fishing opportunities. | |

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Objective 1: Repair and/or enhance access areas, boat ramps, and bank fishing areas as needed. <i>Comment: The FWC, along with Escambia County, regularly inspect and repair access areas, boat ramps and fishing areas as needed.</i> | 100% |
| Goal 4: Develop an enhancement/renovation plan for Lake Stone to improve and revitalize existing fisheries habitat. | |
| Objective 1: Coordinate plan development through FWC Small Lakes Committee and the Division of Freshwater Fisheries Management and Aquatic Habitat Restoration and Enhancement (AHRES) to determine funding sources, permitting needs, and timetable for implementing plan. Development of plans should be completed and ready for submission for funding by 2012. <i>Comment: Currently, the FWC's Small Lake Committee is no longer active, however FWC staff continue to work with AHRES on various habitat projects.</i> | 100% |
| Goal 5: Coordinate maintenance of upland recreational facilities with Escambia County Parks and Recreation Department. | |
| Objective 1: Continue coordination with Escambia County for the maintenance of hiking trails and park area located at Lake Stone. <i>Comment: The FWC continues to cooperate with Escambia County for maintenance of all roads and campground amenities located on the area.</i> | 100% |
| Objective 2: Coordinate with Escambia County to prevent development within swamps and wetlands contiguous with the lake in order to protect and enhance fish and wildlife resources. This task will be completed in 1997 and continue as needed throughout the duration of this plan. <i>Comment: The FWC continues to communicate and coordinate with Escambia County to ensure adjacent land uses are compatible with the LSFMA and its fish and wildlife resources.</i> | 100% |
| Goal 6: Continue aquatic education efforts. | |
| Objective 1: Develop and make available brochures, informational kiosks, press releases and other educational materials as needed to enlighten anglers regarding available fishing opportunities and fishery management principals. <i>Comment: During this planning period brochures were made available to the public and are currently being updated. Escambia County also continues to provide a website. The FWC installed signs for bass regulation and continues to work with Escambia County on any potential promotions for the area, as feasible.</i> | 100% |
| Goal 7: Provide law enforcement protection for fish and wildlife resources. | |

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Objective 1: Implement preventative patrol as well as apprehension and arrest of persons violating conservation and environmental laws. This task is currently ongoing and scheduled to continue. <i>Comment: Escambia County Sheriff's Office continue to provide law enforcement patrol for the area as needed and appropriate.</i> | 100% |
| Goal 8: Maintain and/or enhance upland recreational facilities to provide greater use opportunities as funding becomes available. | |
| Objective 1: Continue to maintain and/or enhance upland recreational areas as needed and as funding allows. <i>Comment: Escambia County parks and recreation field staff and the campground caretaker continually maintain recreational areas as needed and appropriate.</i> | 100% |
| Objective 2: Attempt to maintain native vegetation communities in all undisturbed upland areas specifically during development of additional recreational facilities. <i>Comment: Escambia County parks and recreation field staff and the campground caretaker maintain vegetation around the recreational facilities up to the edge of the Lake Stone shoreline.</i> | 100% |
| Objective 3: Continue to maintain and enhance where possible hiking trails along northern shoreline of lake. <i>Comment: The Escambia County roads department continually maintain roads on the area as needed and appropriate.</i> | 100% |
| Objective 4: Develop other recreational amenities as needed. <i>Comment: After Hurricane Ivan, prior to the development of the 2010 management plan, all recreational amenities for the area were established. No further recreational facilities were determined necessary during this planning period.</i> | 0% |
| Objective 5: Coordinate additional law enforcement patrol with the Escambia County Sheriff's Office as needed. <i>Comment: Escambia County Sheriff's Office continue to provide law enforcement patrol for the area as needed and appropriate.</i> | 100% |

5 Management Activities and Intent

The following section provides a description of agency plans to locate, identify, protect, preserve or otherwise use fragile natural resources and nonrenewable historical resources. In general, the FWC management intent for the LSFMA is to provide quality fish and wildlife resource based public outdoor recreational opportunities. In conjunction with this primary emphasis, it is the FWC's intent on the LSFMA to restore and maintain natural communities in a condition that sustains ecological processes and conserves biological

diversity, especially fish and wildlife resources. The FWC will utilize the best available data, guidelines, natural resource management practices and recreational management practices to achieve these outcomes in accordance with the original purposes for acquisition. Furthermore, as noted earlier, the management activities described in this section are in compliance with those of the Conceptual State Lands Management Plan.

5.1 Land Management Review

Pursuant to Chapter 259.036, FS, the DEP-DSL is required to “cause periodic management reviews to be conducted” on Board of Trustees conservation lands to determine if they “are being managed for the purposes for which they were acquired and in accordance with a land management plan adopted pursuant to s. 259.032.”

Due to the fact that the LSFMA is less than the normal acreage threshold (1,000 acres) necessary to trigger an LMR, an LMR has not been conducted on the area. If an LMR for the LSFMA is conducted in the future, the FWC will incorporate it into the LSFMA Management Plan.

5.2 Adaptive Management

Adaptive management is "learning by doing";¹ it is the adjustment or modification of conservation actions to achieve a desired conservation goal. In practice, adaptive management is a rigorous process that includes sound planning and experimental design with a systematic evaluation process that links monitoring to management.^{1, 2} Adaptive management requires flexibility for implementation, but should be fitted over a fundamentally sound, well-planned design.

An adaptive management process produces the strongest inference and most reliable results when experimental design components are incorporated into the monitoring process. Adaptive management is most rigorously applied in an active format when components of experimental design (i.e., controls, replication, and randomization) are included in the monitoring process.^{2, 3} Incorporating valid statistical analyses of results will further enhance the value of the adaptive management process. However, in some situations, rigorous experimental design procedures can be relaxed without invalidating monitoring results. In a passive format, adaptive management can involve applying a conservation action at a site, observing the results and adjusting the action in the future if warranted.^{2, 3}

Proposed adaptive management, monitoring and performance measures are developed through literature reviews and FWC staff meetings. Overall, a results-based approach is incorporated into this Management Plan, for which effective monitoring is an integral

component. The FWC will monitor conservation actions, species, habitats and major threats to the conservation of the natural and historical resources of the LSFMA.

5.2.1 Monitoring

A well-developed monitoring protocol is also one of the principal, required criteria for the management of the LSFMA. Monitoring and performance measures are important, but often overlooked elements of conservation planning. Monitoring provides the critical link between implementing conservation actions and revising management goals.

Monitoring is the systematic, repeated measurement of environmental characteristics to detect changes, and particularly trends, in those characteristics. Monitoring provides essential feedback, the data needed to understand the costs, benefits and effectiveness of planned conservation actions and the management projects undertaken to address them.²

For imperiled and locally important fish and wildlife species, FWC staff will monitor fish and wildlife species as appropriate. Exotic and invasive plant and animal species (Section 5.7) are also monitored and treated as needed and appropriate. Recreational uses are monitored through Escambia County Parks and Recreation, and work in conjunction with the establishment and adjustment of public access carrying capacities (Section 5.8.3). Historical resources (Section 5.11) are monitored with guidance from the DHR.

5.2.2 Performance Measures

Performance measures include qualitative or quantitative measures used to provide an estimate or index of the characteristic of interest, and to chart the overall progress of conservation actions towards specific goals. Successful monitoring programs and their associated performance measures provide natural resource professionals with valuable feedback on the effectiveness of conservation actions and make it possible to implement a more flexible adaptive management approach. An adaptive management approach will ultimately be more efficient and effective when it tracks inputs, incorporates an effective monitoring program that integrates performance measures and evaluates results against desired goals.

5.2.3 Implementation

The LSFMA Management Plan serves as the guiding framework to implement this adaptive management process. It serves as the underpinning for the integration of management programs underway to accomplish needed conservation actions that are planned to manage the natural resources of the LSFMA and resolve conservation threats to fish and wildlife and the habitats they occupy. Based on evaluations of project results, the conservation actions are revised as necessary, and the adaptive management process is repeated.

5.3 Habitat Restoration and Improvement

On the LSFMA, the FWC will focus on managing for native habitat diversity, emphasizing maintenance of high-quality natural communities and restoration of disturbed areas. Maintenance of upland areas may be achieved by mowing and/or the use of mechanical or chemical forest management techniques as appropriate. Retention of the native old growth component of forests, while also providing for natural regeneration, remains an important consideration. The LSFMA has high-quality, but limited, native communities including bottomland forest, successional hardwood forest and upland pine forest that the FWC will continue to manage and protect.

