

13 Appendices

13.1 Lease Agreement 3949

SALS104

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND
OF THE STATE OF FLORIDA

MULTIPLE AGENCY LEASE AGREEMENT

Lease Agreement No. 3949

THIS LEASE AGREEMENT is made and entered into this 11th day of May, 1993, by and between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, hereinafter referred to as "TRUSTEES", and the STATE OF FLORIDA GAME AND FRESH WATER FISH COMMISSION, hereinafter referred to as "LEAD AGENCY", and the STATE OF FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, hereinafter referred to as "COOPERATING AGENCY", collectively hereinafter referred to as "MANAGING AGENCIES.

WITNESSETH:

WHEREAS, the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA holds title to certain lands and property being utilized by the State of Florida for public purposes, and

WHEREAS, the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA is authorized in Section 253.03, Florida Statutes, to enter into leases for the use, benefit and possession of public lands by State agencies which may properly use and possess them for the benefit of the people of the State of Florida;

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter contained, LESSOR leases the below described premises to LESSEE subject to the following terms and conditions:

1. DELEGATIONS OF AUTHORITY: The Trustees' responsibilities and obligations herein shall be exercised by the Division of State Lands, Department of Natural Resources.

2. DESCRIPTION OF PREMISES: The property subject to this lease agreement is located in the County of Gadsden, State of Florida, and is more particularly described in Exhibit A attached hereto and hereinafter referred to as "leased premises".

3. TERM: The term of this lease agreement shall be for a period of fifty (50) years commencing on May 11, 1993 and ending on May 11, 2043, unless sooner terminated pursuant to the provisions of this lease agreement.

4. PURPOSE: The MANAGING AGENCIES shall manage these lands for the conservation and protection of natural and historical resources and for resource based public outdoor recreation which is compatible with the conservation and protection of these public lands as set forth in subsection 253.023(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 10 of this lease agreement.

5. BEST MANAGEMENT PRACTICES: The MANAGING AGENCIES shall implement applicable Best Management Practices for all activities conducted under this lease agreement in compliance with paragraph 18-2.004(1)(d), Florida Administrative Code, which have been selected, developed, or approved by the TRUSTEES or the MANAGING AGENCIES for the protection and enhancement of the leased premises.

6. EASEMENTS: All easements including, but not limited to, utility easements are expressly prohibited without the prior written approval of the TRUSTEES. Any easement not approved in writing by the TRUSTEES shall be considered void and without legal effect.

7. OTHER AGREEMENTS: This lease agreement shall not be construed as authorization for the MANAGING AGENCIES to lease, sublease, convey or encumber the leased premises or any portion thereof without the prior written approval of the TRUSTEES.

8. LEAD AGENCY RESPONSIBILITIES: The LEAD AGENCY shall coordinate and oversee all activities on the leased premises; initiate appropriate management programs to meet the intent of the goals and objectives stated herein; coordinate preparation and periodic revision of the Management Plan; coordinate and monitor all management activities undertaken by others; and, compile and submit such reports as may be required of the MANAGING AGENCIES. The LEAD AGENCY shall provide permanent

staff, as funding is acquired, for management on a day-to-day basis.

9. COOPERATING AGENCY RESPONSIBILITIES: The COOPERATING AGENCY shall, in coordination with the LEAD AGENCY, provide advice and on-site assistance in implementing a prescribed burning program; respond to and take charge of any wildfire; and provide advice and on-site assistance in any timber planting and harvesting activities.

10. MANAGEMENT PLAN: The LEAD AGENCY with assistance from the COOPERATING AGENCY shall prepare and submit a Management Plan for the leased premises, in accordance with Section 253.034, Florida Statutes, and Chapters 1802 and 18-4, Florida Administrative Code, within 12 months of the effective date of this lease. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by the LEAD AGENCY, COOPERATING AGENCY, Land Management Advisory Committee, and LESSOR at least every five (5) years. The LEAD AGENCY and COOPERATING AGENCY shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

11. QUIET ENJOYMENT AND RIGHT OF USE: The MANAGING AGENCIES shall have the right of ingress and egress, to, from and upon the leased premises for all purposes necessary to their full

quiet enjoyment of the rights conveyed herein. The MANAGING AGENCIES shall have the authority and right to enter and occupy the property for all purposes necessary to meet their designated responsibilities, including protection of the leased premises. The MANAGING AGENCIES shall have the authority and shall, through their agents and employees, take all reasonable measures to provide security against property damage, property degradation, and unauthorized uses or any use thereof not in conformance with this lease agreement.

12. RIGHT OF INSPECTION: The TRUSTEES or their duly authorized agents, shall have the right at any and all times to inspect the leased premises and the works and operations thereon of the MANAGING AGENCIES in any matter pertaining to this lease agreement.

13. BREACH OF COVENANTS, TERMS OR CONDITIONS: Should the MANAGING AGENCIES fail to keep or perform any of their responsibilities as designated by the approved Management Plan or otherwise as provided for herein, the TRUSTEES shall notify the specific agency of such non-performance. If correction or justification is not made within (60) sixty days of receipt of written notice, the TRUSTEES may either terminate this lease agreement and recover from the MANAGING AGENCIES all damages the TRUSTEES may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises, or maintain this lease agreement in full force and effect and exercise all rights and remedies herein conferred upon the TRUSTEES.

14. ASSIGNMENT: This lease agreement shall not be assigned in whole or in part without the prior written consent of the TRUSTEES. Any assignment made without the prior written consent of the TRUSTEES shall be void and without legal effect.

15. LIABILITY: The MANAGING AGENCIES shall assist in the investigation of injury or damage claims either for or against the State of Florida or the TRUSTEES pertaining to their respective management programs and activities, and shall contact the Division of State Lands regarding whatever legal action they

deem appropriate to remedy such damage or claims.

16. UTILITY FEES: The MANAGING AGENCIES shall be responsible for the payment of all charges for the furnishing of gas, electricity, water and other public utilities to the leased premises and for having all utilities turned off when the leased premises are surrendered.

17. PAYMENT OF TAXES AND ASSESSMENTS: The MANAGING AGENCIES shall assume full responsibility for and shall pay all liabilities that accrue to the leased premises or to the improvements thereon, including any and all drainage and special assessments or taxes of every kind and all mechanic's or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises.

18. CONDITIONS AND COVENANTS: All of the provisions of this lease agreement shall be deemed covenants running with the land included in the leased premises, and shall be construed to be "conditions" as well as "covenants" as though the words specifically expressing or imparting covenants and conditions were used in each separate provision.

19. TRIPPLICATE ORIGINALS: This lease agreement is executed in triplicate originals each of which shall be considered an original for all purposes.

20. PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES: Fee title to the leased premises is held by the TRUSTEES. The MANAGING AGENCIES shall not do or permit anything to be done which purports to create a lien or encumbrance of any nature against the real property contained in the leased premises including, but not limited to, mortgages or construction liens against the real property contained in the leased premises or against any interest of the TRUSTEES therein.

21. PLACEMENT AND REMOVAL OF IMPROVEMENTS: All buildings, structures, improvements, and signs shall be constructed at the expense of the MANAGING AGENCIES. Removable equipment and removable improvements placed on the leased premises by the MANAGING AGENCIES which do not become a permanent part of the leased premises will remain the property of the MANAGING AGENCIES

and may be removed by such upon termination of this lease agreement.

22. MAINTENANCE OF IMPROVEMENTS: The MANAGING AGENCIES shall maintain the real property contained within the leased premises and any improvements located thereon, in a state of good condition, working order and repair including, but not limited to, maintaining the planned improvements as set forth in the approved Management Plan, meeting all building and safety codes in the location situated and keeping the leased premises free of trash or litter and maintaining any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease agreement; provided, however, that any removal, closure, etc., of the above improvements shall be acceptable when the proposed activity is consistent with the goals of conservation, protection, and enhancement of the natural and historical resources within the leased premises and with the approved Management Plan.

23. NO WAIVER OF BREACH: The failure of the TRUSTEES to insist in any one or more instances upon strict performance of any one or more of the covenants, terms and conditions of this lease agreement shall not be construed as a waiver of such covenants, terms and conditions, but the same shall continue in full force and effect, and no waiver of the TRUSTEES of any one of the provisions hereof shall in any event be deemed to have been made unless the waiver is set forth in writing, signed by the TRUSTEES.

24. DAMAGE TO THE PREMISES: The MANAGING AGENCIES agree that they will not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises, any act which may result in damage or depreciation of value to the leased premises, or any part thereof. The MANAGING AGENCIES shall not dispose of any contaminants including, but not limited to, hazardous or toxic substances, chemicals or other agents used or produced in the MANAGING AGENCIES' operations, on the leased premises or on any adjacent state land or in any manner not

permitted by law.

25. INSURANCE REQUIREMENTS: The MANAGING AGENCIES shall procure and maintain adequate fire and extended risk insurance coverage for any improvements or structures located on the leased premises in amounts not less than the full insurable replacement value of such improvements by preparing and delivering to the Division of Risk Management, Department of Insurance, a completed Florida Fire Insurance Trust Fund Coverage Request Form immediately upon erection of any structures as allowed by paragraph 4 of this lease agreement. A copy of said form and immediate notification in writing of any erection or removal of structures or other improvements on the leased premises and any changes affecting the value of the improvements shall be submitted to the following: Bureau of Land Management Services, Division of State Lands, Department of Natural Resources, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399.

26. PUBLIC LANDS ARTHROPOD CONTROL PLAN: The MANAGING AGENCIES shall identify and subsequently designate to the respective arthropod control district or districts all of the environmentally sensitive and biologically highly productive lands contained under this lease agreement, in accordance with Section 388.4111, Florida Statutes and Chapter 10D-54, Florida Administrative Code, for the purpose of obtaining a public lands arthropod control plan for such lands within one year of the effective date of this lease agreement.

27. ARCHAEOLOGICAL AND HISTORIC SITES: Execution of this lease agreement in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Section 253.034, Florida Statutes, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the tract.'

28. SURRENDER OF PREMISES: Upon termination or expiration of this lease agreement, the MANAGING AGENCIES shall surrender the leased premises to the TRUSTEES. In the event no further use of the leased premises or any part thereof is needed, the MANAGING AGENCIES shall give written notification to the Bureau of Land Management Services, Division of State Lands, Department of Natural Resources, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 at least six (6) months prior to the release of all or any part of the leased premises. Notification shall include a legal description, this lease agreement number, and an explanation of the release. The release shall only be valid if approved by the TRUSTEES through execution of a release of lease agreement instrument with the same formality as this lease agreement. Upon release of any leased premises or upon termination or expiration of this lease agreement, all improvements, including both physical structures and modifications to the leased premises, shall become the property of the TRUSTEES, unless the TRUSTEES give written notice to the MANAGING AGENCIES to remove any or all such improvements at the expense of the MANAGING AGENCIES. The decision to retain any improvements upon termination of this lease agreement shall be at the TRUSTEES' sole discretion. Prior to surrender of all or any part of the leased premises, a representative of the Division of State Lands shall perform an on-site inspection and the keys to any building on the leased premises shall be turned over to the Division. If the leased premises do not meet all conditions as set forth in paragraphs 16 and 22 herein, the MANAGING AGENCIES shall pay all costs necessary to meet the prescribed conditions.

29. COMPLIANCE WITH LAWS: The MANAGING AGENCIES agree that this lease agreement is contingent upon and is subject to the MANAGING AGENCIES obtaining all applicable permits and complying with all applicable permits, regulations, ordinances, rules, and laws of the State of Florida or the United States or of any political subdivision or agency of either.

30. ENTIRE UNDERSTANDING: This lease agreement sets forth the entire understanding between the parties and shall only be

amended with the prior written approval of the TRUSTEES.

31. RIGHT OF AUDIT: The MANAGING AGENCIES shall make available to the TRUSTEES all financial and other records relating to this lease agreement and the TRUSTEES shall have the right to audit such records at any reasonable time. This right shall be continuous until this lease agreement expires or is terminated. This lease agreement may be terminated by the TRUSTEES should the MANAGING AGENCIES fail to allow public access to all documents, papers, letters or other materials made or received in conjunction with this lease agreement, pursuant to Chapter 119, Florida Statutes.

32. NON-DISCRIMINATION: The MANAGING AGENCIES shall not discriminate against any individual because of that individual's race, color, religion, sex, national origin, age, handicaps, or marital status with respect to any activity occurring within the leased premises or upon lands adjacent to and used as an adjunct of the leased premises.

33. GOVERNING LAW: This lease agreement shall be governed by and interpreted according to the laws of the State of Florida.

34. SECTION CAPTIONS: Articles, subsections and other captions contained in this lease agreement are for reference purposes only and are in no way intended to describe, interpret, define or limit the scope, extent or intent of this lease agreement or any provisions thereof.

IN WITNESS WHEREOF, the parties have caused this lease to be executed on the day and year first above written.

BOARD OF TRUSTEES OF THE INTERNAL
IMPROVEMENT TRUST FUND OF THE STATE
OF FLORIDA

Bonnie Wilson
Witness
Midge Coughlin
Witness

By: Daniel T. Craft (SEAL)
Chief, Bureau of Land Management
Services, Department of Natural
Resources

"TRUSTEES"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this
11th day of May, 1997, by Daniel T. Crabb, as Chief,
Bureau of Land Management Services, Division of State Lands,
Department of Natural Resources, who is personally known to me
and who did take an oath.

Kelli R. Williams
Signature of person taking acknowledgement
MY COMMISSION # CC269197 EXPIRES
March 19, 1997
APPROVED AS TO FORM AND LEGAL SUFFICIENCY
Name of acknowledger typed, printed or stamped
Commission Expires: March 19, 1997
Commission Number: CC269197

Approved as to Form and Legality
By: William C. Robinson
DNR Attorney

STATE OF FLORIDA GAME AND FRESH WATER
FISH COMMISSION

Dale J. Cook
Witness
Terry M. ...
Witness

By: Robert M. Brantley (SEAL)
Its: Executive Director

"LEAD AGENCY"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this
15 day of December, 1992, by Robert M. Brantley,
as Executive Director, Florida Game and
Fresh Water Fish Commission, who is personally known to me and
who did take an oath.

Jimmie C. Bevis
Signature of person taking acknowledgement
JIMMIE C. BEVIS
Name of acknowledger typed, printed or stamped
Notary Public, State of Florida
Commission Expires: My Commission Expires Nov. 7, 1993
Commission Number: _____

APPROVED AS FISCALLY
AND BUDGETARILLY SOUND

William C. Sumner
DIRECTOR
DIVISION OF ADMINISTRATIVE SERVICES
GFWFC

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APPROVED AS TO FORM
AND LEGAL SUFFICIENCY
Mr. C.
Commission Attorney

11496

STATE OF FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOB CRAWFORD, COMMISSIONER

Ben Clark-Drew
Witness
Sue P. Bush
Witness

By: Mike Graham (SEAL)
Director, Division of Administration, Department of Agriculture and Consumer Services

"COOPERATING AGENCY"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 18th day of March, 1993, by Mrs Graham, as Director, Division of Administration, Department of Agriculture and Consumer Services, who is personally known to me and who did take an oath.

Lee H. Sadler
Signature of person taking acknowledgement



LEE H. SADLER
MY COMMISSION # CC 244421 EXPIRES
December 8, 1996
BONDED THRU TRU FARM INSURANCE, INC.

Name of acknowledger typed, printed or stamped

Commission Expires: _____

Commission Number: _____

Return to: Gary Heiser, Esq.
Division of State Lands
Department of Natural Resources
3900 Commonwealth Building,
Tallahassee, FL 32399

Approved As to Form and Legality
By: Gary H. Hain
Date: 2/17/92

This Instrument Prepared by:
Harvey A. Abrams, Esq.
The Trust for Public Land
2100 Centerville Road
Tallahassee, Florida 32308-4314

D.R. 388 PAGE 884
BOOK

Property Appraisers Parcel Identification (Folio) Number(s):
Grantee(s) S.S. #(s):

WARRANTY DEED (STATUTORY)

THIS WARRANTY DEED made and executed this 30TH day of JANUARY 1992, by THE TRUST FOR PUBLIC LAND, a California not-for-profit corporation existing under the laws of California, and having a place of business at 2100 Centerville Road, Tallahassee, Florida 32308-4314, hereinafter called the Grantor, to BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, whose post office address is 3900 Commonwealth Boulevard, Mail Station 115, Tallahassee, Florida 32399, hereinafter called the Grantee (Wherever used herein the terms "Grantor" and "Grantee" include all the parties in this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations and public bodies):

WITNESSETH:

That the Grantor, for and in consideration of the sum of TEN DOLLARS (\$10.00) and other valuable considerations, receipt whereof is hereby acknowledged, by these presents does grant, bargain, sell, alien, remise, release, convey and confirm unto the Grantee, its successors and assigns forever, all that certain land situate in Gadsden County, Florida, viz:

That Property More Particularly Described on EXHIBIT "A" attached hereto and incorporated herein by reference.

Subject to those matters recited on EXHIBIT "B".

Title to any portion of the Property lying below the Natural, Ordinary High Water Line of any navigable body or bodies of water is not warranted.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD, the same in fee simple forever.

AND the Grantor does hereby fully warrant the title to said lands and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, the Grantor has caused these presents to be executed in its name, and its corporate seal to be hereunto affixed, by its proper officers therunto duly authorized, the day and year first above written.

Signed, sealed and delivered in the presence of:

Harvey A. Abrams
Signature
Harvey A. Abrams
Printed Signature
Gordon J. Smith
Signature
Gordon J. Smith
Printed Signature

THE TRUST FOR PUBLIC LAND, a California not-for-profit corporation

By: W. Dale Allen
Name: W. Dale Allen
Title: Vice President
Address: 2100 Centerville Road
Tallahassee, FL 32308-4314

(CORPORATE SEAL)



DOCUMENTARY STAMP TAX PAID \$6223.20 DATE 1-30-92
NICHOLAS THOMAS, CLERK OF CIRCUIT COURT
GADSDEN COUNTY, FLORIDA
BY W. Dale Allen D.C.

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STATE OF FLORIDA
COUNTY OF LEON

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The foregoing Warranty Deed was acknowledged before me this 30th day of JAN., 1992, by W. Dale Allen, Vice President of THE TRUST FOR PUBLIC LAND, a California not-for-profit corporation, on behalf of the corporation. He is personally known to me and did take an oath.

Sara E. Brunger
Signature SARA E. BRUNGER

Printed Signature
NOTARY PUBLIC

My Commission Expires: My Commission Expires Oct. 23, 1992
Notary Public, State of Florida
Qualified Since July 1, 1988 - License No. 1111

Commission No. AD 69067

(SEAL)



LEGAL DESCRIPTION

(LANDS)

TRACT I

All of the South half (S 1/2) of Section Twenty (20) lying South of the Forbes Purchase Line; Less and Except any part of the following described lands lying within said South one-half (S 1/2) of said Section 20, viz.: From the Northwest corner of the SW 1/4 of Section 20, Township 1 North, Range 2 West, run North along the section line 312.0 feet to a corner for a Point of Beginning; thence East 2,175.0 feet to an iron pipe in the Forbes Purchase Line; thence in a Southerly direction along the Forbes Purchase Line 1,036.0 feet to a corner; thence West 2,440.0 feet to the aforesaid section line; thence North along said section line 1,000.0 feet to the Point of Beginning.

All of the Southeast Quarter (SE 1/4) lying North of the Ocklocknee River except the Northwest Quarter (NW 1/4) of the said Southeast Quarter (SE 1/4), South half (S 1/2) of Southwest Quarter (SW 1/4), Northwest Quarter (NW 1/4) of Southwest Quarter (SW 1/4), South half (S 1/2) of Northwest Quarter (NW 1/4) and Southwest Quarter (SW 1/4) of Northeast Quarter (NE 1/4) of Section Twenty-one (21).

Lots Numbered One (1) and Four (4) in Section Twenty-two (22) and all of the Northeast Quarter (NE 1/4) of the Northwest Quarter (NW 1/4) of Section Twenty-two (22), except Twelve acres more or less described as follows, to-wit: Begin at the Southwest corner of the Northeast Quarter (NE 1/4) of the Northwest Quarter (NW 1/4) and run East Ten and ninety-one hundredths (10.91) chains, thence run North ten and ninety-one hundredths (10.91) chains, thence West ten and ninety-one hundredths (10.91) chains and thence South ten and ninety-one hundredths (10.91) chains to the point of beginning.

Lot Number Two (2) in Section Twenty-three (23).

Excepted from the lands described as Lot No. One (1) in Section Twenty-two (22) and Lot No. Two (2) in Section Twenty-three (23) are those parts of those lots lying North and East and within 50 feet South and West of the Centerline of the existing CSX Railroad single track (described in the final decree of the case Seaboard Air Line Railroad v. Mary Pigott Davis, et al., recorded in Gadsden County, Florida Chancery Order Book "O" at Page 481).

All of the above described land, situate, lying and being in Township One (1) North, of Range Two (2) West.

TRACT IV

Begin at the Southeast Corner of Lot Number Three (3) in Section Twenty-two (22), Township One (1) North, Range Two (2) West and thence run North six hundred ninety (690) feet, thence West four hundred twenty (420) feet, thence South fifty-eight (58) feet, thence West five hundred seventy (570) feet, thence South six hundred thirty-two (632) feet, thence East nine hundred ninety (990) feet to the point of beginning.

TRACT V

The South Half (S 1/2) of Southeast Quarter (SE 1/4) of Section 16, Township 1 North, Range 2 West. The Northeast Quarter (NE 1/4) of Southwest Quarter (SW 1/4) of Section Twenty-one (21), Township One (1) North, Range Two (2) West, Southeast Quarter (SE 1/4) of Northwest Quarter (NW 1/4) of Section 22, Township 1 North, Range 2 West.

TRACT VI--

The Southwest Quarter (SW 1/4) of Section Sixteen (16), in Township One (1) North, Range Two (2) West.

LESS AND EXCEPT - Four acres in the Northwest Quarter (NW 1/4) of the Northeast Quarter (NE 1/4) of the Southwest Quarter (SW 1/4) of Section Sixteen (16), Township One (1) North, Range Two (2) West described as follows: Commencing at the Northwest Corner of the Northeast Quarter (NE 1/4) of the Southwest Quarter (SW 1/4); thence run due East 421 feet; thence due South 421 feet; thence due West 421 feet; thence due North 421 feet to point of beginning.

AND ALSO LESS AND EXCEPT - Begin at a point 1980 feet East and 2640 feet South of the Northwest corner of Section 16 and thence run South 210 feet; thence run East 420 feet; thence run North 210 feet; thence run West 420 feet to the point of beginning. Said tract of land containing 2 acres, more or less, and being in the Northwest Corner of the Northeast Quarter of the Northeast Quarter of the Southwest Quarter of Section 16, Township 1 North, Range 2 West, Gadsden County, Florida.

(EASEMENT)

TOGETHER WITH that certain perpetual nonexclusive easement for unrestricted ingress and egress to and from the above-described lands granted in Trustees' Correction Deed dated December 16, 1991, from George I. Davis and James Calvin Davis as Co-Trustees of the Eugene Moor Davis Family Trust to The Trust For Public Land and its successors in ownership and their invitees recorded in Official Record Book 387, page 113, Public Records of Gadsden County, Florida. Said easement grant and its use shall be by means of the existing roadway between U. S. Highway 90 crossing the CSX railroad and traversing lands in Section Fifteen (15), Township One (1) North, Range Two (2) West to Sections Sixteen (16) and Twenty-Two (22) in said township, and being more particularly described as follows:

A 30-foot wide access easement lying 15 feet right and left of the following described centerline.

Commence at the Southwest Corner of Section 15, Township 1 North, Range 2 West, Gadsden County, Florida, and run along the South line of said Section, North 89 degrees 33 minutes 05 seconds East 1648.15 feet to an intersection with the centerline of an unimproved dirt surfaced road and the Point of Beginning. From said Point of Beginning run along the centerline of said unimproved dirt surfaced roadway the following courses:

North 24 degrees 25 minutes 24 seconds East 172.78 feet;
 North 29 degrees 33 minutes 38 seconds East 63.31 feet;
 North 39 degrees 19 minutes 59 seconds East 83.51 feet;
 North 56 degrees 53 minutes 56 seconds East 103.47 feet;
 North 75 degrees 19 minutes 53 seconds East 108.97 feet;
 North 81 degrees 32 minutes 50 seconds East 106.97 feet;
 North 77 degrees 17 minutes 04 seconds East 82.08 feet;
 North 69 degrees 19 minutes 38 seconds East 75.89 feet;
 North 54 degrees 16 minutes 46 seconds East 84.68 feet;
 North 41 degrees 19 minutes 35 seconds East 123.39 feet;
 North 49 degrees 26 minutes 54 seconds East 107.64 feet;
 North 45 degrees 47 minutes 17 seconds East 91.15 feet;
 North 34 degrees 50 minutes 26 seconds East 149.39 feet;
 North 26 degrees 31 minutes 21 seconds East 154.90 feet;
 North 42 degrees 38 minutes 32 seconds East 73.03 feet;

North 69 degrees 59 minutes 17 seconds East 93.76 feet;
North 83 degrees 34 minutes 31 seconds East 284.12 feet;
South 87 degrees 49 minutes 19 seconds East 112.72 feet;
South 80 degrees 16 minutes 59 seconds East 132.44 feet;
South 67 degrees 42 minutes 54 seconds East 209.42 feet;
South 86 degrees 54 minutes 37 seconds East 195.12 feet;
South 61 degrees 39 minutes 59 seconds East 139.17 feet;
South 79 degrees 58 minutes 32 seconds East 62.48 feet;
North 73 degrees 39 minutes 11 seconds East 58.26 feet;
and North 41 degrees 59 minutes 15 seconds East 71.82
feet to an intersection with the Southwest right-of-way
line of U. S. Highway No. 90 and the end of said
centerline.

The grant of the easement herein specifically contemplates and includes the right to invite the public to use the easement road for ingress and egress to and from the lands conveyed herein.

All of said land and the easement situate, lying and being in the County of Gadsden and State of Florida.

~~EXHIBIT B~~

Subject to the following:

1. Perpetual easement or right to flood from Eugene M. Davis, joined by his wife, Mary Davis, to West Florida Power Company, dated January 27, 1930, recorded in Deed Book XX at Page 175, et seq, public records of Gadsden County, Florida.

2. Perpetual easement or right to flood from Frank Davis to West Florida Power Company, dated May 7, 1930, recorded in Deed Book XX at page 328, et seq, public records of Gadsden County, Florida.

3. Easement for pipeline for natural gas, oil, petroleum products and other liquids, gases or substances which can be transported through a pipeline, from Mary Pigott Davis and George I. Davis, co-trustees of the Estate of Eugene M. Davis, deceased, to Florida Gas Transmission Company, dated November 10, 1967, recorded in OR Book 98 at Page 431, et seq, public records of Gadsden County, Florida.

4. Sovereignty ownership of any portion of the property lying below the ordinary high water line of any navigable body of water.

9200809

O.R. BOOK 388 PAGE 884-889
REC. NICHOLAS THOMAS, CLERK
GADSDEN CO., FLORIDA

'92 JAN 30 PM 4 16

FILED, RECORDED AND
RECORD VERIFIED
NICHOLAS THOMAS, CLERK CIR. COURT,
GADSDEN COUNTY, FLORIDA
by: P. Garrison D.C.

FDACS CONTRACT #

005642

SAL4

2,018.48 Acres

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT
TRUST FUND OF THE STATE OF FLORIDA

MULTIPLE AGENCY LEASE AGREEMENT
ROCKY COMFORT TRACT

Lease Number 4211

This lease is made and entered in this 1st day of September, 2000, between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, hereinafter referred to as "LESSOR", and the STATE OF FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF FORESTRY, hereinafter referred to as "FORESTRY", and the STATE OF FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION, hereinafter referred to as the "COMMISSION", hereinafter collectively referred to as the "MANAGING AGENCIES".

WITNESSETH:

WHEREAS, the LESSOR holds title to certain lands and property being utilized by the State of Florida for public purposes; and

WHEREAS, the LESSOR is authorized in Section 253.03, Florida Statutes, to enter into leases for the use, benefit, and possession of public lands by State agencies which may properly use and possess them for the benefit of the people of the State of Florida.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter contained, LESSOR leases the below described premises to the MANAGING AGENCIES subject to the following terms and conditions:

1. DELEGATIONS OF AUTHORITY: LESSOR'S responsibilities and obligations herein shall be exercised by the Division of State Lands, Department of Environmental Protection.
2. DESCRIPTION OF PREMISES: An undivided 50 per cent management interest in the property subject to this lease, which

is situated in the County of Gadsden, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter referred to as the "leased premises".

3. TERM: The term of this lease shall be for a period of fifty years commencing on September 1, 2000, and ending on August 31, 2050, unless sooner terminated pursuant to the provisions of this lease.

4. PURPOSE: The MANAGING AGENCIES shall manage the leased premises only for the conservation and protection of natural and historical resources and resource based public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 259.032(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 8 of this lease.

5. QUIET ENJOYMENT AND RIGHT OF USE: The MANAGING AGENCIES shall have the right of ingress and egress to, from and upon the leased premises for all purposes necessary to the full quiet enjoyment by said MANAGING AGENCIES of the rights conveyed herein.

6. UNAUTHORIZED USE: The MANAGING AGENCIES shall, through their agents and employees, prevent the unauthorized use of the leased premises or any use thereof not in conformance with this lease.

7. MANAGING AGENCIES RESPONSIBILITIES: The MANAGING AGENCIES shall coordinate and oversee all activities on the leased premises; initiate appropriate management programs to meet the intent of the goals and objectives stated herein; address the management of the leased premises in the Management Plans for Lake Talquin State Forest and Joe Budd Wildlife Management Area; coordinate and monitor all management activities undertaken by others; and, compile and submit such reports as may be required of the MANAGING AGENCIES. The MANAGING AGENCIES shall provide

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permanent staff, as funding is acquired, for management on a day-to-day basis.