The FNAI has mapped the current vegetative communities on the LSFMA. This information will be used to guide and prioritize management and restoration efforts on the area.

During the previous planning period, Lake Stone's water levels were monitored and maintained, and any found invasive and exotic plant species were treated as appropriate. Other natural communities on the area were also maintained through ongoing monitoring, invasive and exotic plant treatments and mowing.

The FWC employs periodic natural community monitoring to track restoration progress. Natural communities on the LSFMA that may undergo some level of habitat restoration include Lake Stone, bottomland forest, upland pine forest and successional hardwood forest. Continuing habitat management activities on the LSFMA will focus on enhancing natural communities, treating and removing invasive and exotic plant species, and controlling vegetation through mowing as needed. Using chemical and mechanical treatments may also be evaluated in some select habitats to restore these areas to an earlier successional condition. Exotic and invasive species control is more extensively discussed in Section 5.5 below. Further specific habitat management and improvement objectives planned for the LSFMA are described in Section 6 below.

5.4 Imperiled and Locally Important Species Habitat Maintenance, Enhancement, Restoration or Population Restoration

5.4.1 Fish and Wildlife

Due to the variety of natural communities, a diversity of associated wildlife can be found on the LSFMA. In managing for wildlife species, an emphasis will be placed on conservation, protection and management of natural communities. As noted above, natural communities important to wildlife include Lake Stone, bottomland forest, upland pine forest and successional hardwood forest.

The size and natural community diversity of the LSFMA creates a habitat mosaic for a wide variety of wildlife species. Resident wildlife will be managed for optimum richness, diversity and abundance. In addition to resident wildlife, the LSFMA provides resources critical to many migratory birds including waterfowl, passerines, raptors and others. Habitats important to migratory species will be protected, maintained or enhanced.

Wildlife monitoring emphasis is placed on documenting the occurrence and abundance of rare and imperiled species on the property. The FWC will continue to update inventories for certain species, with emphasis on rare and imperiled fish and wildlife species. Monitoring of wildlife species will continue as an ongoing effort for the area.

Concurrent with ongoing species inventory and monitoring activities, management practices are designed to restore, enhance or maintain rare and imperiled species, and their habitats. This will be further augmented by following approved Federal and FWC species recovery plans, guidelines and other scientific recommendations for these species. Guided by these recommendations, land management activities will address rare and imperiled species requirements and habitat needs. Section 5.4.2 below provides further information on the FWC's comprehensive species management strategy for rare and imperiled wildlife and their respective habitats.

5.5 Exotic and Invasive Species Maintenance and Control

The FWC will continue efforts to control the establishment and spread of Florida Exotic Pest Plant Council (FLEPPC) Category I or II plants on the LSFMA. Control techniques may include mechanical, chemical, biological and other appropriate treatments.

Treatments utilizing herbicides will comply with instructions found on the herbicide label and employ the Best Management Practices for their application. Exotic and invasive plant species that have been documented on the LSFMA are Chinese privet (*Ligustrum sinense*), hydrilla (*Hydrilla verticillate*) and Japanese climbing fern (*Lygodium japonicum*).

However, the FWC's methodology for determining the number of acres "infested" with invasive and exotic plants only represents a cumulative acreage and does not reflect the degree of the invasive and exotic occurrence. The degree of infestation among areas identified with invasive and exotic plant occurrences often varies substantially by species, level of disturbance, environmental conditions and the status of ongoing eradication and control efforts. The FWC will continue to focus treatments on areas identified as having invasive and exotic plant occurrences, as well as treating any new occurrences as they are identified through continued monitoring.

Additionally, the FWC will continue efforts to control the introduction of exotic and invasive species, as well as pests and pathogens, on the LSFMA by inspecting any vehicles and

equipment brought onto the area by contractors and requiring that they be free of vegetation and dirt. If vehicles or equipment used by contractors are found to be contaminated, they will be referred to an appropriate location to clean the equipment prior to being allowed on the area. This requirement is included in every contract for contractors who are conducting any operational or resource management work on the area. In this way, the FWC implements a proactive approach to controlling the introduction of exotic pests and pathogens to the area.

Currently, maintenance and control of invasive and exotic plant species (Table 5) continues to be a management challenge at the LSFMA. During the previous 10-year planning period, the FWC continued to implement extensive exotic and invasive species control and maintenance activities throughout the LSFMA. These included exotic plant species treatments on a total of 249 acres within areas classified as infested, resulting in an overall 100% of LSFMA currently being in a maintenance condition. The FWC will continue to focus control and maintenance activities on areas identified as having invasive and exotic plant occurrences, as well as treating any new occurrences as they are identified through continued monitoring activities. Ongoing exotic plant species objectives and challenges for the LSFMA are further detailed in Sections 6 - 7 below.

5.6 Public Access and Recreational Opportunities

5.6.1 Americans with Disabilities Act

When public facilities are developed on areas managed by the FWC, every effort is made to comply with the Americans with Disabilities Act (ADA) (Public Law 101-336). As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions. Recreation facilities in semi-primitive or primitive zones will be planned to be universally accessible to the degree possible except as allowed by the ADA⁴ where:

1. Compliance will cause harm to historical resources, or significant natural features and their characteristics.
2. Compliance will substantially alter the nature of the setting and therefore the purpose of the facility.
3. Compliance would not be feasible due to terrain or prevailing construction practices.
4. Compliance would require construction methods or materials prohibited by federal or state statutes, or local regulations.

5.6.2 Public Access Carrying Capacity

Baseline carrying capacities for users on the FWC-managed lands are established by conducting a site-specific sensitivity analysis using available data for the site. The intent of the carrying capacity analysis is to minimize wildlife and habitat disturbance and provide the experience of being “immersed in nature” that visitors to the FWC-managed areas desire. Carrying capacities are just a first step; management of recreational use requires a means of monitoring visitor impacts. Responding to these impacts may require adjusting the carrying capacities as necessary. The carrying capacities generated through this process are used as a tool to help plan and develop public access, wildlife viewing and fish and wildlife resource based public outdoor recreation opportunities. Based on an analysis of the overall approved uses and supported public access user opportunities, and the anticipated proportional visitation levels of the various user groups, the FWC has determined that the LSFMA can currently support 144 visitors per day for fishing and recreational opportunities, with an additional 154 visitors per day for camping. However, visitation to the LSFMA is currently minimal, which provides excellent opportunities for quiet and solitude while viewing the area’s wildlife.

It is important to note that public access carrying capacities are not developed to serve as a goal for expanding the public use of a particular area to match the established carrying capacity. Rather, they are developed to establish maximum thresholds for public use of the respective area to protect the natural and historical resources on the LSFMA and to ensure that visitors will have a high-quality visitor experience. The public access carrying capacity will be periodically reevaluated.

5.6.3 Wildlife Viewing

The LSFMA is home to a variety of resident wildlife found within its upland pine forest, bottomland forest and within Lake Stone. The LSFMA’s size and variety of habitat types, create outstanding wildlife viewing opportunities.

5.6.4 Hunting

Hunting is prohibited on the LSFMA. However, hunting opportunities are offered on nearby public lands.

5.6.5 Fishing

Fishing is authorized year-round at the LSFMA.

5.6.6 Boating

Boating is authorized year-round at the LSFMA, gasoline boat motors are prohibited from use on Lake Stone; however, the use of electric trolling motors is allowed.

5.6.7 Roads and Trails

Currently, the LSFMA offers just under two miles of roads that can also be utilized as hiking trails.

5.6.7.1 Bicycling

Bicycling is permitted on the LSFMA. However, bicycling opportunities are limited on the area.

5.6.7.2 Horseback Riding

Horseback riding is prohibited on the LSFMA. However, horseback riding opportunities are offered on nearby public lands.

5.6.8 Camping

Camping is authorized year-round at the LSFMA at designated campsites.

5.6.9 Geocaching

Geocaching, also known as Global Positioning System (GPS) Stash Hunt and GeoStash, is a contemporary combination of orienteering and scavenger hunting generally utilizing a GPS receiver unit. Geocache websites routinely promote good stewardship. However, the potential exists for resource damage, user conflicts, or safety issues caused by inappropriately placed caches and/or links that do not provide adequate information about the area.

It is the policy of the FWC to allow placement of geocaches only in those locations that do not present the potential for resource damage, user conflicts, or threats to the safety of the activity participants. The placement of geocaches on the FWC-managed lands is governed by specific guidelines. These guidelines may be found on the following the FWC website: <https://myfwc.com/license/public-land-use/geocaching/>.

To facilitate wildlife viewing recreational opportunities on the area, the FWC has continued to establish and maintain a fishing pier, camping facilities, a playground, pavilion, bathroom facilities and two boat ramps. During the previous 10-year planning period, the FWC and Escambia County continue to maintain all facilities on the area. Further planned public access facility improvements are detailed in Section 6 below. Ongoing public access and recreational opportunity management challenges are addressed in Section 7 below.

5.7 Hydrological Preservation and Restoration

5.7.1 Hydrological Assessment, Restoration and Management.

Approximately 130 acres of the LSFMA is comprised of Lake Stone, a dam, two boat ramps, fishing pier and fingers, principal spillway, drawdown structure and drain values and two

emergency overflow spillways. Lake Stone is an impoundment created to increase fishing opportunities in the area. As mentioned previously, Lake Stone is designated as open water. Most of the hydrology on the LSFMA is controlled by the water level of Lake Stone. Lake Stone has an average depth of six feet and a maximum depth of 22 feet, with the deepest area of the lake found near the dam and along the old stream bed.

The Lake Stone dam is an earthen embankment structure 1,012 feet in length with a top or crest width of 16 feet. The crest elevation is 102.0 feet National Geodetic Vertical Datum (NGVD) and the height of the dam is 30.4 feet. The gradient is 3:1 on both the front and back slopes.

The principal spillway is a rectangular reinforced concrete riser with fixed crest weirs on two opposing sides. These weirs are each 7.5 feet in length at an elevation of 95.0 feet NGVD. At this elevation, the lake encompasses 130 acres. Discharge from the lake is through a deep-water release with an intake 11 feet below normal pool. The discharge barrel through the dam consists of 30-inch concrete pipe 192 feet long. The spillway was constructed with a 24-inch external slide gate to achieve a maximum drawdown of 10 feet, and a 20-inch diameter slide headgate which serves as a drain gate. Invert elevation of the drawdown gate and drain gate are 85.0 and 75.0 feet NGVD.

Emergency overflow spillways on each end of the dam are broad-crested, grass-lined, trapezoidal channels with crest elevations of 98.0 feet NGVD. The bottom width of the channels are 50 feet and the side slopes are 4:1.

The FWC and Escambia County will continue to work with NFWFMD and the DEP on monitoring groundwater resources and water quality.

5.7.2 Water Resource Monitoring

Currently, the FWC and Escambia County cooperates with the DEP and the NFWFMD for the monitoring of surface and ground water quality and quantity and will continue to cooperate with those agencies to develop and implement any additional surface water monitoring protocols for the LSFMA. In this capacity, the FWC will primarily rely on the expertise of the NFWFMD and the DEP to facilitate these monitoring activities. As necessary, the FWC may independently conduct or contract for water resource monitoring on the LSFMA, as guided by the DEP and the NFWFMD.

5.8 Forest Resource Management

There are no substantial timber resources on the LSFMA. As a result, the FWC and the FFS have determined that a professional forest assessment for the LSFMA is unnecessary. The FWC and Escambia County will continue to manage any timber resources that occur

on the area for wildlife benefits and natural community restoration. Also, the FWC will continue to consult with the FFS or a professional forestry consultant regarding forest management activities as appropriate.

5.9 Historical Resources

Procedures outlined by the DHR will be followed to preserve the historical sites of the LSFMA. The FWC will consult with the DHR to locate any additional historical features on the area. In addition, the FWC will ensure management staff has the DHR Archaeological Resources Monitoring training. The FWC will refer to and follow the DHR's Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties for management of these resources, and prior to any facility development or other ground disturbing activities. Furthermore, as appropriate and necessary, the FWC will contact professionals from the DHR for assistance prior to any ground-disturbing activity on the LSFMA.

To date, the DHR Master Site File indicates two known historic sites on the LSFMA. The FWC will submit subsequently located historic sites on the LSFMA to the DHR for inclusion in their Master Site File. Additionally, the FWC will also continue to monitor the two sites that are located on the area on an annual basis. The FWC and Escambia County will coordinate with the DHR to assess the need for conducting a historical resource survey during this planning period.

5.10 Capital Facilities and Infrastructure

The FWC's land management philosophy is designed to conserve the maximum amount of wildlife habitat while providing the minimal number of capital facilities and infrastructure necessary to effectively conduct operational and resource management activities and provide ample opportunities for fish and wildlife resource based public outdoor recreation. For these reasons, planned capital facilities and infrastructure will focus on improving access, recreational potential, hydrology or other resource and operational management objectives.



Current capital facilities and infrastructure on the LSFMA include two boat ramps, a fishing pier, field office, bathhouse, 77 campsites, parking area, pavilion, dam and

playground. As described in Section 2.4.1 of this Management Plan, for any public facilities that are developed on areas managed by the FWC, every effort is made to comply with the ADA (Public Law 101-336).

5.11 Land Conservation and Stewardship Partnerships

The FWC utilizes a three-tiered approach to identifying, acquiring or otherwise protecting important conservation lands adjacent to or in proximity to existing FWC-managed areas. This involves development of an Optimal Resource Boundary (ORB), Optimal Conservation Planning Boundary (OCPB) and associated Conservation Action Strategy (CAS).

Increasingly, cooperative land steward partnership efforts with private landowners plays an integral role in this effort as does ongoing land conservation, either through fee-simple or less-than-fee conservation easements. In combination, this tiered model helps the FWC to further the regional conservation of important fish and wildlife habitats through a proactive, comprehensive, and cooperative approach towards conservation.

5.11.1 Optimal Resource Boundary

This three-tiered model begins with the development of an ORB, which is a resource-based analysis on a regional scale that integrates important FWC conservation research and analysis into practical planning, acquisition, and management efforts through GIS analysis. The ORB focuses on critical and important wildlife species or habitat considerations such as rare and imperiled species habitat within a particular region or ecosystem-like area on a landscape scale within which an FWC managed area is contained while eliminating urban areas or lands that have already been conserved or protected.

5.11.2 Optimal Conservation Planning Boundary

The second tier is known as the OCPB. The OCPB combines the regional natural resources identified in the ORB, as well as regional and local area conservation planning, including habitat conservation and restoration, habitat linkages, management challenges, land use and zoning issues, infrastructure including roads and developments, improving access, eliminating inholdings, providing prescribed burn buffers, resolving boundary irregularities, water resource protection and conserving other important natural and historical resources.

The OCPB provides the basis for development of a broader CAS for the LSFMA. Although the OCPB provides the basis for potential future voluntary, willing-seller conservation acquisitions, it is designed to function primarily as a conservation planning boundary. The OCPB identifies surrounding lands and natural resources that may be important to the continued viability of fish and wildlife populations in the region. As they are currently

managed, these lands appear to contribute to regional conservation and may support conservation landscape linkages.

5.11.3 Conservation Action Strategy

The CAS is the third tier and implements the results of the ORB and OCPB tiers. This element of the process incorporates the conservation planning recommendations into an action strategy that prioritizes conservation needs. The CAS is integral to the development of conservation stewardship partnerships and also implements the current approved process for establishing the FWC Florida Forever Inholdings and Additions acquisition list.

Primary components of the CAS may include:

- FWC Landowner Assistance Program
- FWC conservation planning
- FWC Additions and Inholdings Program Land Conservation Work Plan
- Forest Stewardship Program proposals
- Florida Forever project proposals and boundary modifications
- Conservation easements
- Federal or State grant conservation proposals
- Regional or local conservation proposals
- Local, state, and federal planning proposals
- Non-governmental organization conservation proposals

Continued conservation of these lands may be aided by available voluntary landowner stewardship programs, conservation easements and, in some cases, potential voluntary conservation acquisitions. Participation in any FWC conservation effort is entirely voluntary and at the sole choice of willing landowners.