8. MANAGEMENT PLANS: The MANAGING AGENCIES shall prepare and submit Management Plans for their respective portions of the leased premises, in accordance with Section 253.034, Florida Statutes, and subsection 18-2.021(4), Florida Administrative Code, by amending the Management Plans for Lake Talquin State Forest and Joe Budd Wildlife Management Area within twelve months of the effective date of this lease. The amended Management Plans shall be submitted to LESSOR for approval through the Division of State Lands, Department of Environmental Protection. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plans are approved. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary purpose for which the leased premises were acquired. The approved Management Plans shall provide the basic guidance for all management activities and shall be reviewed jointly by the MANAGING AGENCIES, Land Acquisition and Management Advisory Council, and LESSOR at least every five years. The MANAGING AGENCIES shall not use or alter the leased premises except as provided for in the approved Management Plans without the prior written approval of LESSOR. The Management Plans prepared under this lease shall identify management strategies for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

9. RIGHT OF INSPECTION: LESSOR or its duly authorized agents shall have the right at any and all times to inspect the leased premises and the works and operations thereon of the MANAGING AGENCIES, in any matter pertaining to this lease.

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10. INSURANCE REQUIREMENTS: The MANAGING AGENCIES shall procure and maintain fire and extended risk insurance coverage in accordance with Chapter 284, F.S., for any buildings and improvements located on the leased premises by preparing and delivering to the Division of Risk Management, Department of Insurance, a completed Florida Fire Insurance Trust Fund Coverage Request Form and a copy of this lease immediately upon erection of any structures as allowed by paragraph 4 of this lease. A copy of said form and immediate notification in writing of any erection or removal of structures or other improvements on the leased premises and any changes affecting the value of the improvements shall be submitted to the following: Bureau of Public Land Administration, Division of State Lands, Department of Environmental Protection, Mail Station 130, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000.

11. LIABILITY: The MANAGING AGENCIES shall assist in the investigation of injury or damage claims either for or against LESSOR or the State of Florida pertaining to FORESTRY'S or the COMMISSION'S areas of responsibility under this lease agreement or arising out of FORESTRY'S or the COMMISSION'S management programs or activities and shall contact LESSOR regarding the legal action deemed appropriate to remedy such damage or claims. The MANAGING AGENCIES are responsible for all personal injury and property damage attributable to the negligent acts or omissions of the respective MANAGING AGENCIES and their officers, employees, and agents.

12. ARCHAEOLOGICAL AND HISTORIC SITES: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Section

2534034, Florida Statutes, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

13. EASEMENTS: All easements including, but not limited to, utility easements are expressly prohibited without the prior written approval of LESSOR. Any easement not approved in writing by LESSOR shall be void and without legal effect.

14. SUBLEASES: This lease is for the purposes specified herein and subleases of any nature are prohibited, without the prior written approval of LESSOR. Any sublease not approved in writing by LESSOR shall be void and without legal effect.

15. SURRENDER OF PREMISES: Upon termination or expiration of this lease, the MANAGING AGENCIES shall surrender the leased premises to LESSOR. The MANAGING AGENCIES hereby agree that in the event no further use of the leased premises or any part thereof is needed, written notification shall be made to the Bureau of Public Land Administration, Division of State Lands, Department of Environmental Protection, Mail Station 130, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of all or any part of the leased premises. Notification shall include a legal description, this lease number and an explanation of the release. The release shall only be valid if approved by LESSOR through execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon termination or expiration of this lease, all improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to the MANAGING AGENCIES to remove any or all such improvements at the expense of the MANAGING AGENCIES. The decision to retain any improvements upon

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termination of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises, a representative of the Division of State Lands shall perform an on-site inspection and the keys to any buildings on the leased premises shall be turned over to the Division. If the leased premises do not meet all conditions as set forth in paragraphs 18 and 21 herein, the MANAGING AGENCIES shall pay all costs necessary to meet the prescribed conditions.

16. BEST MANAGEMENT PRACTICES: MANAGING AGENCIES shall implement applicable Best Management Practices for all activities conducted under this lease in compliance with Paragraph 18-2.018(2)(h), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, MANAGING AGENCIES or other land managing agencies for the protection and enhancement of the leased premises.

17. PUBLIC LANDS ARTHROPOD CONTROL PLAN: The MANAGING AGENCIES shall identify and subsequently designate to the respective arthropod control district or districts within one year of the effective date of this lease all of the environmentally sensitive and biologically highly productive lands contained within the leased premises, in accordance with Section 388.4111, Florida Statutes, and Chapter 10D-54, Florida Administrative Code, for the purpose of obtaining a public lands arthropod control plan for such lands.

18. UTILITY FEES: The MANAGING AGENCIES shall be responsible for the payment of all charges for the furnishing of gas, electricity, water and other public utilities to the leased premises and for having all utilities turned off when the leased premises are surrendered.

19. ASSIGNMENT: This lease shall not be assigned in whole or in part, without the prior written consent of LESSOR. Any assignment made either in whole or in part without the prior written consent of LESSOR shall be void and without legal effect.

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20. PLACEMENT AND REMOVAL OF IMPROVEMENTS: All buildings, structures, improvements, and signs shall be constructed at the expense of the MANAGING AGENCIES. Removable equipment and removable improvements placed on the leased premises by the MANAGING AGENCIES which do not become a permanent part of the leased premises will remain the property of the MANAGING AGENCIES and may be removed by the MANAGING AGENCIES upon termination of this management agreement.

21. MAINTENANCE: The MANAGING AGENCIES shall maintain the real property contained within the leased premises and any improvements located thereon, in a state of good condition, working order and repair including, but not limited to, keeping the leased premises free of trash or litter, meeting all building and safety codes in the location situated, maintaining all planned improvements as set forth in the approved Management Plans and maintaining any and all existing roads, canals, ditches, culverts, risers, and the like in as good condition as the same may be on the effective date of this lease; provided, however, that any removal, closure, etc., of the above improvements shall be acceptable when the proposed activity is consistent with the goals of conservation, protection and enhancement of the natural or historical resources within the leased premises and with the approved Management Plans.

22. ENTIRE UNDERSTANDING: This lease sets forth the entire understanding between the parties and shall only be amended with the prior written approval of LESSOR.

23. BREACH OF COVENANTS, TERMS, OR CONDITIONS: Should the MANAGING AGENCIES breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to the MANAGING AGENCIES to remedy such breach within sixty days of such notice. In the event the MANAGING AGENCIES fail to remedy the breach to the satisfaction of LESSOR within sixty days of receipt of written notice, LESSOR may either terminate this lease and

recover from the MANAGING AGENCIES all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises or maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

24. NO WAIVER OF BREACH: The failure of LESSOR to insist in any one or more instances upon strict performance of any one or more of the covenants, terms and conditions of this lease shall not be construed as a waiver of such covenants, terms and conditions, but the same shall continue in full force and effect, and no waiver of LESSOR of any one of the provisions hereof shall in any event be deemed to have been made unless the waiver is set forth in writing, signed by LESSOR.

25. PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES: Fee title to the leased premises is held by LESSOR. The MANAGING AGENCIES shall not do or permit anything to be done which purports to create a lien or encumbrance of any nature against the real property contained in the leased premises including, but not limited to, mortgages or construction liens against the leased premises or against any interest of the LESSOR therein.

26. CONDITIONS AND COVENANTS: All of the provisions of this lease shall be deemed covenants running with the land included in the leased premises, and construed to be "conditions" as well as "covenants" as though the words specifically expressing or imparting covenants and conditions were used in each separate provision.

27. DAMAGE TO THE PREMISES: (a) MANAGING AGENCIES shall not do, or suffer to be done, in, on, or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) MANAGING AGENCIES shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants or

pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic, or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. In the event of the MANAGING AGENCIES' failure to comply with this paragraph, the MANAGING AGENCIES shall, at their sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by MANAGING AGENCIES' failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. MANAGING AGENCIES' obligations set forth in this paragraph shall survive the termination or expiration of this lease. Nothing herein shall relieve MANAGING AGENCIES of any responsibility or liability prescribed by law for fines,

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penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by MANAGING AGENCIES' activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release, or discharge of any contaminant, MANAGING AGENCIES shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting period of the applicable governmental agencies.

28. PAYMENT OF TAXES AND ASSESSMENTS: The MANAGING AGENCIES shall assume full responsibility for and shall pay all liabilities that accrue to the leased premises or to the improvements thereon, including any and all drainage and special assessments or taxes of every kind and all mechanic's or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises.

29. RIGHT OF AUDIT: The MANAGING AGENCIES shall make available to LESSOR all financial and other records relating to this lease and LESSOR shall have the right to audit such records at any reasonable time. This right shall be continuous until this lease expires or is terminated. This lease may be terminated by LESSOR should the MANAGING AGENCIES fail to allow public access to all documents, papers, letters or other materials made or received in conjunction with this lease, pursuant to Chapter 119, Florida Statutes.

30. NON-DISCRIMINATION: The MANAGING AGENCIES shall not discriminate against any individual because of that individual's race, color, religion, sex, national origin, age, handicap, or marital status with respect to any activity occurring within the leased premises or upon lands adjacent to and used as an adjunct of the leased premises.

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31. COMPLIANCE WITH LAWS: The MANAGING AGENCIES agree that this lease is contingent upon and subject to the MANAGING AGENCIES obtaining all applicable permits and complying with all applicable permits, regulations, ordinances, rules, and laws of the State of Florida or the United States or of any political subdivision or agency of either.

32. TIME: Time is expressly declared to be of the essence of this lease.

33. GOVERNING LAW: This lease shall be governed by and interpreted according to the laws of the State of Florida.

34. SECTION CAPTIONS: Articles, subsections and other captions contained in this lease are for reference purposes only and are in no way intended to describe, interpret, define, or limit the scope, extent or intent of this lease or any provisions thereof.

35. ADMINISTRATIVE FEE: Each of the MANAGING AGENCIES shall pay LESSOR 50 per cent of an annual administrative fee of \$300. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

IN WITNESS WHEREOF, the parties have caused this lease to be executed on the day and year first above written.

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA

Judy Woodard
Witness
Judy Woodard
Print/Type Witness Name
Florence Davis
Witness
Florence Davis
Print/Type Witness Name

By: Gloria C. Nelson (SEAL)
GLORIA C. NELSON, OPERATIONS AND MANAGEMENT CONSULTANT MANAGER, BUREAU OF PUBLIC LAND ADMINISTRATION, DEPARTMENT OF ENVIRONMENTAL PROTECTION

"LESSOR"

STATE OF FLORIDA
COUNTY OF LEON

1st The foregoing instrument was acknowledged before me this day of September 2000, by Gloria C. Nelson, as Operations and Management Consultant Manager, Bureau of Public Land Administration, Division of State Lands, Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida.



Sylvia S. Roberts
MY COMMISSION # 00354037 EXPIRES
July 25, 2001
BONDED THRU TRUITY Fidelity Insurance, Inc.

Sylvia S. Roberts
Notary Public, State of Florida

Print/Type Notary Name

Commission Number:

Commission Expires:

Approved as to Form and Legality

By: Jay H. [Signature]
DEP Attorney

STATE OF FLORIDA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES,
DIVISION OF FORESTRY

By: Mike Gresham (SEAL)

Mike Gresham
Print/Type Name

Its: Director of Administration

"FORESTRY"

Lee Sadler
Witness

Lee Sadler
Print/Type Witness Name

Steve P. Burch
Witness

Steve P. Burch
Print/Type Witness Name

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this
21st day of July, 2000, by Mike Gresham, as
Director of Administration, Division of Forestry, State
of Florida Department of Agriculture and Consumer Services, who
is personally known to me or who has produced
_____ as identification.

Janice D. Harrell
Notary Public, State of Florida

Janice D. Harrell
Print/Type Notary Name

Commission Number:

Commission Expires:



Janice D. Harrell
MY COMMISSION # CCF1561 EXPIRES
September 26, 2000
FONDED THRU THEY FARM INSURANCE, INC.

STATE OF FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION

Brenda Colcini
Witness
Brenda Collins
Print/Type Witness Name
Cynthia Ward
Witness
Cynthia Ward
Print/Type Witness Name

By: Victor J. Heller (SEAL)
Victor J. Heller
Type/Print Name
Its: Assistant Executive Director
"COMMISSION"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this
23rd day of August, 2000, by Victor J. Heller, as
Assistant Executive Dir., State of Florida Fish and Wildlife
Conservation Commission, who is personally known to me or who has
produced _____ as identification.

Jimmie C. Bevis
Notary Public, State of Florida

JIMMIE C. BEVIS
Print/Type Notary Name

Commission Number _____
Commission Expires _____
Jimmie C. Bevis
MY COMMISSION # CC102562 EXPIRES
December 28, 2001
801001100 REG/TAX/REG/KWL, INC.

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY
[Signature]
Commission Attorney

EXHIBIT "A"

This Instrument Prepared By:
Harvey A. Abrams, Esq.
The Trust for Public Land
306 North Monroe Street
Tallahassee, Florida 32301

Return to:
Stewart Title of Tallahassee, Inc.
3301 Thomasville Road, Suite 202
Tallahassee, Florida 32312

Property Appraiser's Parcel Identification Number:
50-L0-ROS-000-0015-0001-00



WARRANTY DEED

(STATUTORY FORM - SECTION 689.02, F.S.)

THIS INDENTURE, made this 29th day of September, A.D. 1998, between THE TRUST FOR PUBLIC LAND, a charitable nonprofit California corporation, whose address is 306 North Monroe Street, Tallahassee, Florida 32301, of the County of Leon, in the State of Florida, ("Grantor"), and BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, whose address is 3900 Commonwealth Blvd., Mail Station 115, Tallahassee, Florida 32399-3000 ("Grantee"),

(Wherever used herein the terms "Grantor" and "Grantee" include all the parties to this instrument and their heirs, legal representatives, successors and assigns. "Grantor" and "Grantee" are used for singular and plural, as the context requires and the use of any gender shall include all genders.)

WITNESSETH: That the said Grantor, for and in consideration of the sum of Ten Dollars and other good and valuable considerations, to said Grantor in hand paid by said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said Grantee, and Grantee's successors and assigns forever, the following described land situate, lying and being in Gadsden County, Florida, to-wit:

See Exhibit "A" attached hereto and by this reference made a part hereof.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

SUBJECT TO applicable restrictions, reservations, easements, roadways and covenants of record, if any now exist, but any such interests that may have been terminated are not hereby reimposed.

THIS INSTRUMENT IS EXEMPT FROM DOCUMENTARY STAMP TAXES PURSUANT TO CHAPTER 316.05(2) FLORIDA STATUTES

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AND the said Grantor does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF the Grantor has hereunto set Grantor's hand and seal, the day and year first above written.

Signed, sealed and delivered
in the presence of:

W. Dale Allen
Signature
W. Dale Allen
Printed Signature
Cheryl Vickens
Signature
Cheryl Vickens
Printed Signature

THE TRUST FOR PUBLIC LAND, a charitable
nonprofit California corporation

By: *W. Dale Allen*
Name: W. Dale Allen
Title: Vice President
306 North Monroe Street
Tallahassee, FL 32301

(CORPORATE SEAL)

STATE OF FLORIDA)
COUNTY OF LEON)

The foregoing instrument was acknowledged before me this 29th day of September, 1998, by W. Dale Allen, Vice President of The Trust for Public Land, a charitable nonprofit California corporation, on behalf of the corporation. Such person (Notary Public must check applicable box):

- is personally known to me.
- produced a current driver license.
- produced _____ as identification.

(NOTARY PUBLIC SEAL)

Cheryl A. Vickens
Notary Public



(Printed, Typed or Stamped Name of
Notary Public)
Commission No.: _____
My Commission Expires: _____

FAUSERS/CHERYL/PROFECTS/FLAPOWER/STATE/DEED_FT(4-19-98)

Approved for Closing
By: *John J. Fisher*
DEP Attorney
Date: 9-30-98

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Exhibit "A"

All that property in Gadsden County, Florida described as follows:

Lots numbered eight (8), Nine (9), Twelve (12), and Eighty one (81), and as much of Lots numbered Eighty (80), Eleven (11), Ten (10), and Nineteen (19), as lies East of Rocky Comfort Creek in McNeill's Little River Survey of the Forbes Purchase.

Less and Except that part of the foregoing described property lying below the Seventy (70) foot contour of Lake Talquin as recorded in Official Records Book 128, page 524 of the Public Records of Gadsden County, Florida.

ALSO:

Beginning at the Southeast corner of Lot No. Thirteen (13), McNeill's Little River Survey of Forbes Purchase in Township One (1) North, Range Three (3) West; thence run North 6 degrees 30 minutes East along the East line of Lot No. Thirteen (13) aforesaid 2299 feet to a stake, a corner of land of Tom Wynn; thence along land of Tom Wynn North 81 degrees 06 minutes West 710 feet to a stake; thence along other land of the grantors herein, of which this is a part, South 6 degrees 30 minutes West 2335 feet to a stake in the South line of Lot No. Thirteen (13) aforesaid; thence along the South line of Lot No. Thirteen (13) aforesaid South 83 degrees 30 minutes East 710 feet to first mentioned point and place of beginning.

ALSO:

South Half (S 1/2) of Lot No. Six (6), McNeill's Little River Survey of the Forbes Purchase.

ALSO:

Lot No. Seven (7), McNeill's Little River Survey of the Forbes Purchase less and except that part or portion of Lot 7 which lies below Contour 70 line of the Jackson Bluff Hydro Plant pond area of Florida Power Corporation.

Joe Budd WMA, FPC
F:\B3M\LEGAL\S\GADSDEN\JOEBUDD\JOEBUDD.DOC



ATL1

Tract #
[9.78 acres] 001496

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT
TRUST FUND OF THE STATE OF FLORIDA

AMENDMENT NUMBER ONE TO LEASE NUMBER 3949

THIS LEASE AMENDMENT is entered into this 6th day of FEBRUARY, 2015, by and between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, hereinafter referred to as "LESSOR" and the STATE OF FLORIDA, FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION, hereinafter referred to as "LEAD AGENCY" and the STATE OF FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, hereinafter referred to as "COOPERATING AGENCY";

W I T N E S S E T H

WHEREAS, LESSOR, by virtue of Section 253.03, Florida Statutes, holds title to certain lands and property for the use and benefit of the State of Florida; and

WHEREAS, on May 11, 1993, LESSOR, LEAD AGENCY AND COOPERATING AGENCY entered into Lease Number 3949 (the "lease"); and

WHEREAS, LESSOR, LEAD AGENCY and COOPERATING AGENCY desire to amend the lease to add land to the leased premises.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein, the parties hereto agree as follows:

1. The legal description of the leased premises set forth in Exhibit "A" of Lease Number 3949 is hereby amended to include the real property described in Exhibit "A" attached hereto and by reference made a part hereof.
2. It is understood and agreed by LESSOR, LEAD AGENCY AND COOPERATING AGENCY that in each and every respect the terms of Lease Number 3949, except as amended, shall remain unchanged and in full force and effect and the same are hereby ratified, approved and confirmed by LESSOR, LEAD AGENCY AND COOPERATING AGENCY as of the date of this amendment.
3. It is understood and agreed by LESSOR, LEAD AGENCY AND COOPERATING AGENCY that this Amendment Number One to Lease Number 3949 is hereby binding upon the parties hereto and their successors and assigns.

IN WITNESS WHEREOF, the parties have caused this lease amendment to be executed on the day and year first above written.

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA

By: Cheryl Cmc Call (SEAL)
CHERYL C. McCALL, CHIEF,
BUREAU OF PUBLIC LAND
ADMINISTRATION, DIVISION OF
STATE LANDS, STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

Dave Fewell
Witness

DAVE FEWELL
Print/Type Witness Name

Kathy C Griffin
Witness

KATHY C. GRIFFIN
Print/Type Witness Name

"LESSOR"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 6th day of FEBRUARY, 2015, by Cheryl C. McCall, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. She is personally known to me.

David Lee Fewell
Notary Public, State of Florida

Print/Type Notary Name

Commission Number:

Commission Expires:



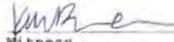
Approved as to Form and Legality

By: [Signature]
DEP Attorney

FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION


Witness

Richard C. Mosby
Print/Type Witness Name


Witness

Kimberlee M. Branuforte
Print/Type Witness Name

STATE OF FLORIDA
COUNTY OF LEON

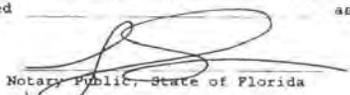
By: Thomas H. Sam (SEAL)
Nick Wiley, Executive Director

Title: Director, HSC

"LEAD AGENCY"
APPROVED AS TO FORM
AND LEGAL SUFFICIENCY

Commission Attorney

The foregoing instrument was acknowledged before me this 14 day of January, 2015, by Nick Wiley, as Executive Director, on behalf of the Florida Fish and Wildlife Conservation Commission. He is personally known to me or has produced _____ as identification.


Notary Public, State of Florida
Jamie C. Sorin
Print/Type Notary Name

Commission Number:
Commission Expires:



STATE OF FLORIDA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES

[Signature]
Witness

Cory Perie
Print/Type Witness Name
Conalita Bennett
Witness
Conalita Bennett
Print/Type Witness Name

By: *[Signature]* (SEAL)
Alan Edwards, Director
Division of Administration

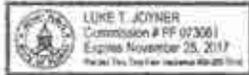
Title: *Director Administration*

"COOPERATING AGENCY"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this *27th* day of *January*, 2015, by Alan Edwards, an Director of the Division of Administration, on behalf of State of Florida Department of Agriculture and Consumer Services. He is personally known to me or has produced as identification.

[Signature]
Notary Public, State of Florida
Luke T. Coyner
Print/Type Notary Name



Commission Number: *FF073061*
Commission Expires: *11/25/17*

EXHIBIT "A"
LEGAL DESCRIPTION

OFFICIAL RECORDS: 3 of 3
Book: 779 Page: 187

EXHIBIT "A"

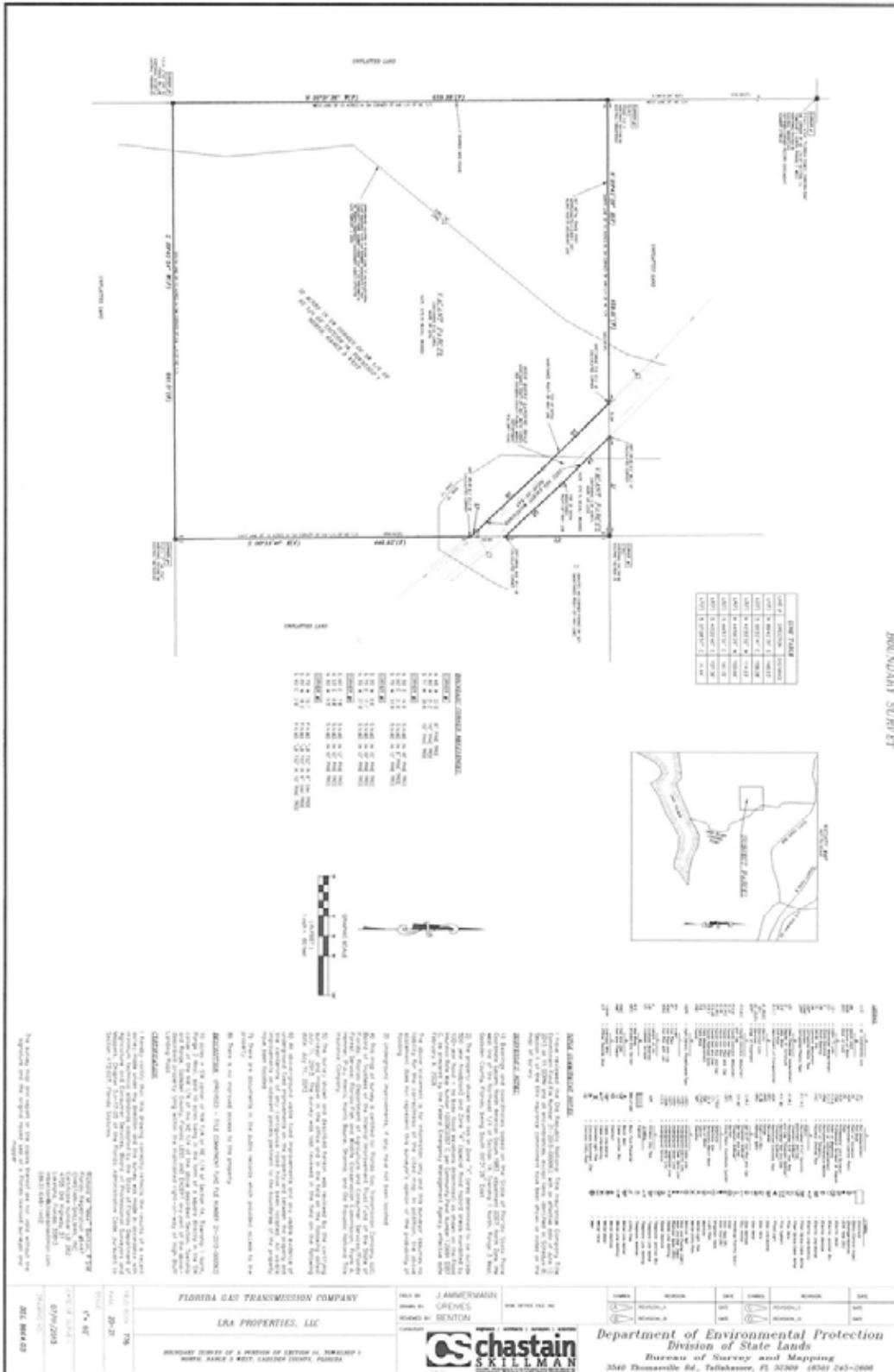
10 acres in Southwest corner of the Northwest ¼ of the Northeast ¼ of Section 14, Township 1 North, Range 3 West, said 10 acres being in the form of a square directly in the Southwest corner of the Northwest ¼ of the Northeast ¼ of the above described Section, Township and Range, Gadsden County, Florida. LESS AND EXCEPT any part of the above described property lying within the maintained right of way of High Bluff Landing Road.

Lake Talquin State Forest/Joe Budd WMA
F1 Gas LRA
Gadsden County

BSM
BY SK
Date: 7.10.2013

Page 1 of 1

Page 5 of 5
Amendment Number One to Lease No. 3949
Revised 05/13



13.2 Management Plan Terminology

Management Plan Goals and Objectives

Terms and Definitions

Assessment: Assessment—when a historic resource professional determines the possible effects—positive or negative—that an action or inaction may have on a historical resource (e.g., site, building, object or structures) by analyzing its current condition and documenting any modifications and changes to its original state as well as identifying any potential human or natural threats to its existence.

Capital Improvement: Capital improvement" or "capital project expenditure" means those activities relating to the acquisition, restoration, public access, and recreational uses of such lands, water areas, and related resources deemed necessary to accomplish the purposes of this chapter. Eligible activities include, but are not limited to: the initial removal of invasive plants; the construction, improvement, enlargement or extension of facilities' signs, firelanes, access roads, and trails; or any other activities that serve to restore, conserve, protect, or provide public access, recreational opportunities, or necessary services for land or water areas. Such activities shall be identified prior to the acquisition of a parcel or the approval of a project. The continued expenditures necessary for a capital improvement approved under this subsection shall not be eligible for funding provided in this chapter.

Desired future condition: Desired Future Condition is a description of the land or resource conditions that are believed necessary if management goals and objectives are fully achieved. Desired Future Condition varies by specific habitat and ecosystem. It can also vary, based upon a specific agency's management goals.

Evaluation: Review by a professional in archaeology, history or architecture as to the integrity and significance of the site, building or structure. The criteria of the National Register of Historic Places will be applied.

Facility: all developed structures and improvements provided for a specific purpose or contained within a clearly defined area.

Fire management plan: An element of the land management plan or an independent document that outlines the goals and objectives of a fire management program (prescribed and wildfire) for a predetermined period of time.

Historic: An object, site or structure that is 50 years or older.

Hydrological assessment: A documented, systematic evaluation by a qualified professional of the existing and historical quantity, quality, movement and function of water resources (e.g., computer modeling).

Imperiled species: A species or subspecies that is listed by the U.S. Fish and Wildlife Service as Endangered or Threatened; Florida Fish and Wildlife Conservation Commission (FWC) as Endangered, Threatened, or Special Concern; Florida Department of Agriculture and Consumer Services (FDACS) as Endangered or Threatened; or is tracked by Florida Natural Areas Inventory (FNAI) as globally or state Critically Imperiled or Imperiled. Imperiled Species does NOT refer to species that are on the FDACS list of commercially exploited plants that are not Endangered or Threatened.

Improve: the enhancement or expansion of facilities, roads and trails.

Maintenance: the daily or regular work of keeping facilities, roads and trails in proper condition.

Monitoring: Periodic examination of the site, building or structure to determine the current condition and threats such as erosion, structural deterioration, vegetation intrusion, poaching or vandalism. An updated Florida Master Site File form is used to complete this assessment.

Natural community/habitat/ecological improvement: Similar to restoration but on a smaller less intense scale. Typically includes small scale vegetation management activities, spot treatments of exotic plants, or minor habitat manipulations. Any habitat alteration that increases the diversity of a habitat or increases the population of a particular species.

Natural community/habitat/ecological restoration: The process of assisting the recovery and natural functioning of degraded natural communities to desired future condition, including the re-establishment of biodiversity, ecological processes, vegetation structure, and physical characters. Activities may include vegetative treatments (e.g., hardwood removal, mechanical treatment, pine tree thinning, etc.), groundcover establishment, non-commercial tree plantings, erosion control, hydrological manipulation(filling ditches), and beach management.

Not in maintenance condition: Species composition and/or structure is outside the targeted range. The natural community is in need of more frequent or recurring management treatments that are beyond maintenance activities. Examples include natural communities with exotic plant or animal infestations that are at levels requiring significant treatment, natural communities that have exceeded maximum targeted fire return intervals, and natural communities in need of restoration treatments.

Poor, fair, good condition: Evaluating the condition of cultural resources is accomplished using a three part evaluative scale, expressed as good, fair and poor. These terms describe the present condition, rather than comparing what exists against the ideal. “Good” describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. “Fair” describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A “fair” assessment is cause for concern. “Poor” describes an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action is needed to reestablish physical stability.