Private landowners seeking assistance with habitat management will likely find it offered within FWC's Landowner Assistance Program (LAP). The FWC employs biologists who are available to provide wildlife-related assistance with land-use planning and habitat management. There are many forms of assistance that include technical, financial, educational and various forms of recognition that seek to award landowners who manage their wildlife habitat responsibly. More information on the FWC's LAP program and online habitat management tools are available online at: <http://myfwc.com/conservation/special-initiatives/lap/> .

5.11.4 FWC Florida Forever Additions and Inholdings Acquisition List

Currently, there are 11 parcels included on the FWC Florida Forever Additions and Inholdings list for the LSFMA. Upon completion of the CAS, additions to the FWC Florida Forever Additions and Inholdings acquisition list may be recommended for the area.

5.12 Research Opportunities

The FWC intends to cooperate with researchers, universities and others as feasible and appropriate. For the LSFMA, the FWC will continue to assess and identify research needs and pursue research and environmental education partnership opportunities as appropriate. Research proposals involving the use of the area are evaluated on an individual basis. All research activities on the LSFMA must have prior approval by the FWC.

5.13 Cooperative Management and Special Uses

5.13.1 Cooperative Management

The FWC is responsible for the overall management and operation of the LSFMA as set forth in the lease agreements with the Board of Trustees. In keeping with the lease agreements, and in order to conduct its management operations in the most effective and efficient manner, the FWC cooperates with other agencies to achieve management goals and objectives described in this management plan. As mentioned previously, the FWC has an established sublease agreement with Escambia County for management of all recreational facilities on the area. Other agencies the FWC and Escambia County will continue to cooperate with include the DHR to ensure the requirements of the Management Procedures Guidelines - Management of Archaeological and Historical Resources document (Appendix 12.10) are followed with regard to any ground-disturbing activities. In addition, the FFS assists the FWC by providing technical assistance on forest resource management. Also, the FWC cooperates and consults with the NFWFMD and the DEP for the monitoring and management of both ground and surface water resources and the overall management of the LSFMA.

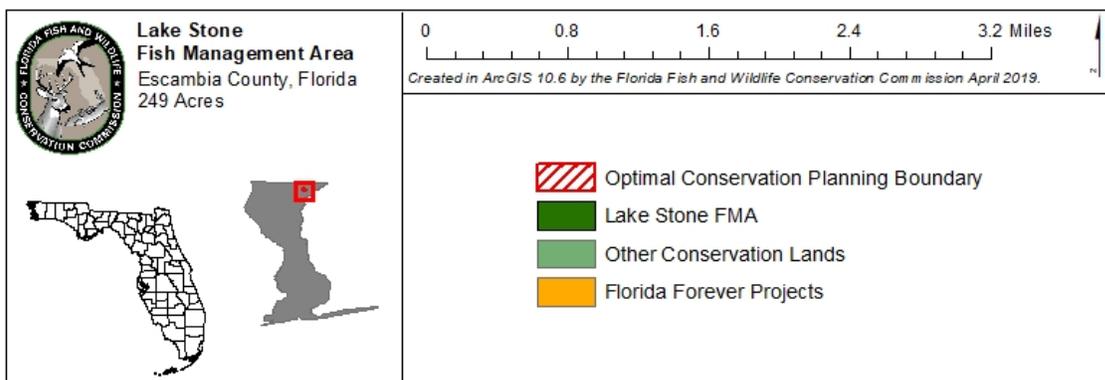
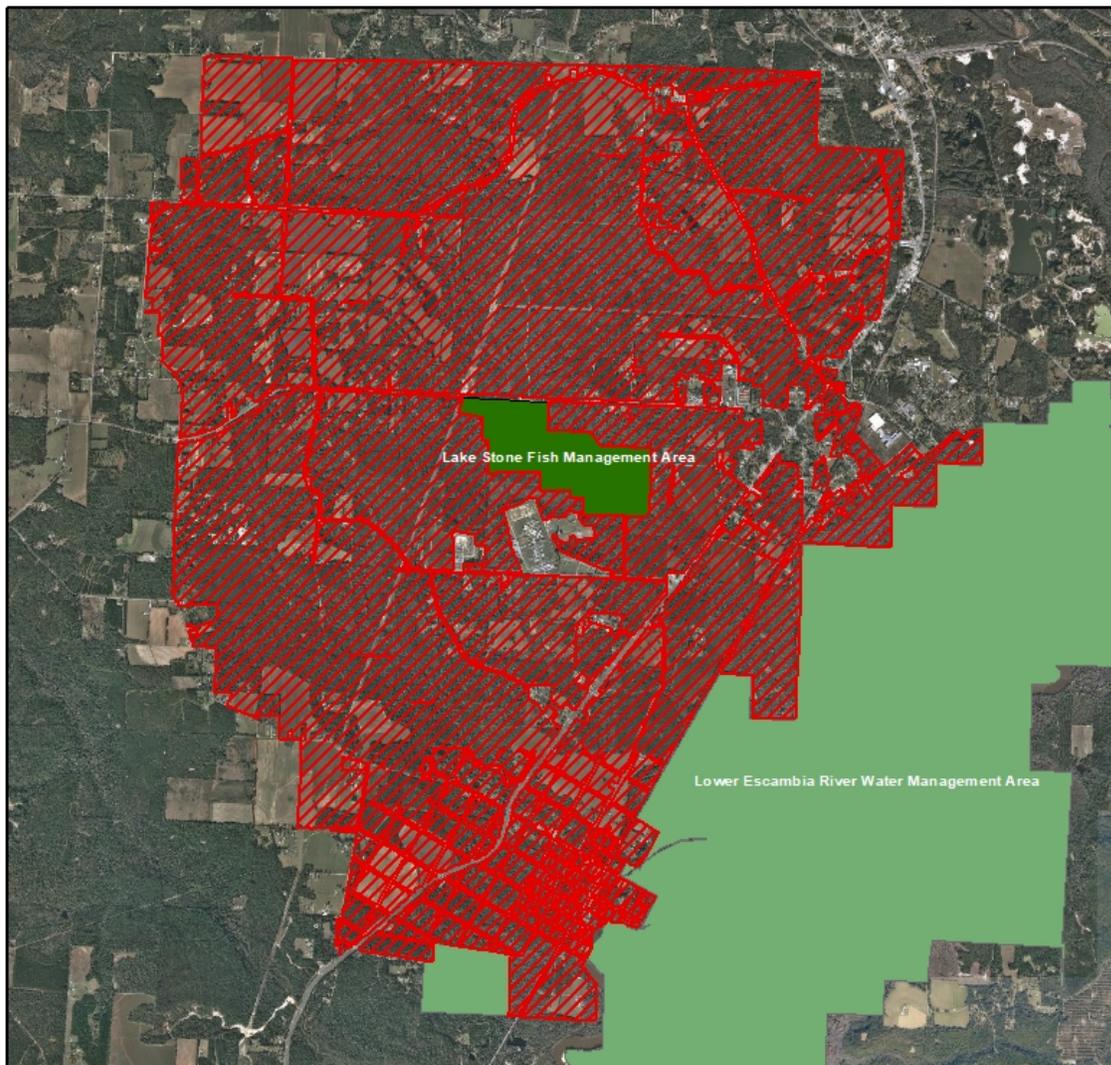


Figure 10. Optimal Conservation Planning Boundary for the LSFMA

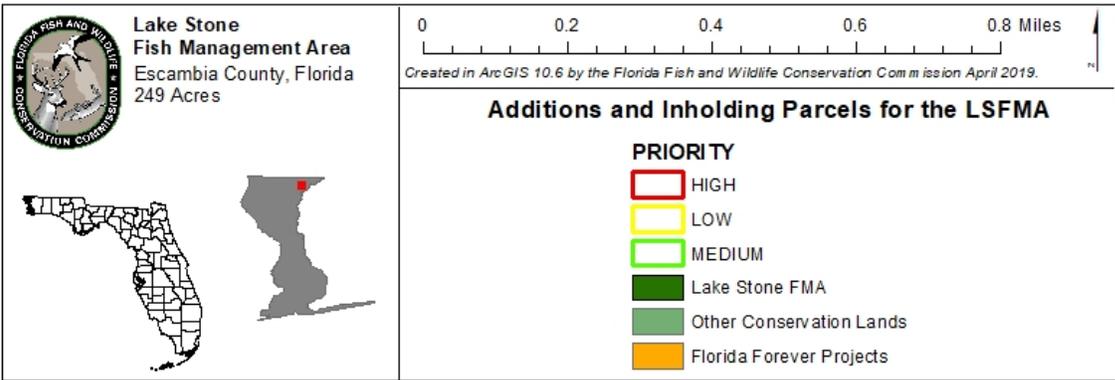
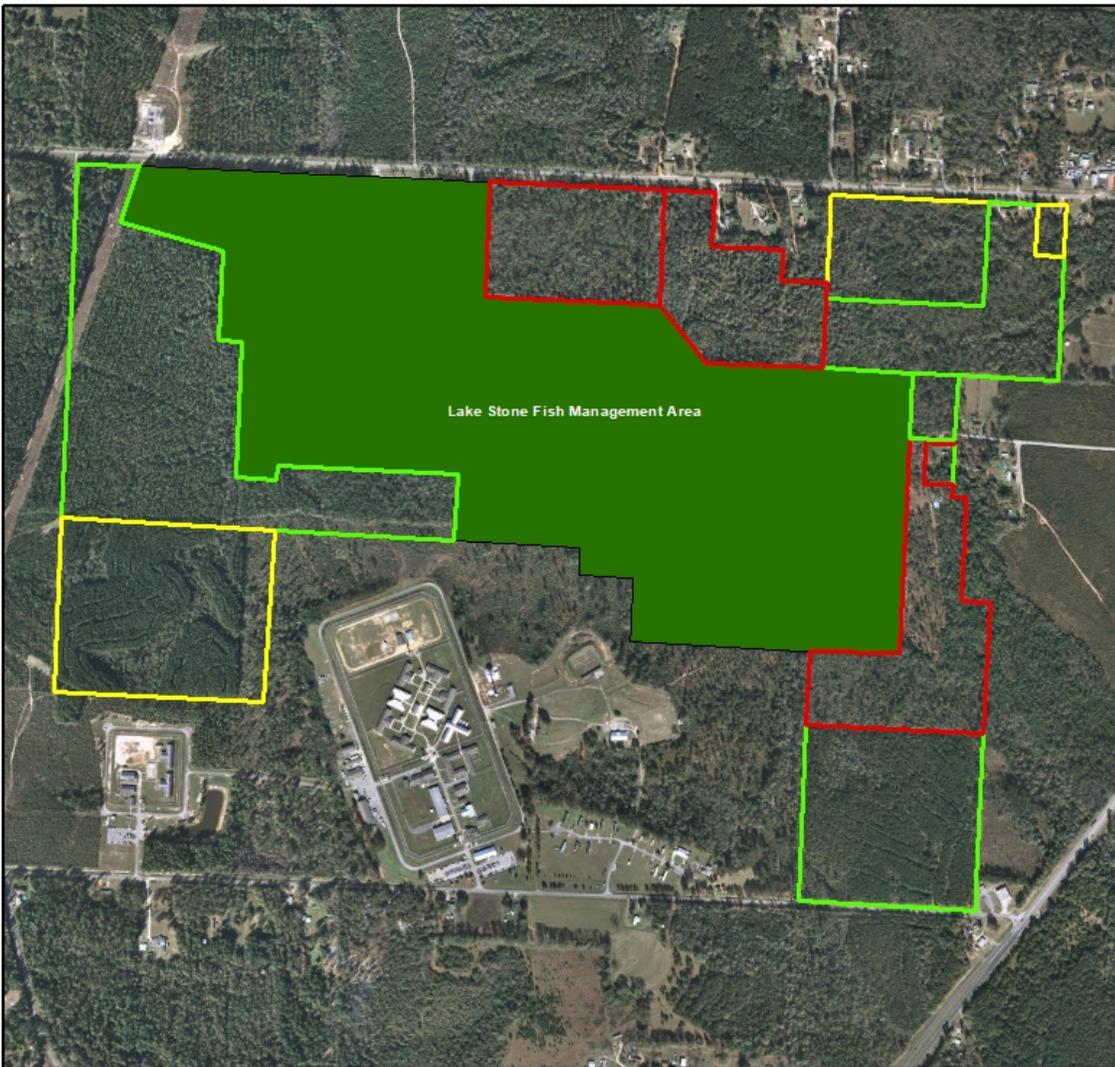


Figure 11. Addition and Inholding Parcels for the LSFMA

5.13.2 First Responder and Military Training

First-responder (public governmental police department or agency, fire and emergency medical service personnel) training and military training are conditionally allowed on the LSFMA. Such activities are considered allowable uses only when undertaken intermittently for short periods of time, and in a manner that does not impede the management and public use of the LSFMA and causes no measurable long-term impact to the natural resources of the area. Additionally, FWC staff must be notified and approve the training through issuance of a permit prior to any such training taking place on the LSFMA. Any first-responder or military training that is not low-impact, intermittent and occasional would require an amendment to this management plan, and therefore will be submitted by the FWC to the DSL and ARC for approval consideration prior to authorization.

5.13.3 Apiaries

Currently, there are no apiaries operating on the LSFMA. However, use of apiaries is conditionally approved for the LSFMA, and is deemed to be consistent with purposes for acquisition, is in compliance with the Conceptual State Lands Management Plan, and is consistent with the FWC agency mission, goals and objectives as expressed in the Agency Strategic Plan and priorities document (Appendix 12.8). Location, management and administration of apiaries on the LSFMA will be guided by the FWC Apiary Policy (Appendix 12.9).

5.14 Climate Change

Because of Florida's unique ecology and topography, any potential impacts as a result of climate change may be particularly acute and affect multiple economic, agricultural, environmental and health sectors across the state. The impact of climate change on wildlife and habitat may already be occurring, from eroding shorelines and coral bleaching to increases in forest fires and saltwater intrusion into inland freshwater wetlands.

The Intergovernmental Panel on Climate Change (IPCC), a multi-national scientific body, reports that climate change is likely proceeding at a rate where there will be unavoidable impacts to humans, wildlife and habitat. Given current levels of heat-trapping greenhouse gas emissions, shifts in local, regional and national climate patterns including changes in precipitation, temperature, increased frequency and intensity of extreme weather events, rising sea levels, tidal fluctuations and ocean acidification are projected. The current trend of global temperature increase has appeared to accelerate in recent decades, and continued

greenhouse gas emissions may result in projected global average increases of 2 –11.5° F by the end of the century.⁵

This apparent change in global climate has the potential to disrupt natural processes; in some areas, climate change may cause significant degradation of ecosystems that provide services such as clean and abundant water, sustainable natural resources, protection from flooding, as well as hunting, fishing and other recreational opportunities. Consequently, climate change is a challenge not only because of its likely direct effects, but also because of its potential to amplify the stress on ecosystems, habitats, and species from existing threats such as exponential increases in surface and ground water use, habitat loss due to increased urbanization, introduction of invasive species and fire suppression.

Potential impacts that may be occurring as a result of climate change include: change in the timing of biological processes, such as flowering, breeding, hibernation and migration;^{6, 7, 8} more frequent invasions and outbreaks of exotic invasive species;⁹ and loss of habitat in coastal areas due to sea level rise.¹⁰ Some species are projected to adjust to these conditions through ecological or evolutionary adaptation, whereas others are projected to exhibit range shifts as their distributions track changing climatic conditions. Those species that are unable to respond to changing climatic conditions are projected to go extinct. Some estimates suggest that as many as 20% - 30% of the species currently assessed by the IPCC are at risk of extinction within this century if global mean temperatures exceed increases of 2.7 – 4.5° F.¹¹ A number of ecosystems are projected to be affected at temperature increases well below these levels.

At this time, the potential effects of climate change on Florida’s conservation lands are just beginning to be studied and are not yet well understood. For example, the FWC has begun a process for currently developing climate change adaptation strategies for monitoring, evaluating, and determining what specific actions, if any, may be recommended to ameliorate the projected impacts of climate change on fish and wildlife resources, native vegetation, and the possible spread of exotic and invasive species. Currently, the FWC is continuing its work on the development of these potential adaptation strategies. However, as noted above, the effects of climate change may become more frequent and severe within the time period covered by this Management Plan.