Population survey: Using broadly accepted methodologies to detect changes in population trends over time.

Public access: access by the general public to state lands and water, including vessel access made possible by boat ramps, docks, and associated support facilities, where compatible with conservation and recreation objectives.

Recorded: A Florida Master Site File form has been completed and filed with the Florida Department of State, Division of Historical Resources.

Recreational/visitor opportunity: measure of potential number of users based on existing resource conditions and developed facilities.

Repair (major): the restoration of facilities, road and trails to proper condition after damage or failure.

Restoration underway: restoration planning/design, executing, evaluating and reporting.

Restored/Maintenance condition: (refers to natural community) - within the range of target species composition and structure such that no significant, non-recurring alterations to structure or species composition are needed for ecological restoration. Invasive exotic plants or animals are absent or at levels requiring minimal recurring treatments, and prescribed fire rotations are within target intervals. Refers to Natural Communities. Includes NCs that meet DFC, and NCs that have received restoration action (such as thinning, clearcut and native species planting) and only require time and recurring maintenance actions such as prescribed fire, maintenance level exotics control, or sustainable forestry practices if applicable.

Road: a paved or unpaved motor vehicle route unless identified and managed as a trail.

Significant: Listed in or determined eligible for listing in the National Register of Historic Places as an individual property, element of a multiple listing or in an historic district. Cultural resource professionals are able to make the determination, but final determination rests with the Director of the Division of Historical Resources.

Sustainable forestry: The stewardship and harvest of forest products in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality, and potential to fulfill, now and in the future, relevant ecological, economic, and social functions at local, national and global levels, and that does not cause damage to other ecosystems.

Systematic survey: A sampling protocol designed to assess the occurrence or population status of a species or a suite of species (e.g., presence/absence, mark and recapture, transect survey, etc.).

Trail: a linear route or path which has been specifically prepared or designed for one or more recreational functions such as hiking, biking, horseback riding or multiple use. In many cases, unimproved service roads are also designated as trails.

Treatment: A mechanical, chemical, biological or manual action that changes the structure or composition of an area in order to facilitate restoration or improvement.

Visitor carrying capacity: An estimate of the number of users a recreation resource or facility can accommodate and still provide a high quality recreational experience and preserve the natural values of the site.

Wildlife activities: wildlife-associated recreation such as birdwatching, fishing, hunting, etc.

13.3 Public Involvement

**Joe Budd Wildlife Management Area (JBWMA)
Management Advisory Group (MAG)
Consensus Meeting Results**

February 20, 2013 in Quincy, Florida

The intent of convening a consensus meeting is to involve a diverse group of stakeholders in assisting the **Florida Fish and Wildlife Conservation Commission** (FWC) in development of a rational management concept for lands within the agency's managed area system. FWC does this by asking spokespersons for these stakeholders to participate in a half-day meeting to provide ideas about how FWC-managed lands should be protected and managed.

The JBWMA consensus meeting was held on the morning of February 20, 2013 at the Northwest Florida Water Management District Board Room in Quincy, Florida. The ideas found below were provided by stakeholders for consideration in the 2013 - 2023 Management Plan (MP) for JBWMA with priority determined by vote. These ideas represent a valuable source of information to be used by biologists, planners, administrators, and others during the development of the MP. Upon approval by FWC, the Acquisition and Restoration Council (ARC), and the Trustees of the Internal Improvement Trust Fund (Governor and Cabinet), the JBWMA MP will guide the activities of FWC personnel over the ten-year duration of the management plan and will help meet agency, state, and federal planning requirements.

Numbers to the left of **bold-faced ideas** listed below represent the total number of votes and the score of each idea. Rank is first determined by the number of votes (vote cards received for each idea) and then by score. Score is used to break ties when two or more ideas have the same number of votes. A lower score indicates higher importance because each voter's most important idea (recorded on card #1) received a score of 1, and their fifth most important idea (recorded on card #5) received a score of 5. Ideas not receiving any votes are listed, and were considered during the development of the MP, but carry no judgment with regard to the consensus priority.

Results

Statements following the bold-faced ideas found below represent a synopsis of the clarification discussion for each idea as transcribed and interpreted by the FWC recorder at the meeting. As indicated above, the ideas below are presented in priority order:

<u>Rank</u>	<u># of Votes</u>	<u>Score</u>	<u>Idea</u>
1.	[6]	[7]	2. Maintain and restore native ecosystem through prescribed fire; a large percentage of fire should be prescribed during the lightning season. Examine historic fire regimes and patterns and continue to implement prescribed fire, with an emphasis on lightning season burns, to restore a more natural fire return regime.
2.	[6]	[17]	21. Enhance overall public access and trails to educate public about conservation lands. Utilize multi-use trails for signage and interpretation. Promote JBWMA as an ecotourism destination. Identify areas where increased informational and interpretive signage may be suitable. Increase the amount of multi-use trails and interpretative themes. Increase overall public access.
3.	[5]	[14]	18. Increase law enforcement presence to provide for a safe experience for all users. Increase law enforcement presence; dependant upon legislative funding. Improve and clarify signage to better delineate restricted or prohibited public access areas.
4.	[5]	[16]	7. Provide conservation education programs; establish volunteer group (Customer Support Organization) to assist with JBWMA clean up projects, etc; promote conservation and land stewardship; provide for overnight field trips for Joe Budd Youth Conservation Center (JBYCC); provide a primitive camping area; promote horse back riding as part of JBYCC. In 1994 the Joe Budd Aquatic Center facility (now the JBYCC) was funded for aquatic education. New facilities will be needed as the role of the JBYCC expands beyond the original aquatic education focus, and additional programs are added.

<u>Rank</u>	<u># of Votes</u>	<u>Score</u>	<u>Idea</u>
5.	[5]	[20]	13. Expand youth and senior recreation opportunities. Expand recreation opportunities for youths and seniors, including additional hunting opportunities.
6.	[4]	[6]	3. Maintain natural resource diversity; restore altered habitats; manage for the sustainability of fish and wildlife populations and habitats. Continue to maintain the natural areas of JBWMA that are in good condition, and manage for habitat and species diversity. Continue prescribed burning and control of invasive exotics.
7.	[4]	[9]	6. Model other Wildlife Management Areas after JBWMA; maintain current level of hunting; provide high-quality recreational opportunities within resource limits. JBWMA is a well-managed area; model the management of other WMAs after JBWMA. Manage public access on other WMAs similar to JBWMA in order to increase visitor quality experiences.

Two ideas of equal rank

8.	[4]	[12]	15. Control invasive exotic plant and animal species; use hunting and other methods to control wild hog population; utilize trapping of wild hogs if necessary. Self-explanatory
	[4]	[12]	29. Request legislation to limit target shooting. Under current law, target shooting is allowed anytime during the year, including hunting seasons. Explore possibility of restricting target shooting to designated sites.

10. [4] [20] 35. **Work with partners and stakeholders to achieve management goals.** To continue to manage JBWMA effectively, work closely with other agencies, partners and stakeholders.
11. [3] [10] 30. **Increase Wildlife Management Area stamp to \$30.00.** Self-explanatory
12. [3] [13] 20. **Create opportunity for recreational shooting sports.** Develop a public sporting clays shooting facility on the abandoned sand mine site located in Zone F (or other suitable site), with an estimated footprint of 20-30 acres. Development of this facility would be contingent on an assessment of other similar local public shooting opportunities.
13. [2] [6] 19. **Violation of law on JBWMA should result in a revocation of the violator's Wildlife Management Area Permit.** Persons convicted of violations of WMA rules and regulations should be denied access to the area. To implement this idea, new legislation would likely have to be enacted.

Two ideas of equal rank

14. [2] [7] 8. **Manage native and exotic vegetation to increase aesthetics of the area, and enhance recreational experience for all recreation, including hunting.** To increase and maintain the aesthetic values of JBWMA, continue prescribed fire and invasive exotic control. Recreational users want to experience a more natural setting. Areas should be cleaned up of slash rows or piles after timber harvests, thinnings; site preparation, restoration, and other management actions should also be conducted in such a way as to preserve the aesthetics of JBWMA.

- [2] [7] 9. **Expand multiple-use trails to be compatible with hunting.** Carefully design and develop additional multi-use trails so as not to restrict access for hunters to hunting areas, or otherwise diminish the hunting experience of JBWMA. Increased multiple-use trails would increase recreational opportunities, and may reduce trail user conflicts (e.g. hiking vs. bicycling vs. horseback riding).
16. [2] [8] 28. **Continue to monitor imperiled species.** Continue to monitor imperiled plant and animal species.
17. [1] [1] 1. **Establish a weekday dove hunt.** Allow hunting one day during the week during the first and second phases of dove season.
- Two ideas of equal rank**
18. [1] [3] 11. **Address rare species needs where natural systems management is insufficient.**
Self-explanatory
- [1] [3] 37. **Utilize the Florida Forest Service to assist with timber management.**
Self-explanatory
20. [1] [4] 27. **Re-invest revenue generated on JBWMA specifically to JBWMA, including habitat management and restoration.** Revenue generated from timber sales and activities need to be directed back to JBWMA instead of to a general funds category. Consider the possibility of service exchanges from timber harvest contractors (e.g, include site preparations and plantings in exchange for additional compensation to the timber harvest contractor).

21. [1] [4] 39. **Optimize management of Joe Budd Pond Fish Management Area; expand fishing opportunities at Joe Budd Pond Fish Management Area.** As part of the JBYCC, expand and optimize the fishing opportunities found at the Joe Budd Pond Fish Management Area.

The following items received no votes. While these ideas represent valuable input, and are considered in development of the JBWMA MP, they carried no rank with regard to the priority perceptions of the MAG.

4. **Protect on-site and off-site water resources**
Self-explanatory
10. **Expand public access for the tract north of County Road 268; establish a designated public entrance and parking area.** Self-explanatory
16. **Assure accessibility for disabled people.**
Self-explanatory
25. **Protect cultural resources.**
Self-explanatory
32. **Alternate hunting weekends with other recreational uses to enhance safety.**
Adjust the hunting seasons to alternating weekends to provide for additional non-hunting public outdoor recreation opportunities. Current hunting seasons are optimal for hunters, but exclude other uses during hunts.
36. **Do something for the quail.**
Increase species-specific management of quail on JBWMA.

42. **Pursue conservation additions and inholdings.** Develop an optimal conservation planning boundary that will identify possible additions and inholdings, as well as cooperative stewardship partnerships with adjacent landowners.

43. **Prioritize management goals; identify and minimize conflicts.** In the overall management of JBWMA, consider needs, uses and demands. Not all management applications are in natural areas, and some areas cannot be restored without decreasing public recreation opportunities and aesthetics. Management and restoration activities must be evaluated and balanced with to determine their priority, while still providing adequate recreation opportunities.

JBWMA MAG Meeting Participants

Name

Affiliation

Active Participants

Donald Francis	FWC JBWMA Biologist
Lieutenant Harry Parker	FWC Law Enforcement
Tyler MacMillan	Northwest Florida Water Management District
Preston Robertson	Florida Wildlife Federation
Jill Jeglie	Gadsden County Planning & Community Development
Chris Colburn	Florida Forest Service
Mark Ludlow	Department of Environmental Protection
Karyn Ruiz-Toro	USDA – NRCS, District Conservationist Gadsden County
Dan Hipes	Florida Natural Areas Inventory
Bill Runkle	The National Wild Turkey Federation
Robert McDonald	WMA Dove Hunter
Sue Noyes	Southern Trail Riders
Rae Waddell	Joe Budd Youth Conservation Center

Supportive Participants

Phil Manor	FWC HSC District Biologist
George Warthen	FWC - Hunter Safety Regional Coordinator
Diana Pepe	FWC HSC Conservation Biologist
Allie Perryman	FWC
Eric Seckinger	FWC

Rich Noyes	FWC Office of Public Access and Wildlife Viewing Services
James Alleman	FWC JBWMA
David McDuffie	FWC JBWMA
Allison Jones	FWC Office of Public Access and Wildlife Viewing Services
Tom M Mathews	FWC Office of Public Access and Wildlife Viewing Services
Lacy McMinn	FWC
Bethany Wagner	FWC
Mike Waylen	FWC

Invited but Unable to Attend

Ken Campbell	Tallahassee Bowhunters Association
Cory Douplik	Coastal Services-Adjacent Landowner
Eric Mason	Florida Trail Association
Mike Wisenbaker	Division of Historical Resources
Sherrie Taylor (District 5)	County Commissioner
Eric F. Hinson (District 1)	County Commissioner
Paul Scharine NW region	FWC Division of Hunting and Game Management
Bill Cline	FWC Section Leader, Hunter Safety and Public Shooting Ranges
Jerrie Lindsey	FWC Office of Public Access and Wildlife Viewing Services
Billy Sermons	FWC HSC Regional Biologist
Arlo Kane	FWC HSC Landowner Assistance Program, Regional Coordinator
Matt Philips	FWC Invasive Plant Management

Chris Paxton	FWC Division of Freshwater Fisheries Management
Michael Hill	FWC Aquatic Habitat Conservation and Restoration
Stuart Cumberbatch	FWC

FWC Land Conservation and Planning Staff

David Alden	Meeting facilitator
Gary Cochran	Conservation Acquisition and Planning Administrator
Tom Houston	Recorder
Rebecca Shelton	Recorder
Diana Kilgore	Recorder

For immediate release: March 22, 2013
Contact: Diane Hirth, (850) 410-5291

Public hearing to outline 10-year management plans for FWC Lead Managed Portions of Joe Budd Wildlife Management Area

The Florida Fish and Wildlife Conservation Commission (FWC) will hold a public hearing in Gadsden County to present the 10-year draft land management plan for the FWC Lead Managed Portions of Joe Budd Wildlife Management Area (WMA). The meeting will be held on April 4th, 2013 starting at 7 p.m. at the Northwest Florida Water Management District, 81 Water Management Drive, Havana, FL 32333.

After the presentation, the public is encouraged to comment and ask questions about the specifics in the draft plan.

All lands purchased with public funds must have a management plan that ensures the property will be managed in a manner that is consistent with the intended purposes of the purchase.

“Joe Budd WMA was purchased in order to ensure the preservation of fish and wildlife resources, other natural and cultural resources, and for fish and wildlife-based public outdoor recreation,” said Rebecca Shelton, FWC land conservation biologist. “This draft plan will specify how we intend to do that.”

She added that hunting and fishing regulations are not included in this plan or meeting; those are addressed through a separate public process.

To obtain a copy of the draft land management prospectus for Joe Budd WMA please call Rebecca Shelton at 850-487-9982 or David Alden at 850-487-9588, or email Rebecca.Shelton@MyFWC.com.

For background on management plans and their goals, visit MyFWC.com/Conservation and select “Terrestrial Programs” then “Management Plans” for more information.
RS/HSC

NOTICE

The Florida Fish and Wildlife Conservation Commission (FWC)
Announces a

PUBLIC HEARING

for the

Joe Budd

Wildlife Management Area Management Plan

Gadsden County, Florida

7:00 P.M. Thursday, April 4, 2013

Northwest Florida Water Management District
81 Water Management Dr
Havana, FL 32333

PURPOSE: To receive public comment regarding considerations for the FWC ten-year Land Management Plan for the Joe Budd Wildlife Management Area (WMA). This hearing is being held **EXCLUSIVELY** for discussion of the **DRAFT Joe Budd WMA Management Plan**. This meeting is not being held to discuss area hunting or fishing regulations. For more information on the process for FWC rule and regulation development go online to: myfwc.com/about/rules-regulations/rule-changes/ or call (850) 487-1764.

A Management Prospectus for the Joe Budd WMA is available upon request. For a copy, please contact Rebecca Shelton, Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850) 487-9982.

Paid 3/22/13
Rebecca Shelton

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*Paid 3/22/13
Rebecca Shelton*

NOTICE:

The Florida Fish and Wildlife Conservation Commission (FWC) announce a PUBLIC HEARING for the FWC Lead Managed Portions of Joe Budd Wildlife Management Area located in Gadsden County, Florida.

7:00 P.M. Thursday, April 4, 2013
Northwest Florida Water Management District
81 Water Management Dr.
Havana, FL 32333

PURPOSE: To receive public comment regarding considerations for FWC's ten-year Management Plan for the FWC Lead Managed Portions of Joe Budd Wildlife Management Area (JBWMA).

This hearing is being held EXCLUSIVELY for discussion of the DRAFT Joe Budd WMA Management Plan. This meeting is not being held to discuss area hunting or fishing regulations. For more information on the process for FWC rule and regulation development go online to: myfwc.com/about/rules-regulations/rule-changes/ or call (850) 487-1764.

A Management Prospectus for Joe Budd WMA and copy of the agenda is available upon request from the Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning Group, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850) 487-9982 or (850) 487-9767 or by e-mail at Rebecca.Shelton@MyFWC.com.

FLORIDA DEPARTMENT OF STATE
Ken Detzner, Secretary of State
 Administrative Code

The Gray Building - 500 S. Bronough Street, Suite 101 - Tallahassee, FL 32399-0250 - (850)245-6270

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 Florida Fish & Wildlife Conservation Commission,
 Habitat & Species Conservation
 620 S Meridian Street
 Tallahassee, FL 32399-1600
 Attn: Laramie Ferry/ Magda Soliman/ Rebecca
 Shelton

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Notice of Meeting/Workshop Hearing

FISH AND WILDLIFE CONSERVATION COMMISSION

Freshwater Fish and Wildlife

The Florida Fish and Wildlife Conservation Commission announces a public meeting to which all persons are invited.

DATE AND TIME: April 4, 2013, 7:00 p.m.

PLACE: Northwest Florida Water Management District, 81 Water Management Dr, Havana, FL 32333.

GENERAL SUBJECT MATTER TO BE CONSIDERED: PURPOSE: To receive public comment regarding considerations for FWC's ten-year Management Plan for the FWC Lead Managed Portions of Joe Budd Wildlife Management Area (JBWMA).

This hearing is being held exclusively for discussion of the draft Joe Budd WMA Management Plan. This meeting is not being held to discuss area hunting or fishing regulations. For more information on the process for FWC rule and regulation development go online to: myfwc.com/about/rules-regulations/rule-changes or call (850)487-1764.

A Management Prospectus for Joe Budd WMA and copy of the agenda is available upon request from the Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning Group, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850)487-9982 or (850) 487-9767, email Rebecca.Shelton@MyFWC.com.

PUBLIC HEARING REPORT

FOR THE

**JOE BUDD WILDLIFE MANAGEMENT AREA
MANAGEMENT PLAN**

HELD BY THE

**JOE BUDD WMA MANAGEMENT ADVISORY GROUP
AND THE
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

APRIL 4, 2013 – GADSDEN COUNTY, FLORIDA

The following report documents the public input that was received at the Joe Budd Wildlife Management Area (JBWMA) Management Advisory Group's (MAG) Public Hearing for the JBWMA Draft Management Plan that was held at 7:00-9:00 PM, on April 4, 2013, at the Northwest Florida Water Management District, 81 Water Management Dr, in Havana, Florida.

JBWMA Management Advisory Group Introduction:

The meeting was introduced by Ms. Sue Noyes, a JBWMA MAG participant, who represented the Gadsden County Southern Trail Riders. Ms. Noyes indicated that she was one of thirteen stakeholders that attended the Florida Fish and Wildlife Conservation Commission (FWC) facilitated MAG meeting held on May 16, 2013. Ms. Noyes stated that the Draft Management Plan was being presented tonight by FWC staff, and that hardcopies of the draft plan and the MAG meeting report were available at the front door for the public's review. Ms. Noyes thanked everyone for attending and then introduced FWC staff Mr. David Alden, Senior Land Conservation and Planner, FWC, to facilitate and coordinate the presentation of an overview of JBWMA, FWC's planning process, and the draft components of the Management Plan.

Presentation on an Overview of JBWMA and the FWC Planning Process: Mr. Alden welcomed everyone and thanked the public for their attendance. Mr. Alden then went over an orientation of the material and explained that the purpose of the public hearing was to solicit public input regarding the draft Management Plan for JBWMA, and not hunting and fishing regulations, indicating there is a separate public input process for FWC hunting and fishing rule and regulation development. Mr. Alden then described the materials that were available at the door for public review, including the draft Management Plan and the JBWMA MAG Meeting Report and Accomplishment Report. Mr. Alden then presented the agenda for the public hearing and facilitated the introduction of all FWC staff

in attendance to the audience. Mr. Alden then presented an overview and orientation of JBWMA, including a description of the natural communities, data about park visitors, money generated for the state by the park, wildlife species, recreational opportunities found on the area, surrounding conservation lands, surrounding Florida Forever lands, acquisition history, etc. He also explained FWC's planning process and asked if there were any questions regarding that process.

Questions, Answers and Discussion on the JBWMA Overview and FWC's Planning Process: Mr. Alden facilitated an informal question and answer session where members of the public in attendance, without necessarily identifying themselves, could ask questions of the FWC staff, and discuss the answers. Mr. Alden again emphasized that the exclusive purpose for the public hearing was to collect public input regarding the draft Management Plan for Mr. Alden, and not to discuss area hunting, fishing and use regulations.

Presentation of the JBWMA Draft Management Plan

At this point, Mr. Donald Lee Francis, the JBWMA Area Biologist provided the presentation of the draft management plan. Mr. Francis, the Area Biologist then completed and concluded the presentation of the JBWMA Draft Management Plan.

Questions and Comments on the JBWMA Draft Management Plan Presentation

Mr. Alden encouraged everyone to fill out a speaker card for public testimony. He informed them that all cards will be considered equally.

Public Question: An anonymous woman asked how successful the plan to control wild hogs has been, referring to special hog hunts and the elimination of bag and size limits.

FWC Response: Mr. Francis informed her that the largest impact was when FWC allowed hunting of wild hogs during the small game season. He also stated that participation in special hunts during the summer were very low and FWC has now started to allow dog and night hunting because this would be the most efficient means of removing the hogs, so they've started with a very limited quota and plan on eventually doubling those quotas. Mr. Francis also informed her that they've removed the hog hunt quotas altogether and now hunters just have to check in at the check station.

Public Question: An anonymous gentleman wanted to know the status of the WCPR (Wildlife Conservation Prioritization and Restoration Strategy) because of all the references to it in the plan.

FWC Response: Mr. Francis informed him that FWC was scheduled to conduct a WCPR Workshop in July for JBWMA. Thus by having it in July FWC hopes to incorporate the WCPR Strategy into the plan before it is submitted to ARC. Mr. Alden said that the FWC WCPR is a relatively new process.

Public Testimony on the JBWMA Draft Management Plan: Four members of the public audience submitted speaker cards indicating their intention to provide formal public testimony. Mr. Alden again emphasized that the public hearing was for taking input regarding the JBWMA Draft Management Plan, and called the first speaker to the podium.

Public Testimony Comment: Mr. Brad Hartman wanted to suggest that the plan be a kind of an adaptive approach to evaluate what was done ten years ago, what wasn't, and how FWC and JBWMA are going to respond to it in this plan. He said that this plan looks more like a universal plan that's not specific to Joe Budd because there is more information on climate change than endangered species. He believes they could help the plan by outlining what they said they were going to do, if they did it, and what problems they ran into, to make it look less generic.

FWC Response: Mr. Alden informed Mr. Hartman that, as a part of the Acquisition Restoration Council (ARC) recommendations and requirements, an accomplishment report is required of them that compares the accomplishments of the last ten year plan with the new one. Mr. Alden informed the gentleman that he can send this report to the gentleman when they become available and that they will be included in the final plan. An example the gentleman gave was the specific burn acreage that was noted in the objectives, he was wondering if this was based off the previous plan burns. Mr. Alden informed him that FWC has made strides with their mapping and with new data from FNAI and that this is where those specific numbers came from. Mr. Alden informed him that the ARC meeting is another public hearing so if anyone wanted to see the complete plan, they're welcome to attend. Mr. Alden told him that the meetings are typically held in Tallahassee at the Department of Environmental Protection Marjorie Stoneman Douglas Office Building, on 3900 Commonwealth Boulevard, off Capital Circle NW.

Public Testimony Comment: Mr. Scott Nelson informed the public that he has utilized Joe Budd WMA for over 30 years and he wants to thank everyone who has helped keep it the way it is. He praised the management programs and the education programs available to children. He would however, like to caution them in regards to expansion. He told the public that one of the greatest things about Joe Budd WMA is its limited access and this is what's kept it in such great shape. He said that that if they increase access it will negatively affect both the environment and the animals.

Public Testimony Comment: An anonymous gentleman whose first name was Bill informed the public that he has enjoyed Joe Budd WMA for many years and that he knows every square inch of it. He said that he used to run up and down it, and now he hunts, fishes, and bikes it. He wants to thank everyone whose planned and kept it up through the past and wants to thank everyone for the great job they've done and hope that they continue doing what they're doing.

Public Testimony Comment: An anonymous gentleman began by informing the public that the primary reason he was there was because of the recent improvements to the boat ramp. Basically, what they've been looking at is the design, access, drainage, and some questions about the way it was designed as opposed to how it was originally. He said that once you pull in, the access is limited based on the way the park is set up and he wanted to know if anyone had taken a look at it since it's been completed.

FWC Response: Ms. Jerrie Lindsay, FWC Director of the Office of Public Access and Wildlife Viewing Services (OPAWVS), informed him that the boat ramp is outside of the management area and that it's the responsibility of the Gadsden County. She said that when FWC did some recent site visits, they did go see it as well as check out some of the concerns they had with it. They spoke with the FWC boating and waterway staff that provided the money to the County for the construction of the ramp as well as receiving input from FWC's engineer and has sent that information to the County. She said that they've asked to get with the County to address those concerns. She informed the gentleman that Mr. Alden has the Gadsden County Parks and Recreation Director's contact information and the Director has asked that FWC give out his information to anyone who has concerns about the boat ramp and that he will get with them about how they're planning to rectify those concerns. So someone is looking into it, she cannot tell when or how long but she agrees that something needs to be done and her understanding is that something is going to be done.

Adjournment: Mr. Alden asked if there were any other members of the public that wished to give public testimony. No other public questions or comments were received. Mr. Alden then declared the public hearing adjourned.

13.4 Land Management Review Report

2014 Land Management Review Team Report for Joe Budd Wildlife Management Area

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1. Introduction

Section 259.036, F.S. requires a periodic on-site review of conservation and recreation lands titled in the name of the Board of Trustees to determine (1) whether the lands are being managed for the purposes for which they were acquired and (2) whether they are being managed in accordance with their land management plan adopted pursuant to s. 259.032, F.S. In case where the managed areas exceed 1,000 acres in size, such a review must be scheduled at least every five years. In conducting this review, a statutorily constructed review team "shall evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan."

The land management review teams are coordinated by the Division of State Lands and consist of representatives from the Division of Recreation and Parks (DEP), the Florida Forest Service (DACS), the Fish and Wildlife Conservation Commission, the local government in which the property is located, the DEP District in which the parcel is located, the local soil and water conservation district, a conservation organization member, and a local private land manager.

Each Land Management Review Report is divided into three sections: Section 1 provides the details of the property being reviewed as well as the overall results of the report. Section 2 provides details of the Field Review, in which the Review Team inspects the results of management actions on the site. Section 3 provides details of the Land Management Plan Review, in which the team determines the extent to which the Management Plan provides for and documents adequate natural and recreational resource protection.

Finally, each report may also contain an Appendix that lists individual team member comments. This is a compilation of feedback, concerns or other thoughts raised by individual team members, but not necessarily indicative of the final consensus reached by the Land Management Review Team.

1.1. Property Reviewed in this Report

Name of Site: Joe Budd Wildlife Management Area

Managed by: Fish and Wildlife Conservation Commission

Acres: 11,039.00

County(ies): Gadsden County

Purpose(s) for Acquisition: To provide conservation and protection of natural and historic resources and resource-based public outdoor recreation that is compatible with the conservation and protection of these public lands.

Acquisition Program(s): P2000, Pitman-Robertson

Original Acquisition Date: 1975

Area Reviewed: Entire Property

Last Management Plan Approval Date: 10/25/02

Review Date: 9/18/14

Agency Manager and Key Staff Present:

- Phil Manor, Manager
- David McDuffie, Biologist

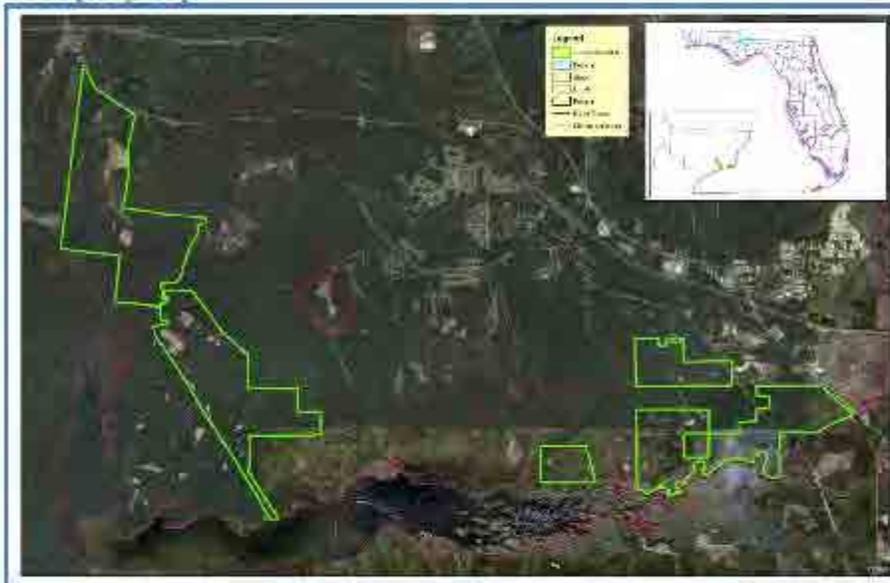
Review Team Members Present (voting)

- DRP: Arthur Stiles
- FWC: Diana Pepe
- FFS: Bill Korn
- DEP: Jeanne Williams
- SWCD:
- Local gov't:
- Conservation organization: Hugh Boyter
- Private land manager:

Other Non-Team Members Present (attending)

- Keith Singleton, DEP/DSL
- Devon McFall, FFS
- Aric Larson, DEP/DSL

1.2 Property Map



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1.3. Overview of Land Management Review Results

Is the property managed in accordance with the purposes for which it was acquired?