For these reasons, there is a continuing need for increased information and research to enable adaptive management to cope with potential long-term climate change impacts. The most immediate actions that the FWC can take are to work with partners to gather the best scientific data possible for understanding natural processes in their current state, model possible impacts and subsequent changes from climate change, develop adaptive

management strategies to enhance the resiliency of natural communities to adapt to climate change, and formulate criteria and monitoring for potential impacts when direct intervention may be necessary to protect a species. To this end, when appropriate, the FWC will participate in organizations such as the Peninsular Florida Land Conservation Cooperative or similar organizations so that the FWC continues to gain understanding and share knowledge of key issues related to potential climate change. In addition, the FWC will consider the need for conducting vulnerability assessments to model the potential effects of climate change, especially sea level rise and storm events, on imperiled species and their habitats on FWC managed land.

To address the potential impacts of climate change on the LSFMA, Goals and Objectives have been developed as a component of this Management Plan (Section 6.11). Depending on the recommendations of the adaptive management strategies described above, additional specific goals and objectives to mitigate potential climate change impacts may be developed for the LSFMA Management Plan in the future.

5.15 Soil and Water Conservation

Soil disturbing activities will be confined to areas that have the least likelihood of experiencing erosion challenges. On areas that have been disturbed prior to acquisition, an assessment will be made to determine if soil erosion is occurring, and if so, appropriate measures will be implemented to stop or control the effects of this erosion.

6 Resource Management Goals and Objectives

The management goals described in this section are considered broad, enduring statements designed to guide the general direction of management actions to be conducted in order to achieve an overall desired future outcome for the LSFMA. The objectives listed within each management goal offer more specific management guidance and measures and are considered the necessary steps to be completed to accomplish the management goals. Many of the objectives listed have specific end-of-the-calendar-year target dates for completion and all of them are classified as having either short-term (less than two years) or long-term (up to ten years) timelines for completion.

6.1 Habitat Restoration and Improvement

Goal: Improve extant habitat and restore disturbed areas.

Long-term (UP TO 10 YEARS)

- 6.1.1 Continue to maintain landscape around recreational facilities including mowing and weed control.
- 6.1.2 Apply appropriate management strategies such as liming/fertilization, supplemental stocking, habitat enhancement, water level manipulation and vegetation control in order to provide high quality fishing opportunities.

6.2 Imperiled Species Habitat Maintenance, Enhancement, Restoration or Population Restoration

Goal: Maintain, improve or restore imperiled species populations and habitats.

Long-term

- 6.2.1 Continue to monitor imperiled species.
- 6.2.2 Continue to collect and record opportunistic wildlife species occurrence data.

6.3 Other Wildlife (Game and Nongame) Habitat Maintenance, Enhancement, Restoration and Population Restoration

Goal: Monitor, maintain, improve or restore game and non-game species populations and habitats.

Long-term

- 6.3.1 Continue to monitor locally important wildlife species.

- 6.3.2 Continue to monitor and maintain sportfish populations through the use of length-frequency histograms, age and growth data, condition indices and creel survey data.
- 6.3.3 Continue to develop and apply appropriate harvest regulations as needed to promote optimum sportfish population densities and size structure.
- 6.3.4 Apply appropriate management strategies for fish stocking.
- 6.3.5 Continue to collect and record opportunistic wildlife species occurrence data.

6.4 Exotic and Invasive Species Maintenance and Control

Goal: Remove exotic and invasive plants and animals and conduct needed maintenance- control.

Long-term

- 6.4.1 Continue to annually inspect at least 249 acres for the level of infestation of FLEPPC Category I and Category II invasive and exotic plant species and treat as needed and appropriate (Chinese privet, hydrilla and Japanese climbing fern).
- 6.4.2 Conduct submersed vegetation sonar mapping to estimate submersed vegetation PAC (percent area covered) and PVI (percent volume infested) and/or point-intercept sampling to collect data on vegetation species richness and frequency of occurrence.
- 6.4.3 Continue to annually monitor fish community for presence of exotic and nuisance fish. Implement any needed control measures (if a feasible option exists).

6.5 Public Access and Recreational Opportunities

Goal: Provide public access and recreational opportunities.

Long-term

- 6.5.1 Obtain any necessary permits and add fish attractors to improve fish habitat and congregate fish (brush attractors, artificial attractors and/or gravel beds).
- 6.5.2 Continue coordination with Escambia County for the maintenance of hiking trails and park area located at the LSFMA.
- 6.5.3 Continue to make available brochures, website, press releases and other educational materials as needed to enlighten anglers regarding available fishing opportunities and fishery management principals.

- 6.5.4 Explore the feasibility of developing an informational kiosk and interpretative signage on the area.
- 6.5.5 Evaluate angler catch and effort data through a spring peak season creel survey at least once during the planning period to document fishing success rates and assess overall results of management strategies.
- 6.5.6 Conduct and evaluate angler use and opinion (satisfaction) survey.
- 6.5.7 Maintain public access and recreational opportunities to allow for 77 campsites and a recreational carrying capacity for fishing opportunities of 144 visitors per day.
- 6.5.8 Continue to provide paddling opportunities on Lake Stone.
- 6.5.9 Continue to provide fishing opportunities on Lake Stone.

6.6 Hydrological Preservation and Restoration

Goal: Protect water quality and quantity, restore hydrology to the extent feasible, and maintain the restored condition.

Long-term

- 6.6.1 Continue annual inspections of the dam, spillways, fishing fingers and water control structures, and coordinate necessary repairs with the FWC engineer.
- 6.6.2 Correct erosion caused by wind and wave action on the fishing fingers using the most efficient and economical means available.
- 6.6.3 Continue to annually monitor dam seepage.
- 6.6.4 Explore potential funding opportunities to improve and repair water control structure and dam and complete necessary repairs as funds become available.
- 6.6.5 Continue to maintain dam by mowing and the removal of woody vegetation.
- 6.6.6 Continue to cooperate with the NFWFMD for the monitoring of surface and ground water quality and quantity.

6.7 Forest Resource Management

Goal: Manage timber resources to improve or restore natural communities for the benefit of wildlife.

Long-term

- 6.7.1 Continue to consult with the FFS or a professional forestry consultant regarding forest management activities as appropriate.

6.8 Historical Resources

Goal: Protect, preserve and maintain historical resources.

Long-term

- 6.8.1 Coordinate with the DHR to schedule and conduct a historical resource survey.
- 6.8.2 Ensure all known sites are recorded in the Florida Division of Historical Resources Master Site file.
- 6.8.3 Cooperate with the DHR in designing site plans for development of infrastructure.
- 6.8.4 Cooperate with the DHR to manage and maintain known existing historical resources.
- 6.8.5 Continue to monitor, protect and preserve as necessary two identified sites.
- 6.8.6 Coordinate with the DHR for cultural resource management guideline staff training.
- 6.8.7 Continue to follow the DHR's Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties for the management of cultural and historic resources.

6.9 Capital Facilities and Infrastructure

Goal: Develop the capital facilities and infrastructure necessary to meet the goals and objectives of this Management Plan.

Short-term

- 6.9.1 Improve campsites on the area by paving the sites with concrete.

Long-term

- 6.9.2 Monitor trails and infrastructure annually for visitor impacts.
- 6.9.3 Continue to maintain 10 facilities (two boat ramps, fishing pier, field office, bathhouse, campsites, parking area, pavilion, dam and playground).
- 6.9.4 Continue to cooperate with Escambia County to maintain two miles of roads on the area.

6.9.5 To improve, replace and enhance current playground facilities, field office, piers, boat ramps, access areas and bank fishing areas.

6.9.6 Explore the feasibility of constructing an additional open pavilion.

6.10 Land Conservation and Stewardship Partnerships

Goal: Enhance fish and wildlife conservation, resource and operational management through development of an optimal boundary.

Long-term

6.10.1 Continue to identify and evaluate potential important wildlife habitat, landscape-scale linkages, wildlife corridors and operational management needs, and update the OCPB for the LSFMA as appropriate and necessary.

6.10.2 Continue to contact and inform adjoining private landowners about the FWC Landowners Assistance Program, and coordinate with public entities to pursue conservation stewardship partnerships.

6.10.3 Continue to evaluate and identify the FWC inholdings and additions priority parcels for potential conservation acquisition and pursue acquisitions as funding allows.

6.10.4 Continue to maintain a GIS shapefile and other necessary data to facilitate nominations within the FWC OCPB for the FWC landowner assistance and conservation acquisition programs.

6.10.5 Continue to update the FWC Conservation Action Strategy for the LSFMA as necessary.

6.10.6 Continue to identify potential non-governmental land stewardship organization partnerships and grant program opportunities.

6.10.7 Determine the efficacy of conducting a landowner assistance/conservation stewardship partnership workshop(s) and pursue as necessary and appropriate.

6.10.8 Continue to evaluate and determine if any portions of the LSFMA are no longer needed for conservation purposes, and therefore may be designated as surplus lands.

6.11 Climate Change

Goal: Develop appropriate adaptation strategies in response to projected climate change effects and their potential impacts on natural resources, including fish and wildlife, and the operational management of the LSFMA.

Long-term

- 6.11.1 Coordinate with the FWC-Fish and Wildlife Research Institute (FWRI) Climate Change Adaptation Initiative to identify potential impacts of projected climate change on fish and wildlife resources and operational management of the LSFMA.
- 6.11.2 As science, technology and climate policy evolve, educate natural resource management partners and the public about the agency's policies, programs and efforts to study, document and address potential climate change.

6.12 Cooperative Management, Special Uses, and Research Opportunities

Goal: Provide access and use of the LSFMA to current cooperative managers and continue collaborative management and research efforts.

Long-Term

- 6.12.1 Continue to cooperate with Escambia County Sheriff's Office and the FWC law enforcement to implement preventative patrol as well as apprehension and arrest of persons violating conservation and environmental laws.
- 6.12.2 Continue to cooperate with Escambia County Parks and Recreation for management of recreational activities.
- 6.12.3 Explore and pursue cooperative research opportunities through universities, Fish and Wildlife Research Institute, etc.
- 6.12.4 Continue to assess the need for research and environmental education partnership opportunities as appropriate.
- 6.12.5 Coordinate and cooperate with Department of Defense military branches to allow for training opportunities for military personnel and other initiatives as appropriate and compatible with the conservation of the LSFMA.

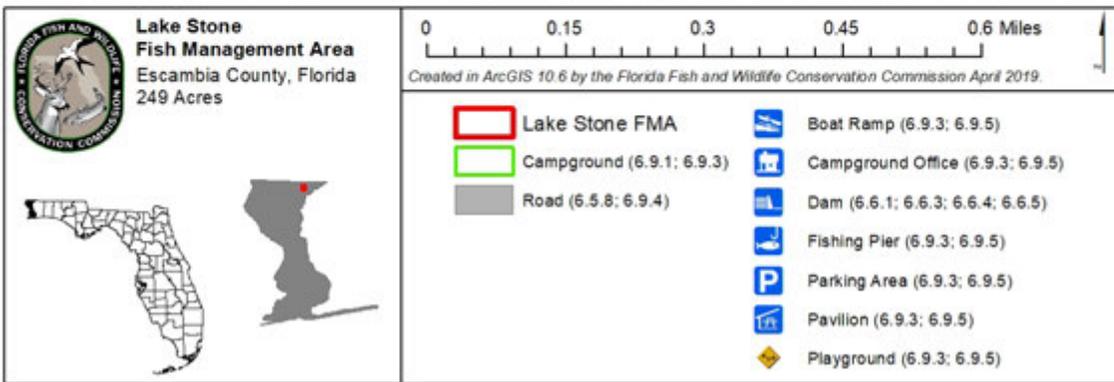
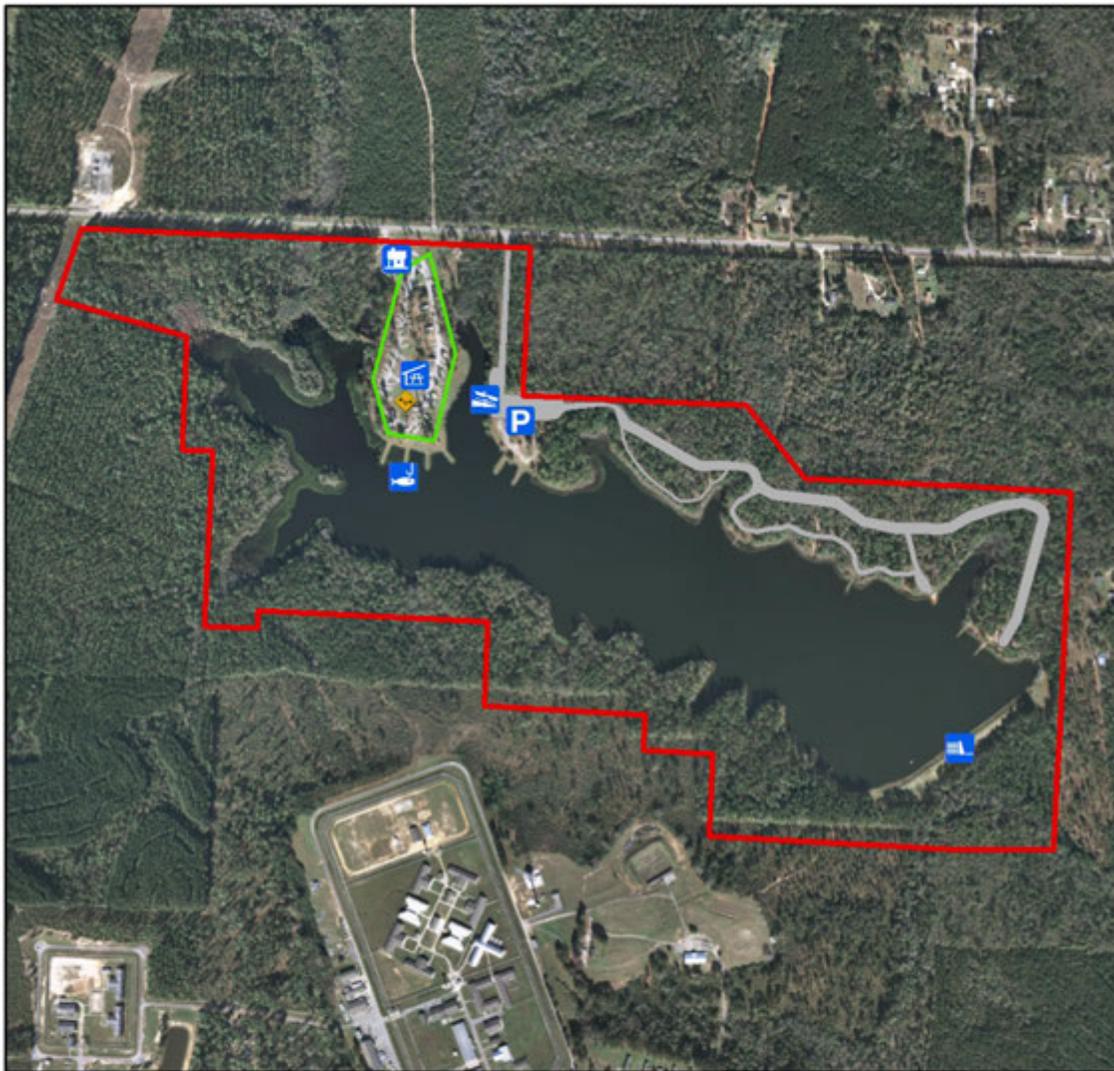


Figure 12. Project Locations for the LSFMA

7 Resource Management Challenges and Strategies

The following section identifies and describes further management needs and challenges associated with the LSFMA and provides solution strategies that will address these challenges. These specific challenges may not be fully addressed in the broader goals and objectives section above and are thereby provided here.

7.1 Challenge 1: Currently, the FWC aims to meet the FWC law enforcement and management staff standards and needs.

- 7.1.1 Strategy: Agency staff levels will continue to be evaluated to determine if increased staffing or other alternatives can improve management needs.
- 7.1.2 Strategy: Pursue funding for increased law enforcement, management staffing and additional private sector contract services as appropriate.
- 7.1.3 Strategy: Explore potential volunteer resources for assisting with management.

7.2 Challenge 2: Currently it is difficult for the general public to access other parts of the lake.

- 7.2.1 Strategy: Explore potential concessionaire opportunities for establishing onsite kayak/canoe rentals.
- 7.2.2 Strategy: Explore potential funding for establishment of a kayak/canoe specific ramp.