Yes = 5, No = 0

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

Yes = 5, No = 0

Table 1 shows the average scores received for each applicable category of review. *Field Review* scores refer to the adequacy of management actions in the field, while *Management Plan Review* scores refer to adequacy of discussion of these topics in the management plan. Scores range from 1 to 5 with 5 signifying excellence. For a more detailed key to the scores, please see Appendix A.

Table 1. Results at a glance.

Major Land Management Categories	Field Review	Management Plan Review
Natural Communities / Forest Management	4.86	3.80
Prescribed Fire / Habitat Restoration	5.00	3.20
Hydrology	4.72	3.81
Imperiled Species	5.00	3.80
Exotic / Invasive Species	4.80	3.47
Cultural Resources	4.00	4.00
Public Access / Education / Law Enforcement	4.90	3.77
Infrastructure / Equipment / Staffing	4.57	N/A

Color Code (See Appendix A for detail)

Excellent	Above Average	Below Average	Poor
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1.3.1 Consensus Commendations for the Managing Agency

The following commendations resulted from discussion and vote of the review team members:

1. The team commends the FWC staff for identification, protection, and management of plant communities; including a number of listed species and control of invasive exotic species. (5+, 0-)
2. The team commends the FWC staff for providing an extensive and diverse array of recreational and educational public use opportunities. (5+, 0-)
3. The team commends the FWC for efforts to restore upland pine and mesic flatwoods, and progress made since the last review through implementation of pine thinning and burning. (5+, 0-)
4. The team commends the FWC for using innovative technology during wildlife surveys such as frog loggers and gopher tortoise burrow cameras. (5+, 0-)
5. The team commends the FWC WMA biological technicians and other staff for outstanding efforts at planting and managing nearly 160 acres of wildlife openings and food plots which have

been very successful in enhancing wildlife populations, and which are very popular among hunters. (5+, 0-)

6. The team commends the WMA biological technicians and other staff for their diligent and thorough efforts to treat and monitor a variety of non-native, invasive plants. (5+, 0-)
7. The team commends the FWC staff for successfully coordinating with FFS in implementing several road and ditch erosion projects on the property and for installing broad-based dips, turn-outs, and gravel at strategic points in the road system. (5+, 0-)
8. The team commends the FWC biologists for their efforts to research and prepare a site specific management strategy for focal species at this WMA. (5+, 0-)

1.3.2. Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of review team members. The next management plan update should include information about how these recommendations have been addressed:

1. The team recommends that FWC provide improved quality FNAI maps and more thorough on-site natural community descriptions in the next ten-year management plan to include actual conditions and specific management needs. (5+, 0-)

Managing Agency Response: Using updated natural community GIS data and associated information provided by FNAI, FWC will provide updated maps and natural community descriptions in the update to the management plan.

2. Field Review Details

2.1 Field Review Checklist Findings

The following items received high scores on the review team checklist, which indicates that management actions exceeded expectations.

1. **Natural Communities; specifically blackwater stream, bottomland forest, depression marsh, dome swamp, floodplain marsh, floodplain swamp, mesic flatwoods/wet flatwoods, upland hardwood forest/slope forest, upland pine forest and sandhill:**
2. **Listed Species Protection and Preservation; specifically animals in general, gopher tortoise, plants in general, and the slope forest "suite" of listed plant species:**
3. **Natural Resources Survey/Monitoring Resources; specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, other non-game species or their**

habitat, fire effects monitoring, other habitat management effects monitoring, and invasive species survey and monitoring:

4. Cultural Resources; specifically cultural resource survey, and protection and preservation:
5. Prescribed Fire; specifically area being burned, frequency and quality:
6. Restoration; specifically upland pine/ground cover:
7. Forest Management; specifically timber inventory, timber harvesting, reforestation/afforestation and site preparation:
8. Non-Native, Invasive & Problem Species; specifically the prevention and control of plants and animals:
9. Hydro-alteration; specifically roads and culverts, ditches, dams, reservoirs or other impoundments and erosion control:
10. Ground Water Monitoring; specifically quality and quantity:
11. Surface Water Monitoring; specifically quality and quantity:
12. Resource Protection; specifically boundary survey, gates and fencing, signage and law enforcement presence:
13. Adjacent Property Concerns; specifically expanding development, and inholdings and additions:
14. Public Access and Education; specifically roads, parking and boat access:
15. Environmental Education & Outreach; specifically wildlife, invasive species, habitat management activities, interpretive facilities and signs, recreational opportunities and management of visitor impacts:
16. Management Resources; specifically waste disposal, sanitary facilities, buildings, equipment, staff and funding:

2.2. Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 3.0 score on average). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The management plan update should include information on how these items have been addressed:

No items were identified by the review team as requiring improvement actions in the field.

2.3. Field Review Checklist and Scores

Field Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Blackwater Stream	I.A.2	5	5	5	5	5				5.00
Bottomland Forest	I.A.3	5	5	5	5	5				5.00
Depression Marsh	I.A.4	5	5	5	5	5				5.00
Dome Swamp	I.A.5	5	5	4	5	5				4.80

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Floodplain Marsh	I.A.6	5	5	4	5	5				4.80
Floodplain Swamp	I.A.7	5	5	4	5	5				4.80
Mesic Flatwoods/Wet Flatwoods	I.A.8	4	5	4	5	4				4.40
Upland Hardwood Forest/Slope Forest	I.A.10	5	5	5	5	5				5.00
Upland Pine Forest	I.A.11	4	5	4	5	4				4.40
Sandhill	I.A.14	5	5	5	5	5				5.00
Natural Communities Average Score										4.82
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	5	5	5	5	5				5.00
Gopher Tortoise	I.B.1.a	5	5	5	5	5				5.00
Plants	I.B.2	5		5	5	5				5.00
Slope Forest Suite	I.B.2.a	5	5	5	5	5				5.00
Listed Species Average Score										5.00
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	5	5	5	5	5				5.00
Listed species or their habitat monitoring	I.C.2	5	5	5	5	5				5.00
Other non-game species or their habitat monitoring	I.C.3	5	5	5	5	5				5.00
Fire effects monitoring	I.C.4	5	5	5	5	5				5.00
Other habitat management effects monitoring	I.C.5	5	5	5	5	5				5.00
Invasive species survey / monitoring	I.C.6	5	5	5	5	5				5.00
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	4	5	5	5				4.80
Protection and preservation	II.B	5	4	5	5	5				4.80
Cultural Resources Average Score										4.80
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	5	5	5				5.00
Frequency	III.A.2	5	5	5	5	5				5.00
Quality	III.A.3	5	5	5	5	5				5.00
Resource Management, Prescribed Fire Average Score										5.00
Restoration (III.B)										
Upland Pine/Ground Cover	III.B.1	5	5	5	5	5				5.00
Restoration Average Score										5.00
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	5	5	5				5.00
Timber Harvesting	III.C.2	5	5	5	5	5				5.00
Reforestation/Afforestation	III.C.3	5	5	5	5	4				4.80
Site Preparation	III.C.4	5	5	5	5	4				4.80
Forest Management Average Score										4.90
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	5	5	5	5	5				5.00
prevention - animals	III.D.1.b	5	4	5	5	3				4.40
prevention - pests/pathogens	III.D.1.c	5	5	5	5	5				5.00

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Control										
control - plants	III.D.2.a	5	5	5	5	5				5.00
control - animals	III.D.2.b	5	4	5	5	4				4.60
control - pest/pathogens	III.D.2.c	5	5	5	5	4				4.80
Non-Native, Invasive & Problem Species Average Score										4.80
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	5	5	5	5	5				5.00
Ditches	III.E.1.b	5	5	5	5	4				4.80
Dams, Reservoirs or other impoundments	III.E.1.e	5	5	5	5	5				5.00
Erosion Control	III.E.1.f	5	5	5		5				5.00
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.95
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	5	4	5	5	3				4.40
Ground water quantity	III.E.2.b	5	4	5	5	3				4.40
Ground Water Monitoring Average Score										4.40
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	5	5	5	5	4				4.80
Surface water quantity	III.F.3.b	5	5	5	5	4				4.80
Surface Water Monitoring Average Score										4.80
Resource Protection (III.F)										
Boundary survey	III.F.1	5	5	5	5	5				5.00
Gates & fencing	III.F.2	5	5	5	5	4				4.80
Signage	III.F.3	5	5	5	5	5				5.00
Law enforcement presence	III.F.4	5	5	5	5	5				5.00
Resource Protection Average Score										4.95
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.G.1.a	5	5	5	5					5.00
Inholdings/additions	III.G.2	5	5	4	5					4.75
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	5	5	5	5				5.00
Parking	IV.1.b	5	4	5	5	5				4.80
Boat Access	IV.1.c	5	4	5	5	3				4.40
Environmental Education & Outreach										
Wildlife	IV.2.a	5	5	5	5	5				5.00
Invasive Species	IV.2.b	5	5	5	5	4				4.80
Habitat Management Activities	IV.2.c	5	5	5	5	5				5.00
Interpretive facilities and signs	IV.3	5	4	5	5	4				4.60
Recreational Opportunities	IV.4	5	5	5	5	5				5.00
Management of Visitor Impacts	IV.5	5	5	5	5	5				5.00
Public Access & Education Average Score										4.84
Management Resources (V.1, V.2, V.3, V.4)										

Maintenance										
Waste disposal	V.1.a	5	5	5	5	4				4.80
Sanitary facilities	V.1.b	4	4	5	5	4				4.40
Infrastructure										
Buildings	V.2.a	5	5	5	5	4				4.80
Equipment	V.2.b	4	5	5	5	5				4.80
Staff	V.3	4	4	5	5	3				4.20
Funding	V.4	4	5	5	5	3				4.40
Management Resources Average Score										4.57

Color Code:

Excellent	Above Average	Below Average	Poor	See Appendix A for detail
	Missing Vote	Insufficient Information		

3. Land Management Plan Review Details

3.1 Items Requiring Improvements in the Management Plan

The following items received low scores on the review team checklist, which indicates that the text noted in the Management Plan Review does not sufficiently address this issue (less than 3.0 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The next management plan update should address the checklist items identified below:

1. **Resource Management, Prescribed Fire; specifically area being burned, frequency and quality, received below average scores. This is an indication that the management plan does not sufficiently address current or desired condition and/or future management actions to protect or restore.**

Managing Agency Response: FWC notes that the importance of fire ecology is discussed extensively within the natural community section of the current management plan (pages 15-29), as well as the vegetation management intent section (pages 55-56). However, FWC will expand the discussion regarding fire ecology and prescribed fire in the update to the management plan.

2. **Adjacent Property Concerns; specifically discussion of potential surplus land determination, received a below average score. This is an indication that the management plan does not adequately provide a discussion of how potential surplus lands were determined.**

Managing Agency Response: A discussion describing FWC's methodology for making a determination to recommend surplus lands will be included in the update to the management plan.

3.2 Management Plan Review Checklist and Scores

Plan Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Blackwater Stream	I.A.2	3	4	5	5	3				4.00
Bottomland Forest	I.A.3	3	4	5	5	3				4.00
Depression Marsh	I.A.4	3	4	5	5	3				4.00
Dome Swamp	I.A.5	3	4	5	5	3				4.00
Floodplain Marsh	I.A.6	3	4	5	5	3				4.00
Floodplain Swamp	I.A.7	3	4	5	5	3				4.00
Mesic Flatwoods/Wet Flatwoods	I.A.8	3	4	5	5	3				4.00
Upland Hardwood Forest/Slope Forest	I.A.10	3	4	5	5	3				4.00
Upland Pine Forest	I.A.11	3	4	5	5	3				4.00
Sandhill	I.A.14	3	4	5	5	3				4.00
Natural Communities Average Score										4.00
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	3	3	3	5	3				3.40
Gopher Tortoise	I.B.1.a	3	3	2	5	3				3.20
Plants	I.B.2	3		5	5	3				4.00
Slope Forest Suite	I.B.2.a	3	3	5	5	3				3.80
Listed Species Average Score										3.60
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	3	4	3	5	2				3.40
Listed species or their habitat monitoring	I.C.2	3	3	3	5	3				3.40
Other non-game species or their habitat monitoring	I.C.3	3	3	5	5	3				3.80
Fire effects monitoring	I.C.4	3	3	5	5	3				3.80
Other habitat management effects monitoring	I.C.5	3	3	5	5	2				3.50
Invasive species survey / monitoring	I.C.6	3	4	5	5	2				3.80
Cultural Resources (Archeological & Historic sites) (II.A,II.B)										
Cultural Res. Survey	II.A	3	4	5	5	3				4.00
Protection and preservation	II.B	3	4	5	5	3				4.00
Cultural Resources Average Score										4.00
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	3	2	2	5	2				2.80
Frequency	III.A.2	3	2	2	5	2				2.80
Quality	III.A.3	3	2	2	5	2				2.80
Resource Management, Prescribed Fire Average Score										2.80
Restoration (III.B)										
Upland Pine/Ground Cover	III.B.1	3	3	4	5	3				3.60
Restoration Average Score										3.60

Forest Management (III.C)										
Timber Inventory	III.C.1	3	3	4	5	3				3.60
Timber Harvesting	III.C.2	3	3	4	5	3				3.60
Reforestation/Afforestation	III.C.3	3	3	4	5	3				3.60
Site Preparation	III.C.4	3	3	4	5	3				3.60
Forest Management Average Score										3.60
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	3	3	5	5	2				3.60
prevention - animals	III.E.1.b	3	2	5	5	2				3.40
prevention - pests/pathogens	III.E.1.c	3	2	5	5	2				3.40
Control										
control - plants	III.E.2.a	3	3	5	5	2				3.60
control - animals	III.E.2.b	3	2	5	5	2				3.40
control - pest/pathogens	III.E.2.c	3	2	5	5	2				3.40
Non-Native, Invasive & Problem Species Average Score										3.47
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	3	3	5	5	2				3.60
Ditches	III.F.1.b	3	3	5	5	2				3.60
Dams, Reservoirs or other impoundments	III.F.1.e	3	3	5	5	3				3.80
Erosion Control	III.F.1.f	3	4	5		2				3.50
Hydrologic/Geologic function, Hydro-Alteration Average Score										3.63
Ground Water Monitoring (III.E.2)										
Ground water quality	III.F.2.a	3	3	5	5	3				3.80
Ground water quantity	III.F.2.b	3	3	5	5	3				3.80
Ground Water Monitoring Average Score										3.80
Surface Water Monitoring (III.E.3)										
Surface water quality	III.F.3.a	3	4	5	5	3				4.00
Surface water quantity	III.F.3.b	3	4	5	5	3				4.00
Surface Water Monitoring Average Score										4.00
Resource Protection (III.F)										
Boundary survey	III.G.1	3	4	5	5	2				3.80
Gates & fencing	III.G.2	3	4	5	5	2				3.80
Signage	III.G.3	3	3	5	5	2				3.60
Law enforcement presence	III.G.4	3	3	5	5	2				3.60
Resource Protection Average Score										3.70
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.H.1.a	3	4	5	5	3				4.00
Inholdings/additions	III.H.2	3	5	2	5	4				3.80
Discussion of Potential Surplus Land Determination	III.H.3	3	1	2	5	3				2.80
Surplus Lands Identified?	III.H.4	3	5	5	5	3				4.20

Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	3	4	5	5	3				4.00
Parking	IV.1.b	3	3	5	5	3				3.80
Boat Access	IV.1.c	3	3	5	5	2				3.60
Environmental Education & Outreach										
Wildlife	IV.2.a	3	3	5	5	3				3.80
Invasive Species	IV.2.b	3	3	5	5	3				3.80
Habitat Management Activities	IV.2.c	3	3	5	5	3				3.80
Interpretive facilities and signs	IV.3	3	3	5	5	2				3.60
Recreational Opportunities	IV.4	3	5	5	5	3				4.20
Management of Visitor Impacts	IV.5	3	5	5	5	2				4.00
Public Access & Education Average Score										3.84
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Apiary Lease	VI.A.1	5	4	5	5	5				4.80
Environmental Education	VI.A.2	5	5	5	5	5				5.00
Silviculture	VI.A.3	5	4	5	5	5				4.80
Hiking	VI.A.4	5	4	5	5	5				4.80
Hunting	VI.A.5	5	5	5	5	5				5.00
Fishing	VI.A.6	5	4	5	5	5				4.80
Wildlife Observation	VI.A.7	5	5	5	5	5				5.00
Bicycling	VI.A.8	5	4	5	5	5				4.80
Equestrian Use	VI.A.9	5	4	5	5	5				4.80
Proposed Uses										
Astronomy	VI.B.1	5	4	5	5	5				4.80
IFAS Research	VI.B.2	5	4	5	5	5				4.80
Geocaching	VI.B.3	5	3	5	5	5				4.60

Color Code: Excellent Above Average Below Average Poor Missing Vote Insufficient Information See Appendix A for detail

Appendix A: Scoring System Detail

Explanation of Consensus Commendations:

Often, the exceptional condition of some of the property's attributes impress review team members. In those instances, team members are encouraged to offer positive feedback to the managing agency in the form of a commendation. The teams develop commendations generally by standard consensus processes or by majority vote if they cannot obtain a true consensus.

Explanation of Consensus Recommendations:

Subsection 259.036(2), F.S., specifically states that the managing entity shall consider the findings and recommendations of the land management review. We ask team members to provide general recommendations for improving the management or public access and use of the property. The teams discuss these recommendations and develop consensus recommendations as described above. We provide these recommendations to the managing agency to consider when finalizing the required ten-year management plan update. We encourage the manager to respond directly to these recommendations and include their responses in the final report when received in a timely manner.

Explanation of Field Review Checklist and Scores, and Management Plan Review Checklist and Scores:

We provide team members with a checklist to fill out during the evaluation workshop phase of the Land Management Review. The checklist is the uniform tool used to evaluate both the management actions and condition of the managed area, and the sufficiency of the management plan elements. During the evaluation workshop, team members individually provide scores on each issue on the checklist, from their individual perspective. Team members also base their evaluations on information provided by the managing agency staff as well as other team member discussions. Staff averages these scores to evaluate the overall conditions on the ground, and how the management plan addresses the issues. Team members must score each management issue 1 to 5: 1 being the management practices are clearly insufficient, and 5 being that the management practices are excellent. Members may choose to abstain if they have inadequate expertise or information to make a cardinal numeric choice, as indicated by an "X" on the checklist scores, or they may not provide a vote for other unknown reasons, as indicated by a blank. If a majority of members failed to vote on any issue, that issue is determined to be irrelevant to management of that property or it was inadequately reviewed by the team to make an intelligent choice. In either case staff eliminated the issue from the report to the manager.

Average scores are interpreted as follows:

Scores 4.0 to 5.0 are *Excellent*

Scores 3.0 to 3.99 are *Above Average*

Scores 2.0 to 2.99 are *Below Average*

Scores 1.0 to 1.99 are considered *Poor*

13.5 Soil Series Descriptions

Map Unit Description

Gadsden County, Florida

Map unit: 21 - Dothan-Fuquay-Cowarts complex, 8 to 15 percent slopes

Component: Dothan (49%)

The Dothan component makes up 49 percent of the map unit. Slopes are 8 to 15 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Fuquay (20%)

The Fuquay component makes up 20 percent of the map unit. Slopes are 8 to 15 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 54 inches during January, February, March, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Cowarts (19%)

The Cowarts component makes up 19 percent of the map unit. Slopes are 8 to 15 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 23 - Fuquay-Lucy-Orangeburg complex, 0 to 5 percent slopes

Component: Fuquay (40%)

The Fuquay component makes up 40 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 54 inches during January, February, March, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Lucy (30%)

The Lucy component makes up 30 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine and fluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Orangeburg (20%)

The Orangeburg component makes up 20 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls

Map Unit Description

Gadsden County, Florida

Map unit: 23 - Fuquay-Lucy-Orangeburg complex, 0 to 5 percent slopes

Component: Orangeburg (20%)

on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 32 - Leefteld-Bonifay-Dothan complex, 0 to 5 percent slopes

Component: Leefteld (44%)

The Leefteld component makes up 44 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 23 inches during January, February, March, August, September, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Bonifay (26%)

The Bonifay component makes up 26 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY008FL Upland Hardwood Hammock ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Dothan (23%)

The Dothan component makes up 23 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April, August, September. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 36 - Lucy-Orangeburg-Cowarts complex, 15 to 45 percent slopes

Component: Lucy (49%)

The Lucy component makes up 49 percent of the map unit. Slopes are 15 to 45 percent. This component is on hillslopes on marine terraces on coastal plains. The parent material consists of sandy and loamy marine and fluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Orangeburg (21%)

The Orangeburg component makes up 21 percent of the map unit. Slopes are 15 to 45 percent. This component is on hillslopes on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth

Map Unit Description

Gadsden County, Florida

Map unit: 36 - Lucy-Orangeburg-Cowarts complex, 15 to 45 percent slopes

Component: Orangeburg (21%)

to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Cowarts (19%)

The Cowarts component makes up 19 percent of the map unit. Slopes are 15 to 45 percent. This component is on hillslopes on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 41 - Norfolk loamy fine sand, 0 to 2 percent slopes

Component: Norfolk (69%)

The Norfolk component makes up 69 percent of the map unit. Slopes are 0 to 2 percent. This component is on broad ridges on marine terraces on coastal plains. The parent material consists of loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 1. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 46 - Orangeburg loamy sand, 2 to 5 percent slopes

Component: Orangeburg (80%)

The Orangeburg component makes up 80 percent of the map unit. Slopes are 2 to 5 percent. This component is on broad interstream divides, coastal plains. The parent material consists of marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Map unit: 47 - Orangeburg-Norfolk-Tifton complex, 5 to 8 percent slopes

Component: Orangeburg (48%)

The Orangeburg component makes up 48 percent of the map unit. Slopes are 5 to 6 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Norfolk (19%)

The Norfolk component makes up 19 percent of the map unit. Slopes are 5 to 8 percent. This component is on side slopes and ridges on

Map Unit Description

Gadsden County, Florida

Map unit: 47 - Orangeburg-Norfolk-Tifton complex, 5 to 8 percent slopes

Component: Norfolk (19%)

marine terraces on coastal plains. The parent material consists of loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Tifton (18%)

The Tifton component makes up 18 percent of the map unit. Slopes are 5 to 8 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 51 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 48 - Fuquay-Orangeburg-Norfolk complex, 8 to 15 percent slopes

Component: Fuquay (45%)

The Fuquay component makes up 45 percent of the map unit. Slopes are 8 to 15 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 54 inches during January, February, March, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Orangeburg (25%)

The Orangeburg component makes up 25 percent of the map unit. Slopes are 8 to 15 percent. This component is on side slopes and hills on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Norfolk (21%)

The Norfolk component makes up 21 percent of the map unit. Slopes are 8 to 10 percent. This component is on hills on marine terraces on coastal plains, ridges on marine terraces on coastal plains. The parent material consists of loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 51 - Plummer sand, 0 to 5 percent slopes

Component: Plummer (85%)

The Plummer component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats on marine terraces



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Map Unit Description

Gadsden County, Florida

Map unit: 51 - Plummer sand, 0 to 5 percent slopes

Component: Plummer (85%)

on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 8 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 5 percent. This component is in the R133AY012FL Wetland Hardwood Hammock ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 52 - Rains fine sandy loam

Component: Rains (86%)

The Rains component makes up 86 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of loamy and clayey marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 4 percent. This component is in the R133AY010FL Freshwater Marsh & Pond ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 59 - Troup-Lakeiland-Lucy complex, 2 to 8 percent slopes

Component: Troup (50%)

The Troup component makes up 50 percent of the map unit. Slopes are 2 to 8 percent. This component is on ridges on marine terraces on coastal plains, knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Lakeiland (21%)

The Lakeiland component makes up 21 percent of the map unit. Slopes are 2 to 8 percent. This component is on ridges on marine terraces on coastal plains, knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Lucy (16%)

The Lucy component makes up 16 percent of the map unit. Slopes are 2 to 8 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of sandy and loamy marine and fluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit Description

Gadsden County, Florida

Map unit: 65 - Udorthents, reclaimed

Component: Udorthents (100%)

The Udorthents component makes up 100 percent of the map unit. Slopes are 0 to 3 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of mine spoil or earthy fill. Depth to a root restrictive layer is greater than 60 inches. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. This soil does not meet hydric criteria.

Map unit: 66 - Pickney, Dorovan, and Bibb soils, frequently flooded

Component: Pickney (32%)

The Pickney component makes up 32 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on stream terraces on marine terraces on coastal plains, depressions on stream terraces on marine terraces on coastal plains, flood plains on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Dorovan (29%)

The Dorovan component makes up 29 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on flood plains on marine terraces on coastal plains. The parent material consists of organic material over sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 50 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Bibb (25%)

The Bibb component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on flood plains on marine terraces on coastal plains. The parent material consists of stratified loamy and sandy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 8 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 69 - Lucy-Bonifay-Orangeburg complex, 5 to 8 percent slopes

Component: Lucy (38%)

The Lucy component makes up 38 percent of the map unit. Slopes are 5 to 8 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of sandy and loamy marine and fluvial deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Bonifay (28%)

The Bonifay component makes up 28 percent of the map unit. Slopes are 5 to 8 percent. This component is on side slopes and ridges on

Map Unit Description

Gadsden County, Florida

Map unit: 69 - Lucy-Bonifay-Orangeburg complex, 5 to 8 percent slopes

Component: Bonifay (26%)

marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March, August, September. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Orangeburg (22%)

The Orangeburg component makes up 22 percent of the map unit. Slopes are 5 to 8 percent. This component is on side slopes and ridges on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 71 - Cowarts-Nankin complex, 2 to 5 percent slopes

Component: Cowarts (45%)

The Cowarts component makes up 45 percent of the map unit. Slopes are 2 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Nankin (40%)

The Nankin component makes up 40 percent of the map unit. Slopes are 2 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of stratified loamy and clayey marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 77 - Bonifay-Fuquay complex, 0 to 5 percent slopes

Component: Bonifay (49%)

The Bonifay component makes up 49 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March, August, September. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Fuquay (40%)

The Fuquay component makes up 40 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridgetops and knolls on

Map Unit Description

Gadsden County, Florida

Map unit: 77 - Bontay-Fuquay complex, 0 to 5 percent slopes

Component: Fuquay (40%)

marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 54 inches during January, February, March, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 79 - Hurricane and Chipley soils, 0 to 3 percent slopes

Component: Hurricane (50%)

The Hurricane component makes up 50 percent of the map unit. Slopes are 0 to 3 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during January, February, March, April, August, September, November, December. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Chipley (41%)

The Chipley component makes up 41 percent of the map unit. Slopes are 0 to 3 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 80 - Foxworth-Lakeland complex, 0 to 5 percent slopes

Component: Foxworth (53%)

The Foxworth component makes up 53 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Lakeland (32%)

The Lakeland component makes up 32 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit Description

Gadsden County, Florida

Map unit: 83 - Foxworth-Lakeland complex, 5 to 15 percent slopes

Component: Foxworth (47%)

The Foxworth component makes up 47 percent of the map unit. Slopes are 5 to 15 percent. This component is on side slopes, hills on marine terraces on coastal plains, ridges on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Lakeland (41%)

The Lakeland component makes up 41 percent of the map unit. Slopes are 5 to 15 percent. This component is on side slopes, hills on marine terraces on coastal plains, ridges on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 85 - Bonifay-Leon-Chipley complex, 0 to 5 percent slopes

Component: Bonifay (38%)

The Bonifay component makes up 38 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March, August, September. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Leon (27%)

The Leon component makes up 27 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 4 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Chipley (25%)

The Chipley component makes up 25 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit Description

Gadsden County, Florida

Map unit: 86 - Rutlege, Bibb, and Surrency soils, frequently flooded

Component: Rutlege (38%)

The Rutlege component makes up 38 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on low stream terraces on marine terraces on coastal plains, flood plains on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Bibb (27%)

The Bibb component makes up 27 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on flood plains on marine terraces on coastal plains. The parent material consists of stratified loamy and sandy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Surrency (25%)

The Surrency component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on flood plains on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 90 - Hostford and Plummer mucky sands, 2 to 12 percent slopes

Component: Hostford (50%)

The Hostford component makes up 50 percent of the map unit. Slopes are 2 to 12 percent. This component is on lower side slopes and seeps on uplands marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 12 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Plummer (41%)

The Plummer component makes up 41 percent of the map unit. Slopes are 2 to 5 percent. This component is on slopes of stee slopes on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 10 percent. This component is in the R133AY012FL Wetland Hardwood Hammock ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit Description

Gadsden County, Florida

Map unit: 93 - Foxworth-Blanton-ChIPLEY complex, 0 to 5 percent slopes

Component: Foxworth (45%)

The Foxworth component makes up 45 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Blanton (24%)

The Blanton component makes up 24 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R133AY008FL Upland Hardwood Hammock ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: ChIPLEY (20%)

The ChIPLEY component makes up 20 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 94 - Albany-Garcon-BIbb complex, 0 to 5 percent slopes, occasionally flooded

Component: Albany (33%)

The Albany component makes up 33 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats on stream terraces on marine terraces on coastal plains, rises on stream terraces on marine terraces on coastal plains, flood plains on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY008FL Upland Hardwood Hammock ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Garcon (28%)

The Garcon component makes up 28 percent of the map unit. Slopes are 0 to 5 percent. This component is on broad flats on low stream terraces on marine terraces on coastal plains, flood plains on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 23 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit Description

Gadsden County, Florida

Map unit: 94 - Albany-Garcon-Bibb complex, 0 to 5 percent slopes, occasionally flooded

Component: Bibb (26%)

The Bibb component makes up 26 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats on flood plains on marine terraces on coastal plains. The parent material consists of stratified loamy and sandy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 8 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 96 - Pelham sand, 0 to 5 percent slopes

Component: Pelham (87%)

The Pelham component makes up 87 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 13 inches during January, February, March, April, June, July, August, September, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 97 - Eunola, Garcon, and Ousley soils, occasionally flooded

Component: Eunola (45%)

The Eunola component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains, rises on stream terraces on marine terraces on coastal plains. The parent material consists of loamy marine deposits and/or fluvio-marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Garcon (25%)

The Garcon component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on broad flats on low stream terraces on marine terraces on coastal plains, flood plains on marine terraces on coastal plains. The parent material consists of sandy and loamy alluvium and/or sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 23 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Ousley (20%)

The Ousley component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on broad flats on stream terraces on marine terraces on coastal plains, flood plains on marine terraces on coastal plains. The parent material consists of sandy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is occasionally flooded. It is rarely ponded. A seasonal zone of water saturation is at 23 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 0 percent. This component is in the R133AY008FL Upland Hardwood Hammock ecological site. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1

Map Unit Description

Gadsden County, Florida

Map unit: 97 - Eunola, Garcon, and Ousley soils, occasionally flooded

Component: Ousley (20%)
within 30 inches of the soil surface.