7.3 Challenge 3: The LSFMA is not a widely known recreational destination.

- 7.3.1 Strategy: Continue to coordinate and communicate with existing and future partnerships.
- 7.3.2 Strategy: Work with Escambia County to promote the LSFMA.
- 7.3.3 Strategy: Cross promote the LSFMA with other regional conservation lands.
- 7.3.4 Strategy: Explore potential funding opportunities to further promote the area.

7.4 Challenge 4: Currently, there is unauthorized uses on the area.

- 7.4.1 Strategy: Continue to work with the FWC and Escambia County law enforcement for enforcement of rules and regulations and increase patrol of the area.
- 7.4.2 Strategy: Work with the FWC law enforcement and Escambia County on potential revisions to rules and regulations on the area.
- 7.4.3 Strategy: Pursue outreach efforts to increase public awareness of area rules and regulations.

7.5 Challenge 5: Potential future development on adjacent lands can result in incompatible land uses increasing management challenges for the area.

- 7.5.1 Strategy: Cooperate and work with Escambia County to ensure land use and zoning designations adjacent to the LSFMA will continue to be compatible with the management of the area.

8 Cost Estimates and Funding Sources

The following represents the actual and unmet budgetary needs for managing the lands and resources of the LSFMA. This cost estimate was developed using data developed by the FWC and other cooperating entities and is based on actual costs for land management activities, equipment purchase and maintenance, and for development of fixed capital facilities. Funds needed to protect and manage the property and to fully implement the recommended program are derived primarily from the Land Acquisition Trust Fund and from State Legislative appropriations. However, private conservation organizations may be cooperators with the agency for funding of specific projects. Alternative funding sources, such as monies available through grants and potential project-specific mitigation, may be sought to supplement existing funding as needed.

The cost estimate below, although exceeding what the FWC typically receives through the appropriations process, is estimated to be what is necessary for optimal management and is consistent with the current and planned resource management and operation of the LSFMA. Cost estimate categories are those currently recognized by the FWC and the Land Management Uniform Accounting Council.

Lake Stone FMA Management Plan Cost Estimate
Maximum expected one-year expenditure

| <u>Resource Management</u> | <u>Expenditure</u> | <u>Priority</u> | Priority schedule: |
|-------------------------------------------------------------|---------------------------|------------------------|------------------------------|
| Exotic Species Control | \$7,804 | (1) | (1) Immediate (annual) |
| Prescribed Burning | \$0 | (1) | (2) Intermediate (3-4 years) |
| Cultural Resource Management | \$627 | (1) | (3) Other (5+ years) |
| Timber Management | \$0 | (1) | |
| Hydrological Management | \$49,854 | (1) | |
| Other (Restoration, Enhancement, Surveys, Monitoring, etc.) | \$20,958 | (1) | |
| Subtotal | \$79,243 | | |
| | | | |
| <u>Administration</u> | | | |
| General administration | \$10,586 | (1) | |
| | | | |
| <u>Support</u> | | | |
| Land Management Planning | \$16,338 | (1) | |
| Land Management Reviews | \$6,968 | (3) | |
| Training/Staff Development | \$13,326 | (1) | |
| Vehicle Purchase | \$9,761 | (2) | |
| Vehicle Operation and Maintenance | \$9,661 | (1) | |
| Other (Technical Reports, Data Management, etc.) | \$25,697 | (1) | |
| Subtotal | \$81,752 | | |
| | | | |
| <u>Capital Improvements</u> | | | |
| New Facility Construction | \$148,194 | (2) | |
| Facility Maintenance | \$61,444 | (1) | |
| Subtotal | \$209,638 | | |
| | | | |
| <u>Visitor Services/Recreation</u> | | | |
| Info./Education/Operations | \$1,895 | (1) | |
| | | | |
| <u>Law Enforcement</u> | | | |
| Resource protection | \$227 | (1) | |
| | | | |
| <u>Total</u> | \$383,341 | * | |

* Based on the characteristics and requirements of this area, two FTE positions would be optimal to fully manage this area. All land management funding is dependent upon annual legislative appropriations.

Lake Stone FMA Management Plan Cost Estimate

Ten-year projection

| <u>Resource Management</u> | <u>Expenditure</u> | <u>Priority</u> | Priority schedule: |
|-------------------------------------------------------------|--------------------|-----------------|------------------------------|
| Exotic Species Control | \$68,564 | (1) | (1) Immediate (annual) |
| Prescribed Burning | \$0 | (1) | (2) Intermediate (3-4 years) |
| Cultural Resource Management | \$5,513 | (1) | (3) Other (5+ years) |
| Timber Management | \$0 | (1) | |
| Hydrological Management | \$438,021 | (1) | |
| Other (Restoration, Enhancement, Surveys, Monitoring, etc.) | \$184,138 | (1) | |
| Subtotal | \$696,236 | | |
| Administration | | | |
| General administration | \$93,009 | (1) | |
| Support | | | |
| Land Management Planning | \$143,551 | (1) | |
| Land Management Reviews | \$19,948 | (3) | |
| Training/Staff Development | \$117,083 | (1) | |
| Vehicle Purchase | \$34,349 | (2) | |
| Vehicle Operation and Maintenance | \$84,883 | (1) | |
| Other (Technical Reports, Data Management, etc.) | \$225,778 | (1) | |
| Subtotal | \$625,592 | | |
| Capital Improvements | | | |
| New Facility Construction | \$428,056 | (2) | |
| Facility Maintenance | \$539,856 | (1) | |
| Subtotal | \$967,912 | | |
| Visitor Services/Recreation | | | |
| Info./Education/Operations | \$16,648 | (1) | |
| Law Enforcement | | | |
| Resource protection | \$1,998 | (1) | |
| Total | \$2,401,394 | | * |

* Based on the characteristics and requirements of this area, two FTE positions would be optimal to fully manage this area. All land management funding is dependent upon annual legislative appropriations.

9 Analysis of Potential for Contracting Private Vendors for Restoration and Management Activities

The following management and restoration activities have been considered for outsourcing to private entities. It has been determined that items selected as “Approved” below are those that the FWC either does not have in-house expertise to accomplish or which can be done at less cost by an outside provider of services. Those items selected as “Conditional” items are those that could be done either by an outside provider or by the agency at virtually the same cost or with the same level of competence. Items selected as “Rejected” represent those for which the FWC has in-house expertise and/or which the agency has found it can accomplish at less expense than through contracting with outside sources:

Approved Conditional Rejected

- | | Approved | Conditional | Rejected |
|---------------------------------------------------------|----------|-------------|----------|
| • Dike and levee maintenance | | | ✓ |
| • Exotic species control | | | ✓ |
| • Mechanical vegetation treatment | | | ✓ |
| • Public contact and educational facilities development | | | ✓ |
| • Prescribed burning | | | ✓ |
| • Timber harvest activities | ✓ | | |
| • Vegetation inventories | | | ✓ |

10 Compliance with Federal, State, and Local Governmental Requirements

The operational functions of the FWC personnel are governed by the agency's Internal Management Policies and Procedures (IMPP) Manual. The IMPP Manual provides internal guidance regarding many subjects affecting the responsibilities of agency personnel including personnel management, safety issues, uniforms and personal appearance, training, as well as accounting, purchasing and budgetary procedures.

When public facilities are developed on areas managed by the FWC, every effort is made to comply with Public Law 101 - 336, the Americans with Disabilities Act. As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions (e.g., where handicap access is structurally impractical or where providing such access would change the fundamental character of the facility being provided).

Uses planned for the LSFMA are in compliance with the Conceptual State Lands Management Plan and its requirement for "balanced public utilization," and are in compliance with the mission of the FWC as described in its Agency Strategic Plan (Appendix 12.8). Such uses also comply with the authorities of the FWC as derived from Article IV, Section 9 of the Florida Constitution as well as the guidance and directives of Chapters, 253, 259, 327, 370, 379, 373, 375, 378, 403, 487, 597 and 870 FS.

The FWC has developed and utilizes an Arthropod Control Plan for the LSFMA in compliance with Chapter 388.4111 F.S. (Appendix 12.13). This plan was developed in cooperation with the local Escambia County arthropod control agency. This plan is also in conformance with the Local Government Comprehensive Plan as approved and adopted for Escambia County, Florida, (Appendix 12.14).

11 Endnotes

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