Map unit: 96 - Rutlege and Plummer soils, depressional

Component: Rutlege, depressional (50%)

The Rutlege, depressional component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Plummer, depressional (38%)

The Plummer, depressional component makes up 38 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 5 percent. This component is in the R133AY012FL Wetland Hardwood Hammock ecological site. Nonirrigated land capability classification is 6w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 99 - Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map unit: 101 - Albany-Odilla-Chiplee complex, 0 to 5 percent slopes

Component: Albany (48%)

The Albany component makes up 48 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits and/or fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R133AY008FL Upland Hardwood Hammock ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Odilla (25%)

The Odilla component makes up 25 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 21 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit Description

Gadsden County, Florida

Map unit: 101 - Albany-Ocilla-Chipley complex, 0 to 5 percent slopes

Component: Chipley (16%)

The Chipley component makes up 16 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map unit: 106 - Plummer-Leon-Sapelo complex

Component: Plummer (49%)

The Plummer component makes up 49 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 8 inches during January, February, March, April, May, June, July, August, September, October, December. Organic matter content in the surface horizon is about 5 percent. This component is in the R133AY012FL Wetland Hardwood Hammock ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Leon (19%)

The Leon component makes up 19 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 4 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Sapelo (18%)

The Sapelo component makes up 18 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, July, August, September, October, December. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY004FL North Florida Flatwoods ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit Description

Leon County, Florida

Map unit: 99 - Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

13.6 FNAI Element Occurrence Data Usage Letter



1016 Thomsville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

April 11, 2014

David Alden
Land Conservation & Planning
Florida Fish and Wildlife Conservation Commission
Tallahassee, FL

Dear David,

By virtue of this letter we are updating and continuing our agreement that it is unnecessary for your office to request FNAI element occurrence data for each land management plan you prepare, under the following conditions:

- FNAI will continue to provide our Florida Element Occurrence GIS database to FWC on a quarterly update basis;
- The FNAI GIS data will be available to FWC staff for reference and incorporation as required in management plan review and preparation.

Our database manager, Frank Price, currently provides this update via ftp to FWC staff on a quarterly basis. Current FWC contacts for the quarterly update are Beth Stys and Ted Hoehn. We are pleased to continue this beneficial collaboration with the Florida Fish and Wildlife Conservation Commission.

Sincerely,

Gary Knight
Director
Florida Natural Areas Inventory



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Tracking Florida's Biodiversity

13.7 Cultural Resources; Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties

Cultural Resources

Analysis Shape Type: Polygon

Analysis Timestamp: 03022015 03:51:23

Shape Name: Joe Budd WMA - FWC lead management

Boundary Area: 2753 acres

Cultural Resources										
Florida Sites										
SITE NAME	SITEID	SITETYPE1	SITETYPE2	SITETYPE3	SITETYPE4	SITETYPE5	SITETYPE6	HUMANREMN	Total Area (acres)	Percent of Area
Drew-Hair Homestead	GD00875	Homestead	Land-terrestrial	Artifact scatter-low density (< 2 per sq meter)					10.26	0.35 %
GADSDEN STATION 7	GD00310	Campsite (prehistoric)	Specialized site for procurement of raw materials						0.03	0 %
Little River Bluff	GD00876	Land-terrestrial	Artifact scatter-low density (< 2 per sq meter)						3.33	0.11 %
NN	GD00007	Lithic scatter/quarry (prehistoric: no ceramics)							1.93	0.07 %
NN	GD00114	Campsite (prehistoric)	Habitation (prehistoric)	Land-terrestrial	Artifact scatter-low density (< 2 per sq meter)				0.25	0.01 %
PACE SITE	GD00106	Habitation (prehistoric)	Land-terrestrial	Prehistoric mound(s)	Artifact scatter-low density (< 2 per sq meter)	Variable density scatter of artifacts		YES	52.42	1.79 %
X138F-1	GD00405	Campsite (prehistoric)	Specialized site for procurement of raw materials	Homestead	Land-terrestrial	Other	River/Stream/Creek-riverine		0.63	0.02 %
TOTAL:									68.85	2.35 %
Florida Structures										
No Records Found										
Historical Cemeteries										
No Records Found										
Historic Bridges										
No Records Found										
National Register of Historic Places										
No Records Found										
Resource Groups										
SITE NAME	SITEID	Total Area (acres)		Percent of Area						
PENSACOLA AND GEORGIA RAILROAD	LE05209	0.00		0 %						
TOTAL:		0.00		0 %						
Field Survey										

TITLE	Total Area (acres)	Percent of Area
PHASE I CULTURAL RESOURCES INVESTIGATION OF PROPOSED ACCESS ROADS WITHIN THE FLORIDA PORTION OF THE PROPOSED FLORIDA GAS TRANSMISSION COMPANY PHASE III EXPANSION PROJECT PIPELINE CORRIDOR [DRAFT REPORT]	0.90	0.03 %
A CULTURAL RESOURCES SURVEY OF THE ZACHARY-FORT LAUDERDALE PIPELINE CONSTRUCTION AND CONVERSION PROJECT: ALTERNATE II/FLORIDA	18.55	0.63 %
PHASE I C.R.I. OF THE 453.18 KM (281.60 MI) FLORIDA PORTION ON THE PROPOSED F.G.T. COMPANY PHASE III EXPANSION PROJECT VOL. I-II;APPE.I SITE MAPS, ILL'S; PHOTO'S; A.II, VOL.I MATERIALS BY FMSF NO.:A.III, VOL.II MT. BY REC.NO.; APP.III SITE FORMS	9.95	0.34 %
ARCHAEOLOGICAL SURVEY OF THE ROCKY COMFORT TRACT, LAKE TALQUIN STATE FOREST, GADSDEN COUNTY, FLORIDA	2.54	0.09 %
PROPOSED TOWER: LITTLE RIVER TOWER SITE/ PIES #015714	76.49	2.61 %
SURVEY AND EVALUATION OF HISTORIC PROPERTIES WITHIN THE AREA OF POTENTIAL EFFECTS OF THE PROPOSED LITTLE RIVER FARMS ROAD TELECOMMUNICATIONS SITE, GADSDEN COUNTY, FLORIDA	408.93	13.94 %
PHASE I CULTURAL RESOURCES SURVEY AND ARCHAEOLOGICAL INVENTORY OF LOOPS 2, 3, 4, 5, 6, AND GREENFIELD 1 OF THE FLORIDA GAS TRANSMISSION COMPANY, LLC PHASE VIII EXPANSION PROJECT, ESCAMBIA, SANTA ROSA, OKALOOSA, WALTON, WASHINGTON, BAY, CALHOUN, JACKSON,	28.36	0.97 %
FLORIDA GAS TRANSMISSION PHASE VIII FIRST ADDENDUM REPORT RELATED TO REPORT NOS. 2008-07035 AND 2008-07036	32.16	1.1 %
ASSESSMENT OF CULTURAL RESOURCES ON THE ROCKY COMFORT TRACT OF THE LAKE TALQUIN STATE FOREST, GADSDEN COUNTY, FLORIDA	4.25	0.15 %
FLORIDA GAS TRANSMISSION PHASE VIII SECOND ADDENDUM REPORT RELATED TO REPORT NOS. 2008-07035 AND 2008-07036 (GOODWIN & COUGHLIN ET AL. 2010)	32.95	1.12 %
TOTAL:	615.09	20.97 %

Cultural Resources

Analysis Shape Type: Polygon

Analysis Timestamp: 03022015 03:51:38

Shape Name: Joe Budd WMA - FWC and FFS co-lead management (Rocky Comfort Creek Tract)

Boundary Area: 2014 acres

Cultural Resources										
Florida Sites										
SITE NAME	SITEID	SITETYPE1	SITETYPE2	SITETYPE3	SITETYPE4	SITETYPE5	SITETYPE6	HUMANREMN	Total Area (acres)	Percent of Area
ANIMAL PEN	GD00705	Artifact							4.51	0.22 %
		scatter-low density (< 2 per sq meter)								
BUNTING	GD00708	Artifact							1.37	0.07 %
		scatter-low density (< 2 per sq meter)								
CORAL BEND	GD00706	Artifact							0.49	0.02 %
		scatter-low density (< 2 per sq meter)								
FIVE POINTS	GD00710	Artifact							5.05	0.24 %
		scatter-low density (< 2 per sq meter)								
FRANCIS	GD00704	Artifact							0.47	0.02 %
		scatter-low density (< 2 per sq meter)								
LITTLE RIVER VILLAGE	GD00701	Campsite (prehistoric)	Land-terrestrial	Artifact scatter-low			Historic town		17.34	0.84 %

		density (< 2 per sq meter)					
LONE SHERD	GD00707	Artifact scatter-low density (< 2 per sq meter)				0.33	0.02 %
RICHLANDER CREEK	GD00303	Building remains	Campsite (prehistoric)	Habitation (prehistoric)	Land-terrestrial	Artifact scatter-low density (< 2 per sq meter)	45.62 2.21 %
ROCKY COMFORT HOMESTEAD	GD00703	Artifact scatter-low density (< 2 per sq meter)				2.94	0.14 %
ROCKY COMFORT SCATTER	GD00702	Artifact scatter-low density (< 2 per sq meter)				8.69	0.42 %
SUBER	GD00125	Artifact scatter-low density (< 2 per sq meter)				22.20	1.08 %
TOTAL:						109.01	5.28 %
Florida Structures							
No Records Found							
Historical Cemeteries							
No Records Found							
Historic Bridges							
No Records Found							
National Register of Historic Places							
No Records Found							
Resource Groups							
No Records Found							
Field Survey							
TITLE						Total Area (acres)	Percent of Area
ARCHAEOLOGICAL SURVEY OF THE ROCKY COMFORT TRACT, LAKE TALQUIN STATE FOREST, GADSDEN COUNTY, FLORIDA						2,034.23	98.55 %
ASSESSMENT OF CULTURAL RESOURCES ON THE ROCKY COMFORT TRACT OF THE LAKE TALQUIN STATE FOREST, GADSDEN COUNTY, FLORIDA						1,998.08	96.8 %
TOTAL:						4,032.30	195.34 %

Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties
(Revised March 2013)

These procedures apply to state agencies, local governments, and non-profits that manage state-owned properties.

A. General Discussion

Historic resources are both archaeological sites and historic structures. Per Chapter 267, Florida Statutes, *‘Historic property’ or ‘historic resource’ means any prehistoric district, site, building, object, or other real or personal property of historical, architectural, or archaeological value, and folklife resources. These properties or resources may include, but are not limited to, monuments, memorials, Indian habitations, ceremonial sites, abandoned settlements, sunken or abandoned ships, engineering works, treasure trove, artifacts, or other objects with intrinsic historical or archaeological value, or any part thereof, relating to the history, government, and culture of the state.’*

B. Agency Responsibilities

Per State Policy relative to historic properties, state agencies of the executive branch must allow the Division of Historical Resources (Division) the opportunity to comment on any undertakings, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the project, permit, grant, etc.

State agencies shall preserve the historic resources which are owned or controlled by the agency.

Regarding proposed demolition or substantial alterations of historic properties, consultation with the Division must occur, and alternatives to demolition must be considered.

State agencies must consult with Division to establish a program to location, inventory and evaluate all historic properties under ownership or controlled by the agency.

C. C. Statutory Authority

Statutory Authority and more in depth information can be found at:
<http://www.flheritage.com/preservation/compliance/guidelines.cfm>

D. Management Implementation

Even though the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual. Specific information regarding individual projects must be submitted to the Division for review and recommendations.

Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include, but are not limited to: approval of the project as submitted, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration, or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case by case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should make preparations for locating and evaluating historic resources, both archaeological sites and historic structures.

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at:

http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf .

* * *

Questions relating to the treatment of archaeological and historic resources on state lands should be directed to:

Deena S. Woodward
Division of Historical Resources
Bureau of Historic Preservation
Compliance and Review Section
R. A. Gray Building
500 South Bronough Street
Tallahassee, FL 32399-0250

Phone: (850) 245-6425

Toll Free: (800) 847-7278

Fax: (850) 245-6435

13.8 FWC Agency Strategic Plan

Florida Fish and Wildlife Conservation Commission
Agency Strategic Plan
2014 – 2019

Theme One – Florida’s Fish and Wildlife Populations and Their Habitats

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

Strategies:

1. Manage listed species so they no longer meet Florida’s endangered and threatened listing criteria.
2. Manage species to keep them from meeting Florida’s endangered and threatened listing criteria.
3. Anticipate and address fish and wildlife species’ conservation needs in light of adaptation to long-term environmental changes.
4. Develop, acquire and apply the appropriate biological and sociological science to inform fish and wildlife conservation decisions.
5. Inform and guide partners regarding how their regulations, policies, procedures and other actions affect fish and wildlife conservation.
6. Protect fish and wildlife species through effective outreach and enforcement.

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

Strategies:

1. Use science to determine quantity, quality and location of the habitats most critical to sustain healthy and diverse fish and wildlife populations.
2. Protect lands and waters critical to sustaining healthy and diverse fish and wildlife populations through diverse incentive programs.
3. Manage habitats to sustain healthy and diverse fish and wildlife populations.

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

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

Strategies:

1. Develop, acquire and use the appropriate biological and sociological science necessary to provide sustainable fishing, hunting, boating and wildlife viewing opportunities that meet the needs and expectations of user groups while providing for the sustainability of those resources.
2. Manage fish and wildlife populations to provide sustainable fishing, hunting, and wildlife viewing opportunities.
3. Develop and maintain widely available, diverse and accessible fishing, hunting, boating and wildlife viewing opportunities that meet the needs and expectations of residents and visitors while providing for the sustainability of those resources and emphasizing partnerships with both public and private landowners.
4. Recruit and manage sustainable levels of resident and visitor participation in fishing, hunting, boating and wildlife viewing.
5. Provide targeted fishing, hunting, boating and wildlife viewing programs for youth, the disabled and veterans.

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

Strategies:

1. Provide and promote opportunities for residents, and visitors to learn safety practices for fishing, hunting, boating and wildlife viewing.
2. Enhance the boating safety and waterway experience of residents and visitors through improved access, management, education and enforcement.
3. Promote Florida's outdoor environment as a safe and healthy recreational option for residents and visitors.
4. Address the growing disconnect between people and nature by marketing and providing opportunities and education for diverse age, race, gender, ethnic and other demographic sectors.

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

Strategies:

1. Continually evaluate proposed and existing regulations, based on resource management benefits, public safety concerns, and economic and social impacts, to improve or eliminate regulations as warranted.
2. Coordinate with partners and stakeholders to ensure that appropriate authorities and regulations exist to maintain sustainable fish and wildlife populations.
3. Implement and enforce regulations in an informative, proactive and influential manner to enrich resident and visitors' outdoor experience while safeguarding the natural resources.

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

Strategies:

1. Manage species and their habitats, as well as species and human interactions, to eliminate or reduce the adverse environmental, social, economic and health and safety impacts from native and non-native fish, wildlife and plants.
2. Effectively communicate to residents, visitors and businesses how to be safe and act responsibly when interacting with or possessing fish, wildlife and plants.
3. Manage captive and non-native wildlife movement and trade through proactive and responsive enforcement, regulation and education, with an emphasis on species that pose a high risk to our native fish and wildlife.
4. Enhance partnerships to address adverse environmental, social, economic and health and safety impacts from fish, wildlife and plants and ensure a consistent and integrated approach with FWC.

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

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

Strategies:

1. Expand and promote the Florida Youth Conservation Centers Network through leveraging FWC programs and staff, and developing public and private partnerships and sponsorships.
2. Develop and deliver standardized youth conservation curricula and fishing, hunting, boating and wildlife viewing outdoor activity programs, and assist with adapting programs and curricula to meet the needs of diverse communities.

3. Foster stewardship and shared responsibility for fish and wildlife conservation through conservation education programs.
4. Expand marketing and outreach to reach diverse audiences and engage all staff in priority outreach initiatives.

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

Strategies:

1. Foster a common vision among partners and the FWC to maintain and enhance fish and wildlife populations and their habitats through interagency coordination, mutually beneficial goals and initiatives.
2. Engage residents, visitors, stakeholders and partners to understand their perspectives, develop and implement conservation programs, and implement fishing, hunting, boating and wildlife viewing management activities.
3. Use citizen science to enhance conservation programs.

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

Strategies:

1. Inform residents and visitors about conservation stewardship and encourage their active involvement in achieving conservation of fish and wildlife.
2. Provide and promote opportunities for residents and visitors, especially youth, to participate in conservation stewardship activities, including FWC volunteer opportunities.

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

Strategies:

1. Provide communities with the necessary assistance to help them obtain the social and economic benefits of local conservation lands.
2. Provide residents and visitors with relevant information on the social and economic benefits of conservation, fishing, hunting, boating, and wildlife viewing.
3. Support community events and programs that promote fish and wildlife conservation.

Theme Four – Responsive Organization and Quality Operations

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

Strategies:

1. Identify and implement ways to support Florida businesses and job growth while managing fish and wildlife.
2. Identify and promote opportunities for staff to benefit local communities through participation in approved activities where FWC resources can be used (for example, the Florida State Employees' Charitable Campaign, the Guardian ad Litem Program, mentoring programs, FWC Disaster Response Teams, and American Red Cross Disaster Services).
3. Provide residents and visitors with reliable and current information on Florida's fish and wildlife.
4. Continue to attract visitors by providing top-quality fishing, hunting, boating and wildlife viewing opportunities.

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

Strategies:

1. Identify existing and emerging risks to the safety of residents and visitors and foster internal collaboration and external partnerships necessary to effectively manage, reduce or eliminate those risks.
2. Provide immediate and effective disaster response and recovery through mutual-aid efforts with local, state and federal partners.
3. Provide search, rescue, and recovery services in coordination with local, state and federal entities to ensure the safety of residents and visitors.
4. Protect natural and cultural resources through proactive and responsive enforcement efforts.

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

Strategies:

1. Address emerging biological, social and economic trends, anticipate impacts and take advantage of opportunities to accomplish FWC's mission.
2. Expect each employee to be an ambassador for FWC and its mission to Florida's diverse residents and visitors.
3. Provide efficient and effective service to Florida's diverse residents, visitors, and FWC staff.

4. Foster a diverse, accountable, responsive and skilled workforce who effectively serves Florida's residents and visitors.
5. Manage existing and secure additional resources necessary to achieve fish and wildlife conservation and meet residents, visitor and stakeholder needs.
6. Create and maintain an effective business model that supports the FWC's mission by using continuous improvement approaches that foster a collaborative and professional culture.

13.9 Prescribed Burn Plan

Joe Budd Wildlife Management Area

Conceptual Prescribed Burn Plan



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II. Introduction

Purpose – The purpose of this document is to establish a conceptual prescribed burn plan for those portions of Joe Budd Wildlife Management Area (WMA) in which the Florida Fish & Wildlife Conservation Commission serves as lead agency. Fire is widely recognized as an indispensable component to the proper function of many natural ecosystems and substantially improves diversity of various wildlife habitats. Consequently, prescribed burning is recognized as a valuable tool in the overall management of the Joe Budd WMA.

This plan will identify the potential burn units on Joe Budd WMA, describe vegetation types, and discuss objectives of a prescribed burn plan for Joe Budd WMA, as well as firing techniques, firebreak needs, and methods for post burn monitoring.

Area Description – The 11,039 acre Joe Budd WMA is located in the southeast portion of Gadsden County ([Appendix D](#)), Florida along the north shore of Lake Talquin. The area lies approximately six miles southeast of Quincy and seven miles west of Tallahassee. This area consists of a multitude of different types of land acquisitions and management authority. The 794 acre Budd and the 927 acre Little River Tracts were purchased directly by the Commission via its land acquisition trust fund. Another 1,032 acres, known as the Davis Tract, was the Commission's very first acquisition under the Preservation 2000 Inholdings and Additions Program. Combined, these properties constitute about 25% of Budd and include the portion of the WMA in which the Commission serves as sole lead agency with full management responsibilities, including prescribed burning. Consequently, it is these tracts for which this conceptual prescribed burn plan applies. The remaining three-fourths of the property consists primarily of previous Florida Power Corporation land in which the Florida Forest Service (FFS) serves as lead agency along with the 2,018 acre Rocky Comfort Tract where both the Commission and the Division of Forestry shares lead agency responsibilities 50:50, both of which make up a portion of the Lake Talquin State Forest.

The various tracts on which the Commission serves as lead agency consist of a wide variety of vegetative types. The Little River Tract was formerly part of the old Joyceland Dairy. The northern portion of the area consists of old abandoned pasture land, some of which has been planted in Loblolly Pine by the previous owner. Restoration of some of the pasture back to Longleaf Pine was accomplished through a Wildlife Habitat Incentive Program (WHIP) grant from the Natural Resource Conservation Service. There are also some hardwood ravines draining to Richlander Creek. The southern portion of the area is in the floodplain of the Little River and was once cleared for agriculture but is slowly recovering. Approximately 311 acres of this 927 acre tract, or about 34%, is in pine plantations or old fields and considered burnable and included in this burn plan.

The Budd Tract is characterized by a substantial amount of quality mesic flatwoods/upland pine. Averaging 50 to 70 years old, this predominately longleaf pine stand has been regularly burned and contains good quality understory commensals. This tract is also bisected by several shallow creek drains and also contains some high quality slope forest along its boundary with the Little River. Mature pine make up approximately 452 acres of this 794 acre tract, or about 57%, and is included in this burn plan.

The Davis Tract is located in Zone F and actually consists of four separate parcels totaling 1,032 acres. The southeastern most tract is located in the floodplain of the Ochlockonee River and consists primarily of cutover, second growth bottomland hardwoods. It has also been impacted by mining for Fuller's earth and contains little or no burnable acres. The central and northern parcels are very similar, having been logged by the previous owner and replanted in Slash and Loblolly Pine plantations. They are currently only about eighteen or nineteen years old and just beginning to get large enough to begin conducting prescribed burns. The central tract also contains a large clay pit along with some hardwood areas along the south boundary. Finally, the westernmost parcel of the Davis Tract is unique in that it is the only one not logged by the previous owners. It contains some relatively mature Longleaf Pine, primarily in the northern portion of the area, while hardwoods

dominate the southern portion near Lake Talquin. Eliminating hardwoods, creek drains, clay pit, and other nonburnable areas, approximately 497 of the 1,032 acres, or 48%, is deemed burnable and included in this plan.

Out of the 2,753 acres of Joe Budd WMA in which the FWC has sole management responsibility, a total of 1,272 acres, or about 46%, is considered burnable and addressed in this conceptual prescribed burn plan.

Objectives - Prescribed fire will be utilized on Joe Budd WMA as one of many techniques for manipulating and managing various wildlife habitats to accomplish a variety of objectives. One of the primary objectives for the use of prescribed fire on Budd is the restoration and/or maintenance of fire-dependent native vegetative communities, as well as setting back succession. This will not only serve to promote native plant communities but insure that plant and wildlife diversity is increased by maintaining an early succession component to the habitat. Prescribed burning will be utilized almost exclusively in stands dominated by pines. So long as crown density is kept low enough so as not to inhibit understory growth, fire is one of the best tools available for controlling hardwood encroachment into pine stands and keeping the understory structure where it can provide the most benefits to a wide variety of wildlife species, such as browse for deer, brood habitat for turkeys, and habitat for gopher tortoises and fox squirrels, for example. Many other secondary objectives are also accomplished via prescribed burning as follows:

- 1) Reduction of fuel loads which help to prevent or mitigate the effects of wildfires.
- 2) Control of invasive exotic plant species.
- 3) Site Prep prior to forest regeneration.
- 4) Disease control such as brown needle blight spot in longleaf.
- 5) Improved aesthetics and public access.
- 6) Reduces competition and helps release longleaf pine seedlings, improving the success of regeneration efforts.

III. Burn Timing and Frequency

Prescribed burning is generally broken down into two temporal categories. Dormant or winter burns are conducted during the cooler period of the year. Most plants are not actively growing at this time, making them less susceptible to damage from fire. The cooler temperatures also help protect plants, resulting in less heat damage such as needle scorch. The numerous cold fronts during the winter in North Florida provide ideal burning weather with low humidity and consistent winds for a couple of days following the front. All this makes prescribed burning during the dormant season much easier and more forgiving. However, results are less dramatic and are especially poor in accomplishing adequate hardwood control. In North Florida, this period is generally considered to be from October through March.

Summer or growing season burns are conducted during the warmer months of the year and are often referred to as lightning season fires. This is because these burns more closely mimic a natural fire regime that is most often started by lightning, which occurs frequently during the numerous thunderstorms this time of year. It is believed that the fire-dependent native plant communities in this area adapted at least partially to not only withstand but thrive when exposed to these commonly occurring natural fires. Consequently, growing season burns are important in maintaining these types of communities. For example, hardwood encroachment is much better controlled with prescribed burns this time of year and it promotes ground cover diversity including benefits to listed plant species. However, because the weather pattern is more tropical in nature, fronts are much less common than during the winter, resulting in high temperatures and humidifies with much less predictable or consistent winds. It is therefore much more difficult to burn at this time and care and planning must be exercised to avoid undesirable consequences. In North Florida, growing season burns are generally considered to include burns conducted in April through September.

It is not the intent of this conceptual plan to discuss specific burn compartments. The vegetative structure and composition will be considered for each individual compartment when deciding upon the best time to burn to achieve specific objectives for that stand. For example, dormant season burns may be initially employed to reduce heavy fuel loads. Then summer burns may be conducted to achieve desired community structure and composition. Once accomplished, dormant season burns may again be utilized with occasional growing season burns for maintenance of the stand.

Substantial effort will be made to emphasize growing season burning and utilize dormant season burns on occasion to ensure the targeted frequencies are maintained throughout the area. Regarding frequency of burning, also referred to as the burn rotation, or the length of time between burns, a short rotation is considered most desirable in the near term in order to reduce the non-pine densities and in turn release herbaceous cover. Most burn rotations will be in the 18 month to 30 month range. The exception are the pasture compartments in the Little River Tract, which are generally on a shorter rotation to take advantage of the more open nature of the vegetation and where quail densities are the highest. As with the timing of burning, varying the frequency of burning among adjacent compartments will help maximize the spatial distribution and juxtaposition within the area and achieve a well-distributed mosaic of various habitat types.

Another consideration regarding the timing of burns on the Joe Budd WMA is that, due to its small size and the intensive use the area receives by hunters, prescribed burning must be avoided during scheduled hunts. This includes Saturdays and Sundays from October through January and again in mid-March through late April. Fridays during December and January must also be avoided. In addition, even though it is not a hunt day, Thursdays during December and January must usually be avoided as well due to the need to conduct the drawing prior to every archery and archery/muzzle loading gun hunt and the high numbers of hunters on the area preparing for the weekend hunt. Consequently, in December and January, only three days a week, Monday through Wednesday, will be available for burning. In fact, because of the need to complete track counts, training of OPS check station operators, supervision of hunts and Christmas holidays, rarely will prescribed burning be conducted in December.

IV. Firing Techniques

Methods - Various methods and techniques for setting prescribed fires exist such as back fires, flanking fires, and head fires. Back fires are those in which the fire burns into the fuel and against the wind. These types of fire burn slowly and are much easier to control with typically low flame heights. Head fires are set in such a manner that the wind 'pushes' the fire into the fuel. These fires can burn very quickly, depending on the wind speed, and flame heights are much higher, resulting in a much greater likelihood of damage to over story trees. A spot strip head or strip head fire is similar to a head fire except it is set only a short distance from the previous fire instead of completely on the upwind side of the entire compartment in order to minimize the time the fire can gain in intensity before encountering the previously burned area. Flanking fires are set parallel to the prevailing wind and fall somewhere between back and head fires in intensity.

At all times on the Joe Budd WMA, prescribed burns will begin with a back fire to secure the baseline. The baseline is the road, firebreak, or natural boundary of a compartment furthest from the direction the wind is coming from. In this way, a low, more easily controlled fire can be used to increase the safety zone away from adjacent downwind stands to minimize the potential for spot overs. In addition, the burn crew can concentrate along this boundary during the beginning of a burn to be available to react to any potential problems. Once the fire backs away from the baseline a sufficient distance, other firing methods can be considered. The exact method employed will depend greatly on the density and height of the fuel in relation to the over story, the consistency and strength of the wind, fuel moisture, temperature, relative humidity, and objectives of the burn. If fuels are light, the stand has been burned regularly, and the trees are relatively mature, a flanking, spot strip head or strip head fire can be utilized without too much danger of damaging the over story. On the other hand, if the fuels are heavy and the over story young, the back fire may be allowed to completely traverse the stand in

order to minimize its intensity. Head fires will likely only be used on the pasture compartments on the Little River Tract due to the lack of over story. The point is that the specific conditions and objectives for each individual stand will be considered before selecting the method of burning.

Equipment - Due to the small size and wide distribution of burn compartments, aerial ignition will not likely be used for conducting prescribed burns on the Joe Budd WMA. A combination of hand-held drip torches and ATV-mounted drip torches will be the primary means of ignition. ATV mounted torches will be utilized wherever possible due to their speed and efficiency. A small dozer with root rake and/or a farm tractor and disc as well as a 500 gallon pumper truck will be on standby during the majority of burns. Hand held Macom radios will be used to communicate within the burn crew and forestry will be contacted via cell phone should assistance be required.

V. Fire lines

Adequate fire lines are essential for controlling prescribed burns. On the Joe Budd WMA, it is the policy to utilize existing service as well as public roads and natural barriers, such as creeks, whenever possible to minimize erosion. In addition, plowed lines will be avoided due to their propensity to form ditches which are especially prone to erosion. Instead, light disking with a farm tractor will be employed and only where absolutely necessary. Even so, a total of approximately 12 miles of disked fire lines are required to safely contain burns on all compartments on Joe Budd. This is in addition to approximately 18 miles of service and public roads and another 11 miles of natural boundaries such as creeks.

VI. Burn Units

Size & Distribution - The Commission-managed portion of Joe Budd WMA has been divided into a total of 32 prescribed burn compartments, 29 of which contain pyrogenic natural communities (see Figure 1, and Appendix III). Given the total of 1,272 acres considered burnable, this yields an average of 43.4 acres per burn unit and ranges from 17.6 to 91.8 acres. Due to Budd's relatively small size, a concerted effort was made to keep the burn units small compared to most other WMA's in order to increase habitat diversity over short distances. Size was also determined to a large degree by available roads and other natural fire boundaries so as to minimize the need to install disked fire lines to the extent feasible. However, the fact that the Commission-managed areas are disjunct and scattered among the FFS managed property as well as private property created the need for more fire lines to protect adjacent properties than would normally be the case.

Table 1 (Appendix III) illustrates the prescribed burn compartments and describes the recent burn history of each unit. The average number of acres burned annually for the previous 10 year period is about 389, which is nearly one-third of the burnable acreage during that time.

Burn Prescriptions – Here we provide items that should be addressed in a burn prescription, including both legal requirements and professional elements. A sample prescription form is included with this plan ([Appendix IV](#)).

Legal Requirements:

- 1) Map of burn area
- 2) Stand/site description: over story, understory, fuels
- 3) Personnel, equipment

- 4) Desired weather factors: surface and transport winds, relative humidity, temperature, dispersion index, fine-fuel moisture
- 5) Desired fire behavior factors: type of fire, flame length, rate of spread
- 6) Time and date prescription was prepared
- 7) Authorization date and time period
- 8) Smoke screening
- 9) Signature and certification number of Burn Manager

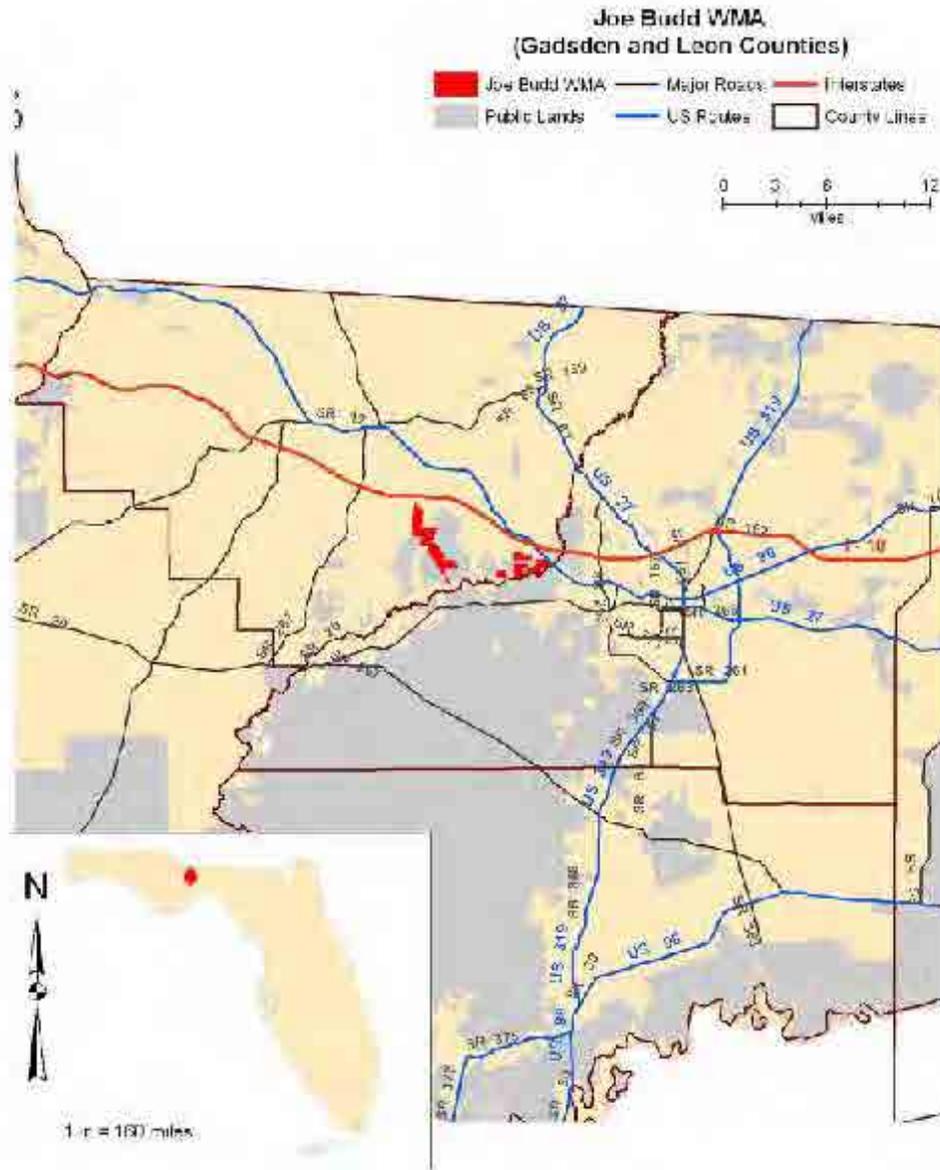
Professional Elements:

- 10) Purpose, measurable goals & objectives
- 11) Safety
- 12) Description of fuel conditions
- 13) Season and time of day
- 14) Publicity
- 15) Ignition plan
- 16) Contingencies, control & mop up, declaring fire out
- 17) Evaluation & monitoring

VII. Evaluation and Monitoring

Prescribed burn evaluation and monitoring is a continual process and can be broken down into three categories: pre-burn, during burn, and post burn. For several days or weeks leading up to the prescribed burn evaluation and monitoring of the existing site conditions and weather parameters will be conducted to ensure the appropriate conditions are present prior to ignition. During the ignition and burnout phases of each burn weather parameters and fire behavior will be continually observed for compliance with the prescribed parameters. A contingency plan will be a part of every burn plan that will inform decision making and actions should weather conditions or fire behavior become out of prescription during the burn. Post burn monitoring will involve subjective estimates of crown scorch, scorch height, percent of unit burned vs. unburned and we will evaluate these results against the prescribed parameters. Vegetation monitoring through the Objective Based Vegetation Monitoring (OBVM) program will provide long term data to inform the area manager of the natural communities' condition compared to the Desired Future Condition (DFC). This data also will allow the manager to make adjustments to the burn regime so that the DFC can be met or maintained. Various wildlife surveys will determine whether Wildlife Conservation, Prioritization and Recovery (WCPR) Program focal species are using the area and their response to management activities.

Appendix I Vicinity Map



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Appendix II

Natural Community and Altered Landcover Type Descriptions

Joe Budd Wildlife Management Area

Florida Natural Areas Inventory
2013

NATURAL COMMUNITIES

Baygall

Baygall occurs where seepage is at or near the soil surface. Seepage is generally the result of percolating water hitting a restrictive soil layer (e.g. clay or organic pan) and then generally moving laterally and eventually emerging along a slope. Baygalls are generally associated with sandy upland communities (flatwoods and sandhills) and seepage streams. The canopy, if present, typically contains sweetbay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*), or red bay (*Persea palustris*); diamondleaf oak (*Quercus lanrifolia*), tulip poplar (*Liriodendron tulipifera*), and sweetgum (*Liquidambar styraciflua*) may also be present. The tall shrub layer is generally dense and composed of titi (*Cyrilla racemiflora*) and sweet gallberry (*Ilex coriacea*). Short shrub cover is also dense and often dominated by shiny lyonia (*Lyonia lucida*); other shrubs include sweet pepperbush (*Clethra alnifolia*), black titi (*Cliftonia monophylla*) and azaleas (*Rhododendron viscosum*, and *Rhododendron canescens*). In well-developed baygalls, where woody vegetation is dense, the herbaceous layer is sparse due to lack of sunlight. Herb cover, if present, is typically represented by cinnamon fern (*Osmunda cinnamomea*) and sensitive fern (*Onoclea sensibilis*). *Sphagnum* is usually present and may be abundant.

Bottomland Forest

Bottomland forests are hardwood forests that occur on drier soils within river floodplains and occur on slightly higher elevations than the commonly adjacent floodplain swamp community. This community also receives flooding inputs seasonally. At Joe Budd WMA, bottomland forest is primarily associated with the Ochlocknee River and its smaller tributaries. Bottomland forest commonly occurs between the lowest slope of the ravine upland hardwood forest community and the clear water seepage stream commonly found in ravine bottoms. This community has a closed canopy of tall, mature, and straight trees, including both pines and hardwoods, with a subcanopy of younger canopy species. The dense canopy maintains relatively high humidity levels, thus fires are rare. The open understory is characterized by a wide array of shrub species that are relatively sparse with a ground cover of ferns, herbs, and grasses. Within the bottomland forest community are often floodplain swamp and upland hardwood forest inclusions. Bottomland forest is highly variable in species composition, dependent on floodplain gradient, included seepage stream size, and local edaphic conditions.

On the 1953 geo-rectified photographs, bottomland forest appears as a dark, rough grained signature, virtually indistinguishable from the surrounding communities. All other surrounding communities, such as swamps, floodplain forests, and upland hardwood forests were delineated first using the 1999 infrared photography. The remaining community that occurred between the previously mentioned habitats was deemed bottomland

forest by the process of elimination. Contour lines were used to further separate bottomland forest. Polygons were also ground-truthed in the field to confirm boundaries. Bottomland forest at Joe Budd WMA has been minimally altered from its historic conditions and the 1999 aeriels accurately reflect historic conditions.

The commonly closed canopy of the bottomland hardwood forest community included red maple (*Acer rubrum*), loblolly pine (*Pinus taeda*), water oak (*Quercus nigra*), swamp tupelo (*Nyssa sylvatica* var. *biflora*), pignut hickory (*Carya glabra*), sweetgum (*Liquidambar styraciflua*), tuliptree (*Liriodendron tulipifera*), ogeechee tupelo (*Nyssa ogeche*), diamond-leaf oak (*Quercus laurifolia*), and live oak (*Quercus virginiana*). The subcanopy layer often included younger representative canopy species in addition to American holly (*Ilex opaca*), sweetbay (*Magnolia virginiana*), and swamp bay (*Persea palustris*). The shrub strata were typically sparse and included American beautyberry (*Callicarpa americana*), titi (*Cyrilla racemiflora*), St John's wort (*Hypericum* sp.), large gallberry (*Ilex coriacea*), wax myrtle (*Myrica cerifera*), dwarf palmetto (*Sabal minor*), large gallberry (*Ilex coriacea*), and fetterbush (*Lyonia lucida*). The herbaceous layer for the bottomland hardwood forest community was dominated by slender woodoats (*Chasmanthium laxum*). Other herbaceous associates included cinnamon fern (*Osmunda cinnamomea*), sphagnum moss (*Sphagnum* sp.), netted chain fern (*Woodwardia areolata*), Virginia chain fern (*Woodwardia virginica*), and switchcane (*Arundinaria gigantea*). Vines were sparse, but commonly present and included peppervine (*Ampelopsis arborea*), rattan vine (*Berchemia scandens*), trumpet creeper (*Campsis radicans*), eastern poison ivy (*Toxicodendron radicans*), and muscadine (*Vitis rotundifolia*).

Fire is infrequent to nonexistent in bottomland forests, occurring only during times of extreme drought. This community should be considered as a natural fire-break that may experience limited burning at its margins.

Depression Marsh

Depression marshes are characterized as shallow, rounded depressions that are typically dominated by herbaceous vegetation. On Joe Budd WMA, fire suppression has led to considerable shrub encroachment within many depression marshes. These marshes may also have a sparse canopy of slash pine (*Pinus elliottii*) or water oak (*Quercus nigra*). Tall and short shrub layers are high in coverage, ranging from 25-100%. Dominant shrub species include titi (*Cyrilla racemiflora*), shiny lyonia (*Lyonia lucida*), blueberries (*Vaccinium* spp.), black titi (*Cliftonia monophylla*), red maple (*Acer rubrum*), wax myrtle (*Myrica cerifera*), and gallberry (*Ilex glabra*). Herbaceous cover is often very sparse, but may occasionally include Virginia chain fern (*Woodwardia virginica*), cinnamon fern (*Osmunda cinnamomea*) and sphagnum moss (*Sphagnum* sp.).

Dome Swamp

Dome swamps are typically small forested wetlands occurring in depressions commonly within flatwoods and sandhill communities. Dome swamp occurs at only a few limited locations on Joe Budd WMA. The majority of the swamp communities found at this site are associated with and/or within the stream and river floodplains. This site contains a moderately dense canopy of swamp tupelo (*Nyssa biflora*). The ecotone of this community includes a dense shrub perimeter of wax myrtle (*Myrica cerifera*), shiny lyonia (*Lyonia lucida*), and titi (*Cyrilla racemiflora*). Herb cover is sparse and limited to the center of the dome where patches of sedge (*Carex* sp) and witchgrass (*Panicum* sp) are dominant.

Floodplain Marsh

Floodplain marsh is a wetland community occurring in river floodplains and dominated by herbaceous vegetation and/or shrubs. The highest part of the marsh is often saturated and seasonally flooded with a high diversity of graminoids and forbs. Broadleaf emergents and floating plants occupy the deepest and most frequently flooded portions of the community. Floodplain marsh occurs within the Ochlocknee River floodplain at Joe Budd WMA and typically forms a varied mosaic with the commonly adjacent floodplain swamp. Shrubs are typically sparse and are limited by water depth. Coastal plain willow (*Salix caroliniana*) and immature cypress (*Taxodium* sp.) are common shrubs found in the floodplain marsh community. Herbs are most commonly represented by broad-leaved emergents such as pickerelweed (*Pontederia cordata*), bulltongue arrowhead (*Sagittaria lancifolia*), and yellow pondlily (*Nuphar advena*).

Floodplain Swamp

Floodplain swamps are deciduous hydric forests occurring along streams and rivers that restrict the establishment of only the most flood tolerant tree species, such as bald cypress (*Taxodium distichum*). This community at Joe Budd Wildlife Management Area receives floodwater inputs from the adjacent Ochlocknee River. Floodplain swamps occur in low-lying areas along stream and river channels and are inundated for most, if not all, of the year. Canopy coverage is generally high (50-100%), with cypress (*Taxodium* spp.) and tupelo (*Nyssa* spp.) being the dominant species. Shrub layers are usually sparse, but occasionally include willows (*Salix* spp.), titi (*Cyrilla racemiflora*), wax myrtle (*Myrica cerifera*), buttonbush (*Cephalanthus occidentalis*), and sweetgum (*Liquidambar styraciflua*). Herbaceous vegetation is sparse (<25%) and typically includes sedges (*Carex* spp.), panic grasses (*Panicum* spp.), lizard's tail (*Saururus cernuus*), and royal fern (*Osmunda regalis*).

Several of the floodplain swamps on Joe Budd WMA have included floodplain marshes, which lack a canopy and are dominated by herbaceous vegetation such as yellow pondlily (*Nuphar advena*), pickerelweed (*Pontederia cordata*), and arrowheads (*Sagittaria* spp.).

Mesic Flatwoods

Mesic flatwoods occur on broad flatlands that are poorly drained, usually as a result of a clay or organic layer that restricts water percolation. Typically there is a sparse canopy of longleaf pine (*Pinus palustris*) and occasionally slash pine (*Pinus elliottii*). The tall shrub layer is represented by a few scattered red bay (*Persea borbonia*), wax myrtle (*Myrica cerifera*), or encroaching oaks. The short shrub layer is generally a dense cover of saw palmetto (*Serenoa repens*) and gallberry (*Ilex glabra*). Other common shrubs include shiny lyonia (*Lyonia lucida*), shiny blueberry (*Vaccinium myrsinites*), huckleberry (*Gaylussacia* spp.), wax myrtle, and dwarf live oak (*Quercus minima*). Herbaceous cover within the mesic flatwoods is sparse to moderate (1 - 25%) and usually includes wiregrass (*Aristida stricta*), bottlebrush threeawn (*Aristida spiciformis*), bluestem grasses (*Andropogon* spp.), blackroot (*Pterocaulon pycnostachyum*), *Xyris*, wild bachelor's button (*Polygala lutea* and *Polygala nana*), yellow hatpins (*Syngonanthus flavidulus*), and low panic grasses (*Dichantherium* spp.). Some areas of mesic flatwoods at Joe Budd WMA were formerly planted in rowed pines. If these areas have had pines thinned, retain substantial native groundcover, and are being managed with prescribed fire they are classified as mesic flatwoods.

Sandhill

Sandhill is characterized by a canopy of widely spaced pine trees, a sparse midstory of deciduous oaks, and a moderate to dense groundcover of grasses, herbs, and low shrubs occurring over a rolling topography with deep, well drained sands. The canopy consists of scattered older mature longleaf pine (*Pinus palustris*) over sand live oak (*Quercus geminata*), blue-jack oak (*Quercus incana*), sand-post oak (*Quercus margareta*), and turkey oak (*Quercus laevis*). The open shrub strata includes sparkleberry (*Vaccinium arborsum*) and deerberry (*Vaccinium stamineum*), gopher apple (*Licania michauxii*), and scattered clumps of saw palmetto (*Serenoa repens*). The ground cover is often sparse to moderately dense and contains wiregrass (*Aristida stricta*), bluestem grass (*Andropogon* spp.), panic grass (*Dichantherium* sp.), wild buckwheat (*Eriogonum tomentosum*), milkpea (*Galactia regularis*), grass-leaf aster (*Pityopsis graminifolia*), bracken fern (*Pteridium aquilinum*), and lopsided Indian grass (*Sorghastrum secundum*). Sandhill in this region of the state is often found intermixed with upland pine and the separation of these two communities is often based on the presence of turkey oak and a suite of forbs characteristic of the sandhill community.

Seepage Stream

Seepage streams typically form as a result of shallow ground water percolating through sandy upland soils. On Joe Budd WMA, seepage streams occur as small narrow fingers, imbedded in and winding through ravines and the associated bottomland forest. These seepage streams grade into blackwater streams as sediment and tannins are accumulated downstream. Canopy and subcanopy species bordering these seepage streams include slash pine (*Pinus elliotii*), sweet bay (*Magnolia virginiana*), red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), and diamond-leaf oak (*Quercus laurifolia*). Tall and short shrub layers along the banks of these streams are generally sparse (1-5% cover), and include black titi (*Cliftonia monophylla*), titi (*Cyrilla racemiflora*), shiny lyonia (*Lyonia lucida*), sweet pepperbush (*Clethra alnifolia*), American holly (*Ilex opaca*), and occasionally saw palmetto (*Serenoa repens*). Herbaceous vegetation along these seepage streams is mainly dominated by graminoids, such as giant cane (*Arundinaria gigantea*) and wild oats (*Chasmanthium sessilifolium*), and ferns, such as cinnamon fern (*Osmunda cinnamomea*) and sensitive fern (*Onoclea sensibilis*), with coverage ranging from 25 to 50%.

Upland Hardwood Forest

Upland hardwood forest is a well-developed, closed-canopy forest dominated by deciduous hardwood trees on mesic soils in areas sheltered from fire. It typically has a diverse assemblage of deciduous and evergreen tree species in the canopy and midstory, shade-tolerant shrubs, and a sparse groundcover. The moisture retention properties of these richer soils and layers of leaf mulch conserve soil moisture and create decidedly mesic conditions. The dense canopy and multiple layers of midstory vegetation restrict air movement and light penetration, which maintains high relative humidity within the community. Upland hardwood forest is found in association with bottomland forest and upland pine, typically situated between the two on isolated ravine slopes.

Canopy cover in upland hardwood forest at Joe Budd WMA is high, usually ranging from 50-100%. Typical canopy and subcanopy species include diamond-leaf oak (*Quercus laurifolia*), American beech (*Fagus grandifolia*), loblolly pine (*Pinus taeda*), tulip poplar (*Liriodendron tulipifera*), southern magnolia (*Magnolia grandiflora*), pignut hickory (*Carya glabra*), sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), hackberry (*Celtis laevigata*), black cherry (*Prunus serotina*) and dogwood (*Cornus florida*). Both tall and short shrub coverage is variable, ranging from 1 to 50% depending on degree of canopy closure. Species typically include young canopy species, as well as sassafras (*Sassafras albidum*), wax myrtle (*Myrica cerifera*), sweetleaf (*Symplocos tinctoria*), needle palm (*Rhapidophyllum histrix*), American holly (*Ilex opaca*), blueberries (*Vaccinium* spp.), southern arrow-wood (*Viburnum dentatum*), persimmon (*Diospyros virginiana*), American

beautyberry (*Callicarpa americana*), and red buckeye (*Aesculus pavia*). The herbaceous layer is variable as well, but typically in the 10 to 30 percent range. Species include sedges (*Carex* spp.), wild oats (*Chasmanthium sessilifolium*), panic grasses (*Panicum* spp. and *Dichantheium* spp.), trillium (*Trillium underwoodii*), violets (*Viola* spp.), Virginia chain fern (*Woodwardia virginica*), cinnamon fern (*Osmunda cinnamomea*), resurrection fern (*Polypodium polypodioides*), and shield ferns (*Thelypteris* spp.). Vines such as greenbrier (*Smilax* spp.), muscadine (*Vitis rotundifolia*), Virginia creeper (*Parthenocissus quinquefolia*), pepper-vine (*Ampelopsis arborea*), yellow jessamine (*Gelsemium sempervirens*) and poison ivy (*Toxicodendron radicans*), are common in upland hardwood forests.

This community also contains numerous FNAI-tracked plant species due its geographic location and high quality habitat conditions. Rare plants found at this site include Flyr's Nemesis (*Brickellia cordifolia*), Carolina allspice (*Calycanthus floridus*), wild ginger (*Hexastylis arifolia*), silky camellia (*Stewartia malacodendron*), Carolina lily (*Lilium michauxii*), pyramid magnolia (*Magnolia pyramidata*), oak leaved hydrangea (*Hydrangea quercifolia*), trout lily (*Erythronium umbilicatum*), and Florida bellwort (*Uvularia floridana*).

Upland Pine

Upland Pine is characterized as a woodland occurring of rolling hills with widely spaced pines, with few understory shrubs and a dense ground cover of grasses and herbs. Upland pine occur on moderately well drained soils that typically have a clay component. Canopy and shrub covers are sparse and low enough to allow ample light to penetrate the forest floor and thus support herbaceous ground cover.

At Joe Budd WMA the canopy of the upland pine community is dominated by a mixed age class of longleaf pine with a sparse subcanopy (1-25% coverage) of younger pines, along with southern red oak (*Quercus falcata*). Laurel oak (*Quercus hemisphaerica*) and water oak (*Quercus nigra*) will invade the upland pine sites that have not burned regularly. In most areas of the forest, the canopy is classified as older mature (50-70 years), and in two areas, old growth, flat-topped longleaf pines were noted. Shrub species diversity in upland pine is usually very high. The shrub layer is variable in coverage (10-75%) with the following shrub species present- shiny blueberry (*Vaccinium myrsinites*), dangleberry (*Gaylussacia frondosa*), runner oak (*Quercus pumila*), dwarf live oak (*Quercus minima*), gallberry (*Ilex glabra*), staggerbush (*Lyonia fruticosa*), wax myrtle (*Myrica cerifera*), long-leaved pawpaw (*Asimina longifolia*) winged sumac (*Rhus copallinum*), persimmon (*Diospyros virginiana*), and saw palmetto (*Serenoa repens*). The herbaceous layer is also variable in coverage (5-75%), and includes wiregrass (*Aristida stricta*), wild indigo (*Baptisia alba*), yellow-eyed grass (*Xyris caroliniana*), elephant's foot (*Elephantopus elatus*), sweet goldenrod (*Solidago odora*), panic grasses (*Panicum* spp., *Dichantheium* spp.), bracken fern (*Pteridium aquilinum*), broomsedge (*Andropogon virginicus*), blazing star (*Liatris gracilis*), deer tongue (*Carphephorus odoratissimus*), innocence (*Hedyotis procumbens*), false wild petunia (*Dyschoriste oblongifolia*), nutrush (*Scleria ciliata*), milk-pea (*Galactia volubilis*), butterfly weed (*Asclepias tuberosa*), tall meadowbeauty (*Rhexia alifanus*), and silk-leaved golden aster (*Pityopsis graminifolia*).

The majority of the upland pine community on Joe Budd WMA have been managed with frequent (2-5 year interval) prescribed fire applications and are generally in good ecological condition. Despite past disturbances, including logging, clearing for food plots, and the addition of firebreaks, these communities remain in a relatively natural condition.

Upland pine found at the Rocky Comfort Tract of Lake Talquin State Forest contains predominately planted pines in various densities. Some of these habitats can best be described as pine plantation currently where

groundcover has been lost and pine densities are extremely high. Pine thinning and prescribed fire has created numerous stands at this site that contain enough characteristics to be classified as upland pine.

Wet Flatwoods

Wet flatwoods are flat, poorly drained woodlands of scattered, well-spaced pine trees with a diverse understory of hydrophytic herbs and shrubs. On Joe Budd WMA, wet flatwoods occur in broad, flat areas within a larger mesic flatwoods matrix and along the upper reaches of drainages that lead into the upland hardwood and bottomland forests ravines.

The canopy layer within the wet flatwoods at Joe Budd WMA is dominated by one or more pine species depending on location; these include slash pine (*Pinus elliottii*), pond pine (*Pinus serotina*), loblolly pine (*Pinus taeda*). Several hardwood species also may be present, these include sweetgum (*Liquidambar styraciflua*), tuliptree (*Liriodendron tulipifera*), sweetbay (*Magnolia virginiana*) and water oak (*Quercus nigra*). This community lacks a true subcanopy. The shrub layer for the wet flatwoods community includes mountain azalea (*Rhododendron canescens*), coastal sweetpepperbush (*Clethra alnifolia*), titi (*Cyrilla racemiflora*), gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), Piedmont staggerbush (*Lyonia mariana*), wax myrtle (*Myrica cerifera*), fourpetal St. John's wort (*Hypericum tetrapetalum*), sparkleberry (*Vaccinium arboreum*), and highbush blueberry (*Vaccinium corymbosum*). Vines found in the wet flatwoods community included muscadine (*Vitis rotundifolia*), cat greenbrier (*Smilax glauca*), and laurel greenbrier (*Smilax laurifolia*). The sparse to moderately dense herbaceous layer for the wet flatwoods community includes broomsedge bluestem (*Andropogon virginicus*), switchcane (*Arundinaria gigantea*), false nettle (*Boehmeria cylindrica*), cinnamon fern (*Osmunda cinnamomea*), maidencane (*Panicum hemitomon*), Virginia chain fern (*Woodwardia virginica*), and tall yelloweyed grass (*Xyris platylepis*).

ALTERED LANDCOVER TYPES

Clearing/ Regeneration

Clearing/regeneration areas are defined as dove fields, wildlife food plots, or clearings that have significantly altered the groundcover. At Joe Budd WMA clearing/regeneration most commonly refer to wildlife food plots that are being managed to provide supplemental game animal forage. These areas frequently are planted with non-native forage species to supplement wildlife with an additional food source.

Developed

Developed areas are defined as check stations, ORV use areas, parking lots, buildings, maintained lawns (as part of recreational, business, or residential areas), botanical or ornamental gardens, campgrounds, recreational, industrial, and residential areas. The maintenance yard, offices, and Joe Budd Aquatic Education Center are the only areas classified as "developed" on the property.

Impoundment

This landcover type is often created by manipulating natural land elevations, hydrology or drainage. At Joe Budd WMA this community has been created by damming ravines in order to create an open water body.

Pine Plantation

Pine plantation is an anthropogenic community characterized by pines planted in rows. Pines are often densely planted and negatively impact herbaceous layer cover and the species diversity of the groundcover. At Joe Budd Wildlife Management Area pine plantation occurs on historic upland pine, flatwoods and sandhill sites. These sites contain pine stands of various ages planted in rows. The density of pines reduce light penetration to the groundcover stratum and negatively impact groundcover species. Pines stands are typically slash (*Pinus elliottii*) and loblolly pine (*Pinus taeda*) dominated with a few scattered oaks (*Quercus* sp.) found in canopy layer. The shrub and herbaceous layers are often sparse due to high pine densities.

Restoration Upland Pine

Upland pine is characterized as a woodland occurring of rolling hills with widely spaced pines, with few understory shrubs and a dense ground cover of grasses and herbs. Upland pine occurs on moderately well drained soils that typically have a clay component. Canopy and shrub covers are sparse and low enough to allow ample light to penetrate the ground layer to support herbaceous ground cover.

Restoration upland pine is historic upland pine that is undergoing management with the end goal of restoring the natural upland pine structure, composition, and function. Approximately 42 acres of former pine plantation that was historically upland pine has been clearcut and replanted with historic groundcover species. These areas are in the first stages of restoration and germination and establishment has been successful thus far. Repeated prescribed fire application is needed for continued success.

Successional Hardwood Forest

Successional Hardwood Forest are closed-canopied forest dominated by fast growing hardwoods such as laurel oak (*Quercus hemisphaerica*), water oak (*Quercus nigra*), and/or sweetgum (*Liquidambar styraciflua*), often with remnant pines. These forests at Joe Budd WMA 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 areas are often dense and dominated by smaller individuals of the canopy species. Species such as beautyberry (*Callicarpa americana*), muscadine (*Vitis rotundifolia*), and sparkleberry (*Vaccinium arboreum*) are common.

Utility Corridor

Utility corridors at Joe Budd WMA are defined as clearings or disturbed lands that house electric, gas, telephone lines and associated right-of-way buffers. These areas often contain remnant groundcover species as a result of canopy and mid-story removal and vegetation mowing. Weedy species such as broomsedges (*Andropogon* spp.) and dogfennel (*Eupatorium capillifolium*) are commonly the dominant species present. Canopy, subcanopy, and shrubs are typically not a significant component of this landcover type.

Appendix III Map with Attribute Table of Burn Units and History

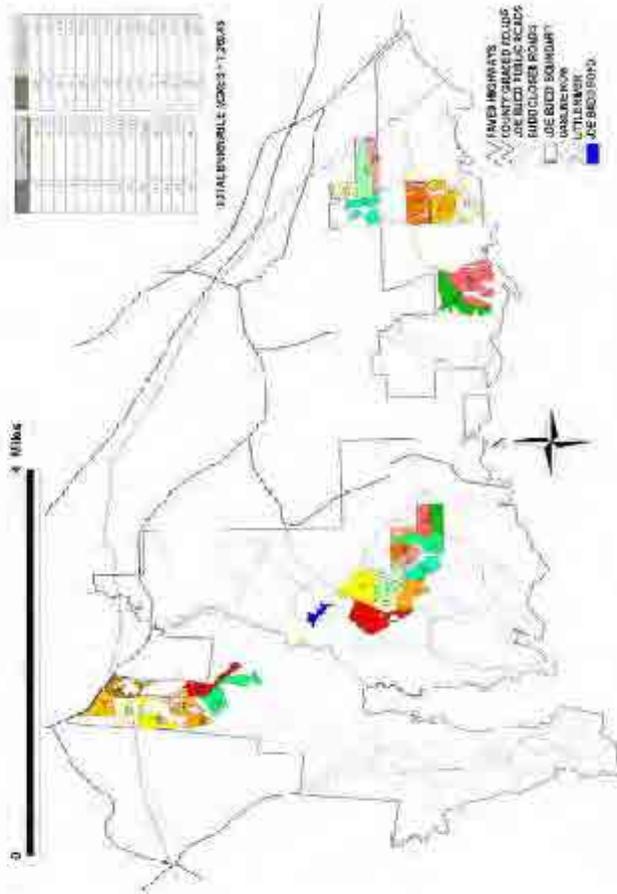


FIGURE 1. Joe Budd Wildlife Management Area Prescribed Burn Compartments on property where the Fish & Wildlife Conservation Commission serves as lead agency.

**JOE BUDD WILDLIFE MANAGEMENT AREA
RECENT PRESCRIBED BURN HISTORY AND
2014-2015 BURN PLAN**

MNGMT UNIT	BURN UNIT NUMBER	SEASON											PROPOSED 2014-2015	
		03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14		
1	15	37.9 01/10/04			37.9 Feb 2007	37.9 01/10/03			37.9 02/23/03			37.9 02/23/03		37.9 Apr 2015
	16	37.0 1/10/2004			37.0 Feb 2007	37.0 1/11/2008			37.0 1/23/2008			37.0 1/23/2008		37.0 Mar 2015
	17		29.5 Feb 2005	29.5 2/9/2006				29.5 Feb 2009	29.5 2/8/2010		29.5 Jan 2012	29.5 03/07/13		29.5 Mar 2015
2	18		34.0 01/10/2004		34.0 *****	34.0 *****		34.0 *****		34.0 3/11/2011		34.0 12/2/2013		34.0 Mar 2015
	19		35.4 3/24/2005		35.0 *****		41.6 Jan 2009	41.6 3/5/2010			41.6 Jan 2012	41.6 03/07/13		
	20	35.8 1/20/2004		35.8 2/10/2006	35.8 Feb 2007	35.8 01-25-08			35.8 3/11/2011			35.8 02/23/03		35.8 02/23/03
3	21		30.9 2/13/2006	30.9 *****	30.9 *****		35.9 Jan 2009	35.9 Jan 2010	35.9 Feb 2011	45.9 Jan 2012	45.9 Jan 2013	30.9 02/23/03		30.9 02/23/03
	22	8.8 *****	8.8 01/10/2004	8.8 2/1/2006	8.8 *****	8.8 1/3/2008			8.8 3/11/2011			8.8 12/2/2013		14.1 Jan 2015
	5				20.2 May 2007	20.2 3/6/2008						20.2 3/10/13		
5	6									35.3 Apr 2012	35.3 09/07/13		35.3 Feb 2015	
	7				24.1 *****							24.1 3/10/10		
	4			41.0 3/2/2006						41.0 3/5/2012			41.0 Jan 2015	
6	13			18.0 3/0/2007			18.0 1/27/2010			18.0 3/4/2012			18.0 Feb 2015	
	14			17.6 3/6/2007			17.6 1/27/2010			17.6 3/4/2012			17.6 Feb 2015	
	2	68.7 07/10/04			68.7 *****	68.7 *****	68.7 3/8/2011			68.7 Mar 2012	68.7 *****		68.7 Jan 2015	
7	12	44.8 3/2/2004				44.8 1/19/04	44.8 2/10/2011					44.8 3/20/2014		
	1					69.7 2/17/2009	69.7 *****					69.7 02/10/2010		
	11				31.4 *****			31.4 1/27/2011				31.4 Mar 2014	31.4 Apr 2015	
9	3			42.6 3/7/2006			42.6 2/10/2009			42.6 Mar 2012	42.6 01/01/13			
	10		36.8 1/8/2005		36.8 *****			36.8 1/24/2011				36.8 3/16/2014		
	24			91.8 Apr 2007	91.8 *****							91.8 3/10/2014		
10	25		63.0 2/11/2005		63.0 1/8/2007		63.0 Jan 2009					63.0 *****	63.0 Apr 2015	
	26					41.9 *****			65.9 Feb 2012	65.9 Feb 2013	65.9 3/26/2014			
	27						26.2 Feb 2010		26.2 2/19/2012			26.2 Apr 2015		
13	28						61.0 Jan 2010					61.0 3/26/2014		
	29						27.0 Feb 2010		27.0 Feb 2012	27.0 03/27/13		27.0 Mar 2015		
	30	61.5 3/8/2004			61.5 Feb 2010	61.5 3/2/2009						61.5 02/23/03	61.5 Apr 2015	
15	31		36.2 1/25/2005				36.2 Feb 2010	36.2 Feb 2011	36.2 Feb 2012			36.2 02/23/03		
	32	46.0 2/17/2004	22.0 3/29/2005				62.0 3/3/2009					62.0 3/10/2014		
	16													
TOTAL ACRES		482.8	395.5	254.9	314.6	458.4	401.2	387.8	391.2	195.5	474.6	624.7	471.0	

 Indicates a growing season burn
 Indicates a compartment planned but not burned
 Blue Font indicates a contractor burn

Appendix IV Example Prescription

Prescription for Prescribed Burning ☐ Entered LHMIS Florida Fish and Wildlife Conservation Commission Division of Habitat and Species Conservation						
WMA/WEA: Joe Budd WMA				FFS Certified Burn Authorization Number: 2015039613		
Landowner: Florida Fish and Wildlife Conservation Commission				County of Burn: Gadsden		
Customer Number: 1353272			Customer Name: Clinton Perez			
Burn Unit Name/Number	Acres	Date of Last Burn	Section(s)	Township	Range	CRU or other code
2	81	01/21/2011	15	1N	3W	unbr
Unit name/number	Acres	Date	Section	Township	Range	code
Unit name/number	Acres	Date	Section	Township	Range	code
Unit name/number	Acres	Date	Section	Township	Range	code
Total	81					
Latitude/Longitude in Axis with Emergency Locate: Lat. 30.473378 Lon. -84.120590						
Unit Description and Habitat Composition - Attach Maps of Area to be Burned						
Overstory Description and Basal Area if Applicable: Mature Long leaf, Loblolly, and Slash Pine overstory with aB/Aw77						
Understory Description: Primarily low gallberry and runner oak brush with various Vaccinium spp., scattered Saw Palmetto (especially towards the southern end of the unit 11), smilax spp., wiregrass, and other ILEX spp.						
Fuel Loading: Low to moderate						
Duff or Muck Locations: None significant.						
Description and Condition of Fire Breaks: A plowed fireline runs completely around unit, except for one stretch of line oak/wood stand on the NW corner.						
Other Important Stand Parameters if Applicable: Localized pockets of mature oaks occur in this stand.						
Restoration or Maintenance Burn? Maintenance						
Burn History and Vegetative Description of Surrounding Units: This burn unit was last burned in April 25, 2011. All surrounding burn units have been burned within the past three years and have a similar vegetative structure and fuel load.						

Emergency Contacts (can be attachment)	
FPS Dispatch: (850) 631-5950	FPS Forest Area Supervisor: Dan Stanley (850) 627-3544
Local Fire Departments: Midway: (850) 574-2355, Quincy: (850) 627-7111	
Local Hospitals or Emergency Care Centers: TMH Emergency Center (850) 427-5417	
FHP: (850) 462-8510	DOT: (850) 414-5200
FWC Dispatch: (850) 745-7715	
Other: Gadsden County Sheriff (850) 627-9231	
Notifications (e-mail group, adjacent landowners, schools, airports, media, etc): Keith Cummings FWS/Talquin State Forest (850) 681-5953	
Personnel Names and Crew Assignments: Clint Peters, Burn Boss, David McGuffie, Ignition/holdline, Joe Davis, Ignition/holdline	
Equipment and Suppression Tools to be Used on Burn: (7) APU's with accessories, (1) type A1 engine (purchased at shop), drip torches, axes (per person), fire holding tools, fire shelters, Personal Protective Equipment, hand held radios (1 per person)	
Purpose of Burn: These units will be burned in order to reduce hazardous fuel loading and maintain the understory vegetative community in an early successional state.	
Measurable Burn Objectives: Topkill 80% hardwood (moderate) component less than 4 inches in diameter at breast height. Reduce by 25% mature hardwood trees with stem diameter greater than 4 inches (DBH).	
Season and Time of Day to Meet Objectives: This unit will be burned in the growing season after the dew has dried off in the morning (approximately 10:00 am).	
Firing Plan and Ignition Pattern: Backing fire on the down wind side of burn unit will be used to secure a black line. After sufficient width of black has been obtained, we will proceed to a grid/spot and/or strip head ignition depending on fire behavior and intensity desired. This pattern will be used throughout the burn unit in order to complete the burn. Burn unit 11 will be burned first, followed directly by unit 13.	
Intensity Desired to Meet Purpose and Objective: Moderate	Ignition Method: Backing Strip head, spot/grid and heading.

<p>Contingencies (includes safety zones, escape routes, secondary control lines, escape response procedures, helicopter landing landing if applicable): In the event of a spot fire, all firing will cease, and the escaped fire will be suppressed immediately with the ATVs with water spray tanks, hand tools, and/or the type VI engine. If those initial suppression efforts fail, or escape is not contained within a reasonable amount of time, Florida Forest Service will be called for assistance.</p>
<p>Mop-up Standards: Mop up all visible flame within 50 feet of both manmade and natural control lines. Mop up all burning snags or trees further in if they could potentially fall and endanger the lines. Burn out any pockets of unburned fuel adjacent to the firelines.</p>
<p>Declaring the Fire Out Standards: The fire will be declared extinguished after mop up is complete and no spreading flame is observed. The fire will be declared out after all ignition has ceased within the unit.</p>
<p>Smoke Management</p>
<p>Smoke Sensitive Areas Identified Using Southern Smoke Management Guide Smoke Screening Tool? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Any Critical Smoke Sensitive Areas Identified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No. If "Yes", Do Not Burn Under Current Prescription.</p>
<p>Downwind/Downdrainage Smoke Sensitive Areas and Distance from Burn: None identified.</p>
<p>Other Smoke Sensitive Areas and Distance from Burn: I-10: North 3.67 Miles, Tallahassee airport, SE, 10.8 miles, Ft. Braden Middle School 8: 2.5 miles</p>
<p>Smoke Management Plan (attach smoke management screening map): Map attached.</p>
<p>Is There Potential for Smoke to Impact a Public Roadway? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>If Yes, Have You Erected Smoke Warning Signs and Contacted FHP and Your Local LE? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Plan for Monitoring Smoke During and After the Burn to Assess Visibility Issues if Applicable: Smoke will be monitored during the burn to ensure sufficient lift and dispersal. Due to the relative small acreage of this burn, transport wind direction, and dispersion predictions, there are no potential smoke issues predicted or expected from this fire.</p>

WEATHER PARAMETERS	Acceptable Parameters	Forecasted and Actual Conditions – Attack Fire Weather Forecast and Spot Weather Forecast.
Surface (20') Wind Direction	N, NE, E, W, NW	E
Surface Wind Speed	5-15 mph	7
Transport Wind Direction	N, NE, E, W, NW	E
Transport Wind Speed	9 mph minimum	10
Minimum Mixing Height	700 ft.	7400
Dispersion Index (DAY)	30-80	82
Dispersion Index (NIGHT)	Greater than 1	7
Maximum Temperature	90 Deg.	83
Relative Humidity Range	15-50 %	34
Minimum Fine Fuel Moisture	6	8
K3DI	500	167
FFDMF	7 maximum	-1
Days since 1/2" Rain	2 to 15 days	8
Additional Field	Additional Field Parameter	Additional field condition
Additional Field	Additional Field Parameter	Additional field condition
FIRE BEHAVIOR		
Rate of Spread	6 chains per hour maximum	
Starting Time	11:00 am	
Burn Technique	Backing, spot, strizing, heading, flanking	
Flame Length	3 to 10 feet	

PRE-BURN CHECKLIST

- BURNMANAGER:** Check each item to indicate compliance.
- All prescription requisites met.
 - Authorization obtained.
 - All equipment required on scene and fully operational.
 - Each crewmember has proper personal gear and clothing.
 - Appropriate steps have been taken to ensure crew and public safety.

CREW BRIEFING

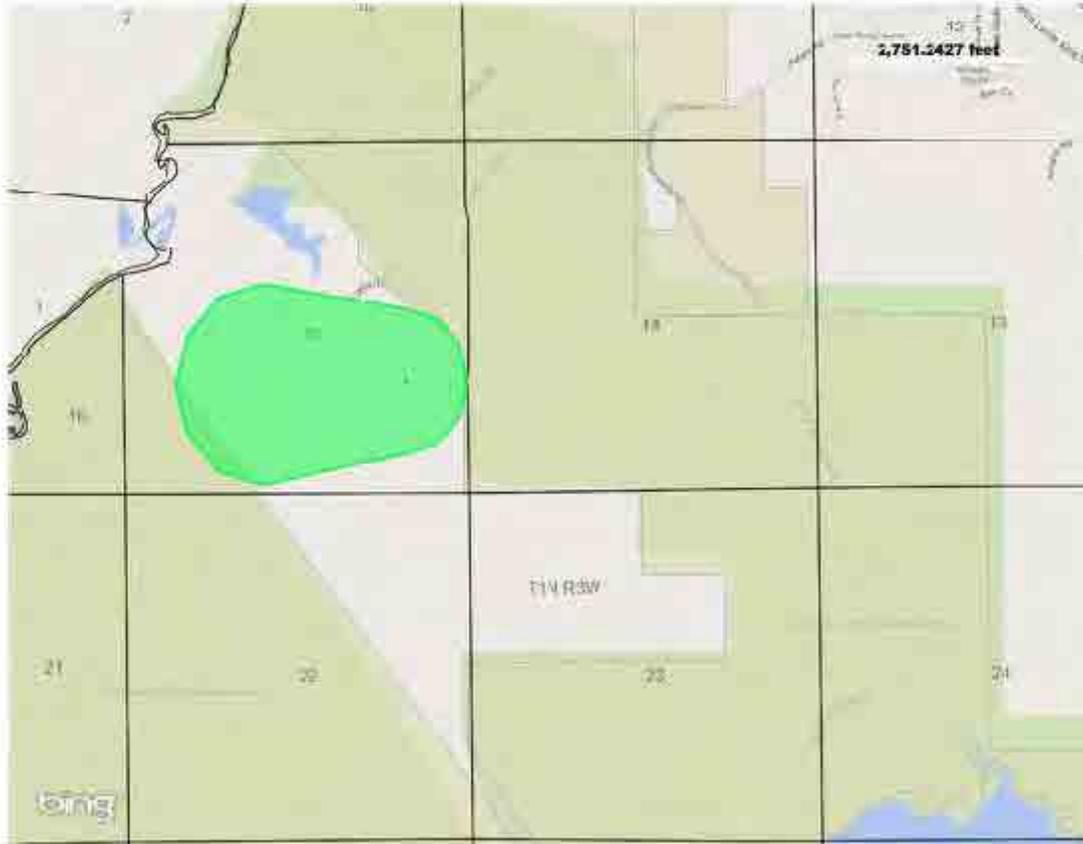
- Objectives of burn.
- Exact area of burn (ensure crew members have maps).
- Hazards discussed (volatile fuels, spotting potential, weak points in perimeter lines, terrain features, etc.)
- Crew assignments made.
- Weather monitoring assignments made.
- Ignition technique and pattern. Holding method(s).
- Location of extra equipment, fuel, water, vehicle keys.
- Authority and communications.
- Contingencies covered including escape routes or procedures.
- Sources of nearest assistance. Nearest phone and emergency numbers.
- Special instructions regarding smoke management, contact with the public, and others.
- Safety briefing.
- Mop up standards.
- Arrange next day inspection and mop-up assignments.
- Questions?
- Crewmembers given opportunity to decline participation (is there anything that is going to prevent full physical performance?).
- Conduct test burn.

Prescription Prepared by: Clint Peters	Date/Time Prescription Prepared: 05/04/15
Authorization Date and Time Period: 05/04/15 10:30 am to sunset	
Burn Manager: Clint Peters	
Burn Manager Title: Joe Budd WMA - Area Manager	
Burn Manager Certification Number: 2008-3512	
Burn Manager Signature:	Start Time: 10:30am
Date Fire Declared Out: Click here to enter text.	

Burn Unit Map



Smoke Screen Maps



Weather Forecast

FLZ016-042130-
 GADSDEN-
 INCLUDING THE CITIES OF...QUINCY...CHATTAHOOCHEE
 315 AM EDT MON MAY 4 2015

	TODAY	TONIGHT	TUE
CLOUD COVER	MCLEAR	MCLEAR	MCLEAR
CHANCE PRECIP (%)	0	0	0
WEATHER TYPE	NONE	NONE	NONE
TEMP	83	60	85
RH %	34	87	31
20FT WND MPH(AM)	E 4		E 6
20FT WND MPH(PM)	E 7	E 4	E 9
PRECIP DURATION	0	0	0
PRECIP BEGIN			
PRECIP END			
PRECIP AMOUNT	0.00	0.00	0.00
LAL	1	1	1
MIXING HGT (FT-AGL)	7400	700	6900
TRANSPORT WND (MPH)	E 10	E 16	E 15
DISPERSION INDEX	83	7	76
MAX LVORI	1	4	3

.FORECAST FOR DAYS 3 THROUGH 5...

.TUESDAY NIGHT...PARTLY CLOUDY, LOWS IN THE LOWER 60S. EAST WINDS AROUND 5 MPH.

.WEDNESDAY...MOSTLY SUNNY, HIGHS IN THE MID 80S. NORTHEAST WINDS AROUND 10 MPH.

.WEDNESDAY NIGHT...MOSTLY CLEAR. LOWS IN THE LOWER 60S. NORTHEAST WINDS AROUND 5 MPH.

.THURSDAY...SUNNY. HIGHS IN THE MID 80S. NORTHEAST WINDS AROUND 5 MPH.

.THURSDAY NIGHT...MOSTLY CLEAR. LOWS IN THE LOWER 60S. NORTHEAST WINDS AROUND 5 MPH.

.FRIDAY...SUNNY. HIGHS IN THE MID 80S. NORTHEAST WINDS AROUND 5 MPH.

Weather Observations

Time	RH	Temperature	Wind direction	Wind Speed	Comments/Observations

13.10 WCPR Species Management Strategy

Joe Budd Wildlife Management Area

Species Management Strategy

June 2014

Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Wildlife and Habitat Management Section

A product of the Wildlife Conservation
Prioritization and Recovery Program



Executive Summary

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

This document presents the results of a science-based process for evaluating focal species needs using an ecosystem management approach on the Joe Budd Wildlife Management Area (JBWMA). Natural community management designed for a set of focal species benefits a host of species reliant upon the same natural communities. Monitoring select species verifies whether natural community management is having the desired effect on wildlife. To maximize the potential wildlife conservation benefit, staff considers the role of the WMA in regional and statewide conservation initiatives throughout the process.

[Section 1](#) informs the reader about the process used to generate this document.

[Section 2](#) describes the historic and ongoing management actions on the property.

[Section 3](#) provides a list of the focal and listed species on the area, and an assessment of each species' level of opportunity and need. This includes species-specific objectives for the gopher tortoise, Bachman's sparrow, brown-headed nuthatch, and bald eagle.

[Section 4](#) describes specific land management actions recommended for focal species. This section also discusses management considerations necessary to ensure continued persistence of focal species.

[Section 5](#) describes species-specific management and monitoring that is prescribed for the area, and identifies any research that would be necessary to guide future management efforts. We did not identify any species management needs for this area. Monitoring is recommended for the gopher tortoise, Bachman's sparrow, brown-headed nuthatch, and bald eagle. We also recommend documentation of opportunistic encounters with other focal species.

[Section 6](#) identifies coordination that will assist in conserving the area's focal species. We identify coordination with 7 other units in FWC and inter-agency coordination with 3 other entities.

[Section 7](#) describes efforts that are prescribed to occur "beyond the area's boundaries" to ensure conservation of the species on the area.

Continuation of current funding and staff levels would be required to provide for most of the land management recommended in this document. Some of the monitoring recommendations may require additional resources, while FWC can accomplish others with continuation of existing resources.

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Acronym List

ANF	Apalachicola National Forest
ARCI	Avian Research and Conservation Institute
BMPs	Best Management Practices
CCA	Candidate Conservation Agreement
CPS	Conservation Planning Services (section; formerly Habitat Conservation Scientific Services)
DEP	Florida Department of Environmental Protection
DFC(s)	Desired Future Condition(s)
FFS	Florida Forest Service (formerly Division of Forestry)
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
FWRI	Fish and Wildlife Research Institute (division)
FWLI	Florida Wildlife Legacy Initiative
GCR	Ground Cover Restoration (program)
HGM	Hunting and Game Management (division)
ISMP	Imperiled Species Management Plan
JBWMA	Joe Budd Wildlife Management Area
MU	Management Unit
OBVM	Objective Based Vegetation Management
PVA	Population Viability Analysis
PLCP	Public Lands Conservation Planning (tool)
SaMP	Survey and Monitoring Protocol
SCP	Species Conservation Planning (section)
SGCN	Species of Greatest Conservation Need
SHCA	Strategic Habitat Conservation Area
SAP	Species Action Plan
SMA	Strategic Management Area
USFWS	United States Fish and Wildlife Service
WHCnFL	Wildlife Habitat Conservation Needs in Florida
WHM	Wildlife and Habitat Management (section)
WCPR	Wildlife Conservation Prioritization and Recovery (program)
WMA/WEA	Wildlife Management Area/Wildlife Environmental Area

Statewide Species Prioritization Parameters

This table provides the values for the 6 prioritization parameters for the focal species. Parameters that are “triggered” (exceed the threshold) are in **bold**. Typically, the more parameters a species triggers, the higher the statewide prioritization.

Species Common Name	Millsap et al ¹		State Wildlife Action Plan ²		Population Viability Analysis (PVA) on managed lands	
	Biological Score ³	Supplemental Score ⁴	Population Status ⁵	Population Trends ⁶	Probability of a 50% decline ⁷	Populations persisting (to 80 or 100 years) ⁸
Gopher Frog	24.6	12	medium	declining	0	9% (to 80)
Florida Pine Snake	23.7	15	medium	declining	0	31% (to 80)
Gopher Tortoise	27.3	17	medium	declining	0	55% (to 100)
American Swallow-Tailed Kite	25.7	13	low	unknown	20%	50% (to 100)
Bachman's Sparrow	16.0	12	medium	declining	0	49% (to 80)
Brown-Headed Nuthatch	17.0	13	medium	declining	0	25% (to 80)
Cooper's Hawk	15.0	12	not a SGCN ⁹	not a SGCN ⁹	96%	100% (to 100)
Louisiana Waterthrush	17.6	13	unknown	unknown	28%	100% (to 97)
Northern Bobwhite	11.0	14	low	declining	0	100% (to 100)
Red-Cockaded Woodpecker	27.6	14	low	declining	0	45% (to 100)
Southern Bald Eagle	21.3	10	medium	increasing	0	100% (to 100)
Wading Birds	23.7	13	varying	varying	0	100% (to 100)
Florida Black Bear	32.7	13	medium	stable	5%	100% (to 100)
Fox Squirrel	24.0	17	low	declining	0	28% (to 80)
Southeastern Myotis	22.6	16	medium	stable	5%	100% (to 100)

¹ scores derived from Millsap et al (1990), “Setting priorities for the conservation of fish and wildlife species in Florida”, as updated by staff of the FWC. We used the most recent updates to score.

² [Florida's State Wildlife Action Plan](#)

³ Species trigger this parameter if the score is ≥ 25.9

⁴ Species trigger this parameter if the score is ≥ 15

- ⁵ Species trigger this parameter if the score is low or unknown
- ⁶ Species trigger this parameter if the score is declining or unknown
- ⁷ Species trigger this parameter if the score is > 0
- ⁸ Species trigger this parameter if the score is $\leq 75\%$
- ⁹ SGCN = species of greatest conservation need

Section 1: Introduction

The FWC manages the lands in the Wildlife Management Area system using a proactive approach, which includes an understanding of natural communities of plants and animals. As applied by FWC, natural community management starts by classifying lands into distinct natural communities managed in a way that maintains or enhances their unique structure and function. This ecological management of natural communities improves and restores the habitats upon which wildlife depends. Natural community management that has a positive influence on the natural community condition benefits the wildlife living in these habitats.

Another important aspect of FWC's management approach is ensuring that it is science-informed and meets the needs of Florida's wildlife. The agency's Wildlife Conservation, Prioritization, and Recovery Program (WCPR) created this Species Management Strategy for JBWMA to inform and guide management on the area, and to verify that area management is meeting the needs of wildlife. The FWC intends for this Strategy to: 1) provide land managers with information on management actions that should be taken provided the necessary resources are available; 2) promote the presence and facilitate the persistence of wildlife species on the area; and 3) provide measurable objectives that can be used to evaluate the success of wildlife management on the area.

When developing a Strategy, WCPR staff utilizes concepts that facilitate the analysis and evaluation of an area's opportunities to manage for wildlife. The focal species concept is an approach to identify the needs of wildlife collectively by strategically focusing on a subset of wildlife species. The subset of species FWC selected as focal species includes umbrella species, keystone species, habitat specialist species, and indicator species. Other concepts in a Strategy include Objective Based Vegetation Management and Strategic Management Areas. [Objective Based Vegetation Management](#) (OBVM) is a method used to assess if vegetation management within natural communities is achieving the desired conditions. A [Strategic Management Area](#) (SMA) is a specially designated piece of land where additional management actions are required to address a particular species' needs.

In addition to the concepts discussed above, we use specific definitions in a Strategy. *Goals* are broad statements of a condition or accomplishment to be achieved; goals may be unattainable, but provide direction and inspiration. *Objectives* are a measurable, time-specific statement of results responding to pre-established goals. *Imperiled Species* refers to any plant or animal federally listed under the Endangered Species Act or state-listed by the FWC or the Department of Agriculture and Consumer Services.

Creating the JBWMA Strategy involved a number of steps. First, WCPR staff assessed the results of species-specific habitat models and statewide potential habitat maps for focal species to determine which focal species had potential habitat on JBWMA. WCPR staff then used knowledge from FWC staff, species-expert opinions, and area-specific natural community maps to modify the statewide models and create area-specific potential habitat

maps for each focal species. Next, WCPR staff conducted a workshop at which area managers, species experts, and section leaders discussed and evaluated JBWMA's potential role in the conservation of focal species. For each species, workshop participants determined the status of the species on the area; evaluated the opportunities for management on the area; specified appropriate monitoring and research actions; and identified beneficial coordination and 'beyond the boundary' considerations. Using the information from the workshop, staff drafted the Strategy document and sent it to species experts and other professionals for review. Following the review, the Strategy was finalized and staff initiated implementation of actions in the Strategy.

Staff considered the goals and objectives in [JBWMA's Management Plan](#) (formerly known as Conceptual Management Plan) when discussing and assessing the species; therefore, this Strategy supports the goals of the Management Plan. Management plans are on a 10-year revision cycle. During the next revision of the Management Plan, staff will incorporate the objectives in this Strategy into the Management Plan, and append this Strategy to the revised Management Plan.

While this Strategy focuses on JBWMA, it considers the role of the area within the larger state or regional context. Similarly, while the Strategy has species-specific objectives and actions, it does not endorse single-species management. Natural community management is the core of FWC's ecological management approach, and by paying special attention to the needs of focal and imperiled species, we verify that our management actions are having the desired effect. By implementing the actions in the Strategy, the FWC believes our management will keep common species common, aid in the recovery of listed species, and benefit the largest suite of native wildlife.

Section 2: Current and Historic Management on Joe Budd Wildlife Management Area

2.1: Location, Acquisition, and Influences on Current Condition

Joe Budd Wildlife Management Area (JBWMA) is located in southeast Gadsden County on the northern shore of Lake Talquin and consists of 11,133 acres cooperatively managed by FWC and the Florida Forest Service (FFS). FWC is the lead managing agency on 2,778 acres of JBWMA. This acreage is comprised of the original 794-acre Budd Ranch parcel, the 927-acre Little River Ranch parcel, the 1,032-acre Davis parcels, and the 25-acre Anderson parcel ([Figure 1](#)). FFS is the lead managing agency on 6,341 acres with FWC as a cooperating manager. The FWC and FFS equally share management responsibilities on the 2,014-acre Rocky Comfort parcel so both agencies are designated as co-lead managers. In this document, we refer to these 3 portions of JBWMA as the FWC-lead, FFS-lead, and co-lead, respectively.

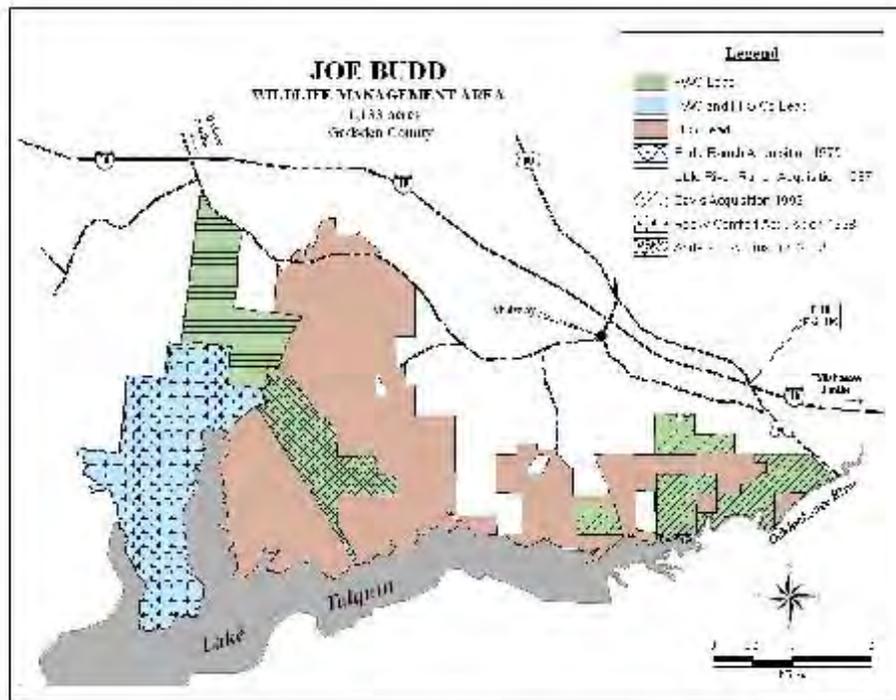


Figure 1. JBWMA lead management authority and acquisition history.

JBWMA is the northernmost parcel in a corridor of conservation lands that extend to the south and along the coast ([Locator Map](#)). From north to southeast, the most prominent of these lands include Lake Talquin State Forest, Apalachicola National Forest (ANF), St. Marks National Wildlife Refuge, Tate's Hell State Forest, Apalachicola River Wildlife and Environmental Area (WEA), and Box-R WMA. The city of Midway lies to the northeast of JBWMA and there are unincorporated private lands to the west, including an adjacent hunt club.

FWC manages JBWMA to conserve and restore natural wildlife habitat while also providing wildlife-based recreation opportunities. JBWMA was first established in 1975 when FWC, then known as the Florida Game and Fresh Water Fish Commission, purchased the 794-acre Budd Ranch from the estate of Mr. Joseph T. Budd, Jr. using funds matched 3:1 through the Pittman-Robertson Act ([Figure 1](#)). At the time of this transaction, all hunting, fishing, and grazing rights held by the estate on approximately 3,500 acres adjacent to Budd Ranch were relinquished to Duke Energy (then known as Florida Power Corporation). These rights were in turn granted to FWC until 1977, when Duke Energy deeded their lands to the State with the Department of Environmental Protection (DEP; then known as the Department

of Natural Resources) designated as the managing authority. Subsequently, DEP issued a 10-year lease to the FFS (then known as the Division of Forestry), for reforestation and other restoration work. The FFS in turn issued a special use permit to FWC to continue operating the area as a WMA. This 3,500-acre tract plus the 794-acre Budd Ranch parcel comprised the main tract of the original JBWMA.

An additional 2,000 acres (originally acquired by FFS from Duke Energy in the 1977 transaction but not included in the WMA), were included as part of JBWMA in a 1981 agreement between FFS and FWC. FWC purchased the 927-acre Little River Ranch in 1987, which contained the current office site and surrounding land, using funds returned through the Pittman-Robertson Act. FWC purchased 4 separate inholdings totaling 1,032 acres (known as the Davis parcels) in 1992 using funds provided under the Preservation 2000 Inholdings and Additions program. FWC and FFS jointly acquired the 2,014-acre Rocky Comfort parcel in 1998 using this same Preservation-2000 funding source. In 2012, FWC acquired the 25-acre Anderson parcel from Florida Gas Transmission Company as mitigation for construction of a gas line.

Prior to acquisition, the area was used for agriculture, silviculture, and hunting. The previous owners used the main tract (Budd Ranch and the surrounding property) as an exclusive hunting club. Watermelon was the primary agricultural crop grown on the area during this time. When Little River Ranch was managed as part of the Joyceland Dairy Farm, the uplands were cleared and planted with bahiagrass (*Paspalum notatum*) and Bermuda grass (*Cynodon dactylon*) to support cattle grazing. The Davis parcels were managed for revenue from timber and hunting rights. Within the Davis parcels, a 40-acre sand mine was leased to a local construction company as a source of sand and fill, resulting in a large borrow pit. The Rocky Comfort parcel was managed as a private hunting club and for timber. Most of the uplands were logged and replanted with loblolly (*Pinus taeda*) and slash pine (*Pinus ellioti*), although longleaf pine (*Pinus palustris*) was planted in some areas.

One challenge of species conservation on JBWMA is the lack of continuity between FWC-lead parcels. Due to the history of acquisition, parcels where FWC is the lead management agency are fragmented across separate zones by FFS-lead areas and private lands. The network of lands surrounding JBWMA also represents a patchwork of ownership and management priorities, and areas to the east are at an increased risk of development from the nearby community of Midway. Some wide-ranging species that use JBWMA require contiguous tracts of habitat to establish a viable population, and area staff has a limited ability to influence the condition of adjacent parcels. FWC area managers can work cooperatively with partners in the FFS to coordinate land management actions that benefit a suite of non-game species. Due to the emphasis on wildlife recreation at JBWMA, however, non-game species will continue to be managed in a way that is compatible with ongoing public use.

2.2: Management Since Acquisition

JBWMA provides high-quality hunting opportunities that attract hunters from throughout the state. Area staff maintains approximately 275 acres of wildlife openings, of which about 74% are planted in crops and the remaining 26% (71 acres) are not actively cultivated. These uncultivated openings of native vegetation are managed primarily by mowing, along with some disking and burning. [Table 1](#) provides a breakdown of the acreage of wildlife openings by management authority. JBWMA is divided into 7 hunting zones ([Figure 2](#)), which were partitioned to spread hunting effort across the area. Hunting zones are referenced in the focal species assessments ([Section 3.2](#)) to identify specific locations within JBWMA. The zones cross the “lead” management divisions, with different zones (or portions of zones) being managed by different agency leads. Other recreational uses of the area include campsites along Lake Talquin, equestrian trails, and the Joe Budd Aquatic Education Center, which is used for youth environmental education programs.

Table 1. Number of acres and percentage of area in wildlife openings by lead management status on the JBWMA.

Lead Status	# of Total Acres	Size of Openings (Acres)	# of Openings	Average Opening Size (Acres)	Percent of Total Opening Acreage	Percent of Area in Openings
FWC-Lead	2,778	138	43	3	50%	5%
FFS-Lead	6,341	119	99	1	43%	2%
Co-Lead	2,014	18	15	1	7%	1%
TOTAL	11,133	275	157	2	100%	3%

Table 2. Mapped acreage of current and historic communities on the FWC-lead portion of JBWMA, including management status and number of focal species that use the community.

Community Type	Estimated current acreage	Estimated historic acreage	# of focal species that use the NC
Baygall	2	17	3
Bottomland Forest	692	0	7
Depression Marsh	22	19	3
Dome Swamp	6	1	5
Floodplain Forest	0	563	7
Floodplain Marsh	5	0	2
Floodplain Swamp	283	184	5
Mesic Flatwoods ¹	184	290	10
Pine Plantation	83	0	8
Ruderal	424	0	8
Sandhill ¹	40	141	12
Successional Hardwood Forest	59	0	5
Upland Hardwood Forest	344	466	5
Upland Pine Forest ¹	716	1063	11
Upland Pine Restoration ¹	42	0	11
Wet Flatwoods ¹	32	94	6
TOTAL ACRES²	2,934	2,838	

¹ Communities that are actively managed and monitored via the OBVM process; other communities are managed but not monitored via OBVM.

² The total acres identified in the lease differs from the total acres identified during the mapping effort. This is possibly due to a combination of digitizing error and complications in determining actual boundaries.

In 1998, FWC received a 5-year Wildlife Habitat Incentive Program grant from the Natural Resource Conservation Service to restore 25 acres of pasture in Zone G at 5-acre per year increments. Staff used this funding to plant longleaf pine throughout the 25 acres and attempt to re-establish native warm-season grasses in one of the 5-acre treatments. The [Ground Cover Restoration \(GCR\) Plan](#) details the management actions staff conducts to restore approximately 40 additional acres of the pasture. Actions on this site since its establishment in 2006 include: mechanical and herbicide treatments on all 40 acres, planting wiregrass on all 40 acres, planting longleaf pine on 15 acres, and conducting 9 prescribed burns. Actions to restore the mesic flatwoods in Zone F include timber thinning and prescribed fire.

Area staff uses herbicide treatments to control invasive exotic plants on the FWC-lead and co-lead. Ongoing treatments on the FWC-lead target Japanese climbing fern (*Lygodium japonicum*), kudzu (*Pueraria lobata*), Chinaberry (*Melia azedarach*), Chinese wisteria (*Wisteria sinensis*), Japanese mimosa (*Albizia julibrissin*), and Chinese privet (*Ligustrum*

sinense). In addition to these species, a number of invasive exotics occur on the co-lead including cogongrass (*Imperata cylindrica*), coral ardisia (*Ardisia crenata*), tree-of-heaven (*Ailanthus altissima*), and nandina (*Nandina domestica*). Invasive feral hogs (*Sus scrofa*) also occur on JBWMA and pose challenges to management. On JBWMA, hogs are legal to hunt during most seasons. There is no possession or bag limit for feral hogs, and staff has previously hosted special opportunity hunts for hogs.

Ongoing wildlife monitoring on JBWMA focuses on game species. Area staff has conducted annual track counts for white-tailed deer (*Odocoileus virginianus*) since 1980 to determine trends in the population and assist in making decisions regarding habitat management and hunting pressure. Staff operates a check station on all hunts to collect information on hunting pressure and harvest. Check station data are collected for deer, hog, mourning dove (*Zenaidura macroura*), duck (Multiple spp.), eastern cottontail (*Sylvilagus floridanus*), raccoon (*Procyon lotor*), grey squirrel (*Sciurus carolinensis*), eastern wild turkey (*Meleagris gallopavo*), and northern bobwhite (*Colinus virginianus*). Staff also traps and collects data on mourning dove for a United States Fish and Wildlife Service (USFWS) study to monitor harvest levels and population trends of doves across the eastern United States.

Area staff does not currently conduct monitoring for non-game species on JBWMA; however, FWC and the University of Florida have conducted numerous monitoring and research projects in the past. Past upland bird surveys include annual Breeding Bird Censuses conducted from 1993-1999, which counted 31 species in longleaf pine flatwoods, including Bachman's sparrows (*Peucaea aestivalis*) and brown-headed nuthatches (*Sitta pusilla*). Similar results were documented during a 1997-1998 winter bird population study of the same area. A Lake Talquin wading bird survey documented great egrets (*Ardea alba*), little blue herons (*Egretta caerulea*), snowy egrets (*Egretta thula*), tri-colored herons (*Egretta tricolor*), white ibis (*Eudocimus albus*), and wood storks (*Mycteria americana*) while attempting to correlate lake draw-downs to brood success. Drift fence surveys for herpetofauna in Zone F from 1996-1997 captured 52 separate species, including one Florida pine snake (*Pituophis melanoleucus mugitus*). Surveys in 2002 and 2003 for flatwoods salamanders did not detect any focal or imperiled species. A 2007 restocking survey of gopher tortoise (*Gopherus polyphemus*) burrows documented an upper density of 1.7 tortoises per acre on JBWMA. The 2012 Southeastern Bat Diversity Network's Bat Blitz documented southeastern myotis (*Myotis austroriparius*) on JBWMA, and unsuccessful aural surveys for gopher frogs (*Lithobates capito*) were conducted in 2013.

Section 3: Focal Species

The FWC's management approach focuses on maintaining and restoring the ecological form and function of natural communities. However, in some instances, it is important to consider the needs of specific wildlife species and to monitor the influences of natural community management on these species. To achieve a science-informed approach

to species management, the FWC uses the focal species concept embraced by the [Wildlife Habitat Conservation Needs in Florida](#) (WHCNIFL) project. This concept allows area staff to identify the needs of wildlife collectively by strategically focusing on a subset of wildlife species. The subset of species selected includes umbrella species, keystone species, habitat specialist species, and indicator species.

The Public Lands Conservation Planning (PLCP) project, an expansion of the WHCNIFL project, added a few species and provided potential habitat modeling on public lands. For the PLCP, the FWC selected 60 focal species (including 1 group of species, the wading birds) for which statewide potential habitat maps were generated using each species' potential habitat model.

The FWC's 2003 landcover data served as the base layer for all potential habitat models, and staff selected additional layers considering the particular natural history of each species (e.g., species' range, known occurrence records); as such, each model is species-specific. Once statewide potential habitat maps were completed, a Population Viability Analysis (PVA) was conducted for each focal species.

The statewide landcover-based habitat models identified 15 of the 60 focal species to have potential habitat on JBWMA ([Section 3.1](#)). For all focal species modeled to have potential habitat on JBWMA, staff created area-specific potential habitat maps by using the same statewide models but replacing the landcover data with area-specific natural community data. The resulting area-specific potential habitat maps were then refined based on the input of local managers and species experts.

The WCPR Workshop for JBWMA held July 17, 2013, brought decision makers together to assess species' opportunities and needs, identify measurable objectives, outline necessary coordination efforts, and determine required actions such as monitoring and species management. To facilitate informed discussion of the species, WCPR staff compiled a workbook that contained information on the focal species. Participants at the workshop discussed the "level of opportunity and need" for each species. This included considering the number of statewide prioritizations the species triggered ([Statewide Species Prioritization Table](#)), the species' listing status, and the long-term security of the species (i.e., examining PVA results). Other factors considered were the species' use of actively managed communities ([Table 2](#)), species' response to management, and any local overriding factors (e.g., status of species in the region, local declines or extirpations). A brief summary of the opportunity and need assessments for each focal species is available in [Section 3.2](#).

3.1: Joe Budd Wildlife Management Area Focal Species List

Workshop participants assessed 15 species for their level of opportunity or need on JBWMA. In the following species list, we use a ¹ to denote species for which a measurable objective is identified, a ² for species for which some level of monitoring is recommended, a ³ for species for which a SMA was recommended, and a ⁴ for species for which species

management is recommended. Occasionally, statewide models indicate a species has potential habitat on the area, but the local assessment indicates there is little opportunity to manage for these species. These [limited opportunity species](#) are denoted with an *. Except for those species identified with a superscript number, workshop participants and expert reviewers determined that ongoing management would meet the needs of the species. For species with no numerical superscripts, participants and reviewers agreed there is no need for measurable objectives, monitoring, SMAs, or species-specific management.

Gopher frog (*Lithobates capito*)*

Florida pine snake (*Pituophis melanoleucus mugitus*)
Gopher tortoise (*Gopherus polyphemus*)^{1,2}

American swallow-tailed kite (*Elanoides forficatus*)
Bachman's sparrow (*Peucaea aestivalis*)^{1,2}
Brown-headed nuthatch (*Sitta pusilla*)^{1,2}
Cooper's hawk (*Accipiter cooperii*)
Louisiana waterthrush (*Seiurus motacilla*)
Northern bobwhite (*Colinus virginianus*)
Red-cockaded woodpecker (*Picoides borealis*)*
Southern bald eagle (*Haliaeetus leucocephalus*)^{1,2}
Wading birds (Multiple species)

Florida black bear (*Ursus americanus floridanus*)
Fox squirrel (*Sciurus niger*)
Southeastern myotis (*Myotis austroriparius*)

3.2: Focal Species Opportunity/Needs Assessment

This section provides an assessment of the opportunities for management, and the needs of each of the focal species. The assessment considers a number of attributes, including the status of a species, the number of prioritization parameters it triggers, the species' response to management, and the amount and spatial arrangement of the species' potential habitat available on the area. Because all federally-listed wildlife species are FWC-listed, we will provide only the federal listing status for federally listed species. When a species is not federally listed but is FWC-listed, we will provide the FWC listing status. The FWC has management plans for FWC-listed species in the form of Species Action Plans (SAPs). Staff will review these plans and incorporate the recommended conservation actions into the Strategy.

Unless otherwise noted, all reported acres of potential habitat are the result of using the area-specific natural community data in the species' potential habitat model. These

estimates include all the area mapped in a natural community identified as potential habitat, including patches that may not be contiguous with other suitable habitat. During the workshop, participants considered the spatial arrangement and habitat patch size when assessing the potential role JBWMA plays in the conservation of each species. For species that require larger habitat patches, we considered the continuity and condition of habitat on lands adjacent to the WMA. To determine the restoration potential, we inserted the historic natural community data into the potential habitat models and generated the acres of potential habitat that could be obtained if all natural communities are restored.

3.2.1: Florida Pine Snake

The Florida pine snake is rarely observed on JBWMA; however, this species is not as conspicuous as most of the other focal species. Staff captured a pine snake in Zone F during a drift fence survey conducted from September 1996 through July 1997 ([Figure 2](#)). Additional observations occurred along the entrance road to the office and in Zone C. There are a few records from the surrounding landscape, the majority of which are from ANF to the south of JBWMA.

The Florida pine snake is an FWC-listed species that triggers 3 of 6 prioritization parameters ([priorities table](#)). Upon approval of the Imperiled Species Management Plan (ISMP), the Florida pine snake will be listed as Threatened. Specific habitat requirements of this species are not well defined, although this species is closely associated with upland pine and sandhill communities. Pine snakes typically occupy locations with sandy soils dominated by pines and a well-developed grassy understory. Southeastern pocket gophers (*Geomys pinetis*) are a preferred prey item; however, the absence of pocket gopher burrows does not preclude pine snakes from using an area. Florida pine snakes are commonly found in pocket gopher burrows, but may also be found in stump holes and gopher tortoise burrows. Given this species' dependence on managed communities and the amount of suitable habitat available, there is a moderate to high level of opportunity to influence the pine snake on JBWMA.

According to the literature, pine snakes and eastern indigo snakes (*Drymarchon couperi*) have similar home range sizes, and approximately 2,500 acres of suitable habitat are required to support a viable population of pine snakes. There are 4,261 acres of potential habitat modeled for the pine snake on JBWMA: 1,188 acres on the FWC-lead, 1,020 acres on the co-lead, and 2,053 acres on the FFS-lead. If management could restore all natural communities to their historic condition, models indicate 4,285 acres of potential habitat could become available to pine snakes: 1,187 acres on the FWC-lead, 998 acres on the co-lead, and 2,100 acres on the FFS-lead. There is enough potential habitat on the FWC-lead, co-lead, and FFS-lead combined to support a population on JBWMA; however, this habitat is not entirely contiguous. Large-bodied snakes are often vulnerable to habitat isolation and high road densities; therefore, the lack of continuity between suitable habitat patches may

influence whether or not the area can support a viable population. Area staff should cooperate with FFS to ensure habitat on the FFS-lead is managed in a condition suitable for pine snakes. Area staff should work with Conservation Planning Services (CPS) to encourage neighboring land owners to use management practices that are compatible with the needs of pine snakes. Through environmental commenting, CPS staff can make recommendations for compatible uses of lands adjacent to JBWMA, including potential expanding development from Midway.

Although southeastern pocket gopher burrows are not evident on the area, the condition of potential habitat on JBWMA is suitable for pine snakes. The [SAP](#) for this species calls for increasing the amount of public land maintained with an appropriate fire regime, and restoring degraded upland habitats to a natural plant community structure. Current and planned management on JBWMA that will maintain and enhance habitat for this species includes timber management to meet target basal areas ([Table 3](#)), and the frequent application of prescribed fire (≤ 3 year rotation) in upland pine and sandhill communities. Continued efforts to restore upland pine in Zone G will also benefit pine snakes. [Section 4.3.1](#) describes additional land management recommendations, such as retaining stumps and coarse woody debris as refuge sites.

Due to the wide home-range and low detectability of this species, no species-specific monitoring is recommended at this time. We recommend opportunistic monitoring for this species and area staff should document all sightings ([Section 5.2.4](#)). If resources become available, future drift-fence surveys should include upland snake traps to improve the chances of detecting pine snakes.

The goal is to maintain habitat in a condition that benefits Florida pine snakes on JBWMA. Staff will achieve the goal by applying prescribed fire and other management actions that maintain upland pine and sandhill communities, and by retaining coarse woody debris when feasible. Florida pine snakes will likely persist on JBWMA under current and planned management to restore natural communities. However, the lack of contiguous suitable habitat on the area and the potential for expanding development from Midway may influence the persistence of pine snakes on JBWMA. Since habitat models suggest that there is only enough habitat to support a viable population when including potential habitat on the FFS-lead, coordination with FFS is important ([Section 6.2](#)).

3.2.2: Gopher Tortoise

Gopher tortoises are common on JBWMA and area staff has observed hatchling and juvenile tortoises on the area. Gopher tortoises also occur on the co-lead, FFS-lead, and private lands in the surrounding landscape. Area staff surveyed portions of the FWC-lead in 2007 as part of the statewide restocking initiative. Based on the results of this survey, JBWMA was not identified as a priority area for accepting translocated tortoises.

The gopher tortoise is an FWC-listed threatened species and a candidate for federal listing. The species triggers 4 of 6 prioritization parameters ([priorities table](#)), making it a high priority species statewide. The gopher tortoise is often considered a keystone species because many other species use tortoise burrows. Additionally, the gopher tortoise is a management-dependent species that can serve as an indicator of properly managed upland pine or grassland communities. FWC approved the [Gopher Tortoise Management Plan](#) in 2012, which emphasizes increasing the number of tortoises on public lands.

Gopher tortoises require open-canopy forests with diverse groundcover. There are 5,446 acres of potential habitat modeled for the gopher tortoise on JBWMA: 1,430 acres on the FWC-lead, 1,020 acres on the co-lead, and 2,996 acres on the FFS-lead. Models indicate 5,530 acres of habitat if management could restore all natural communities to their historic condition: 1,476 acres on the FWC-lead, 998 acres on the co-lead, and 3,056 acres on the FFS-lead. The USFWS recommends 250 acres for identifying potential viable populations. This suggests that the FWC-lead has enough potential habitat to support a viable population of gopher tortoises on its own; however, the lack of continuity between suitable habitat patches may isolate groupings of tortoises across the WMA. There is a high level of opportunity to affect the gopher tortoise on JBWMA given its dependence on actively managed natural communities and the amount of suitable habitat available.

Potential habitat on JBWMA is currently in a condition that can support a population of tortoises, and Zones C and D likely contain the best habitat on the FWC-lead to support the highest numbers of tortoises ([Figure 2](#)). Current and planned timber management to achieve target basal areas ([Table 3](#)), and the frequent application of prescribed fire (<3 year rotation) in upland pine, sandhill, and mesic flatwoods will maintain and enhance suitable habitat for this species. Continued upland pine restoration in the [Ground Cover Restoration Plan](#) will benefit gopher tortoises. Additionally, the numerous wildlife openings maintained on JBWMA will continue to provide suitable habitat for tortoises on the area. [Section 4.3.2](#) contains additional land management recommendations for this species, including consideration for protecting burrows during mechanical treatments.

In 2008, FWC entered into a Candidate Conservation Agreement (CCA) with several other government agencies and private organizations responsible for managing gopher tortoises. The purpose of the CCA is to implement proactive and coordinated activities that can prevent the need to federally list the tortoise. As part of this agreement, participants in the CCA will implement a standardized monitoring protocol across the tortoise's range using a line transect distance sampling design and burrow-scoping cameras. Future gopher tortoise monitoring on JBWMA will use the methods outlined in this range-wide protocol ([Section 5.2.1](#)). Staff should coordinate with FFS to ensure that surveys include suitable habitat on the FFS-lead and co-lead.

The goal is to maintain a viable population of gopher tortoises on JBWMA. Staff will achieve this goal mainly through the use of prescribed fire to maintain habitat in a condition that will support the species. This species will likely persist on JBWMA under current and

planned management. The amount and quality of habitat on surrounding private and conservation lands will also contribute to the persistence of the gopher tortoise on the area. The measurable objective is to:

- 1.) By 2016, conduct a baseline survey to determine an estimate of the gopher tortoise population that occurs on JBWMA.

3.2.3: American Swallow-Tailed Kite

American swallow-tailed kites are commonly observed on JBWMA. Sightings reported to the Center for Birds of Prey from 2007-2012 show many swallow-tailed kite records in the vicinity. The [Avian Research and Conservation Institute](#) (ARCI) documented swallow-tailed kite nests in the panhandle from 1996-1999; the closest nests to JBWMA were approximately 30-35 miles away in Liberty and Wakulla Counties. However, the regular presence of this species on JBWMA during the breeding season suggests it could nest either on or near the area.

The American swallow-tailed kite triggers 4 of 6 statewide prioritization parameters ([priorities table](#)). Swallow-tailed kites are habitat generalists that use a variety of natural communities containing tall trees for nesting and open areas for foraging. Most nest trees are species of pine or cypress that are taller than surrounding trees. Shrub height and density tend to be higher around nest sites. There are 7,630 acres of potential habitat modeled for the swallow-tailed kite on JBWMA: 2,344 acres on the FWC-lead, 1,480 acres on the co-lead, and 3,806 acres on the FFS-lead. If management could restore all natural communities to their historic condition, models indicate 7,650 acres of potential habitat on JBWMA: 2,223 acres on the FWC-lead, 1,458 acres on the co-lead, and 3,969 acres on the FFS-lead.

Despite the amount of potential habitat, it is unlikely that JBWMA can independently support a population of this wide-ranging species. However, JBWMA can help support the regional population by providing foraging habitat and nest sites. Current and planned timber management for mature stands, and the application of prescribed fire, will continue to provide suitable habitat for kites. Additionally, the numerous wildlife openings maintained on JBWMA will continue to provide foraging habitat for kites. [Section 4.3.3](#) contains additional land management recommendations for this species. It is important to protect potential nest trees from direct disturbance during management, as kites exhibit high nest-site fidelity. Nest sites should be documented so that they can be protected from disturbance ([Section 5.2.4](#)), and staff should share any records of nests with ARCI ([Section 6.3](#)).

The goal is to provide suitable foraging and nesting habitat for swallow-tailed kites that will allow individuals using JBWMA to function as part of a regional population. Staff will achieve the goal by maintaining wildlife openings, protecting nest sites from disturbance, and using prescribed fire and other management actions that maintain natural communities. While the continued presence of this species depends on conditions that

influence the regional population, swallow-tailed kites will likely persist on JBWMA given the amount of suitable habitat on the area as well as on surrounding conservation lands.

3.2.4: Bachman's Sparrow

Bachman's sparrows occur on JBWMA but their relative abundance on the area is unknown. A 1993 Breeding Bird Census reported the species to occur at a high density in Zone D ([Figure 2](#)). The nearest records from surrounding areas are from a Breeding Bird Survey route and e-bird records on ANF. Bachman's sparrows also likely occur on private lands in the surrounding landscape.

The Bachman's sparrow triggers 2 of 6 prioritization parameters ([priorities table](#)) and is currently experiencing range-wide population declines. This species is a habitat specialist that prefers mature pine forests with a low basal area and herbaceous groundcover. Literature suggests that Bachman's sparrows require a minimum of 519 acres of suitable habitat to support a viable population. There are 4,856 acres of potential habitat modeled for the Bachman's sparrow on JBWMA: 981 acres on the FWC-lead, 1,016 acres on the co-lead, and 2,859 acres on the FFS-lead. Models indicate 5,530 acres of habitat if management could restore all natural communities to their historic condition: 1,476 acres on the FWC-lead, 998 acres on the co-lead, and 3,056 acres on the FFS-lead. The FWC-lead has enough potential habitat to support a viable population of Bachman's sparrows on its own, and the co-lead and FFS-lead add to this acreage. Given its dependence on managed communities, the amount of suitable habitat available, and the amount of habitat to be gained with restoration, there is a high level of opportunity to affect Bachman's sparrows on JBWMA.

The potential habitat in and surrounding Zone D is currently suitable for Bachman's sparrows. Portions of Zone G and Zone F need additional management to improve habitat suitability. Suitable habitat for this species will be maintained and enhanced by current and planned natural community management that includes timber management to meet target basal areas ([Table 3](#)), and the frequent application of prescribed fire (≤ 3 year rotation) in upland pine, sandhill, and mesic flatwoods. Continued upland pine restoration outlined in the [Ground Cover Restoration Plan](#) will also enhance habitat for Bachman's sparrows. [Section 4.3.4](#) contains additional land management recommendations for this species.

As Bachman's sparrows can be indicators of well-managed pinelands, we recommend monitoring this species to ensure management is having the desired effect. Managers can use spring call counts to track changes in presence and distribution over time. Staff will use a standardized playback method to document Bachman's sparrows in all suitable habitat during the breeding season ([Section 5.2.2](#)). Staff should coordinate with FFS to ensure that surveys include suitable habitat on the FFS-lead and co-lead. Surveys should be conducted once every 3 years in conjunction with brown-headed nuthatch surveys.

The goal is to support a viable population of Bachman's sparrows on JBWMA. Staff will achieve this goal through the use of prescribed fire, timber management, and upland pine

restoration. In addition, monitoring will determine the extent of the sparrow's occurrence across FWC-lead, FFS-lead, and co-lead areas of JBWMA and provide managers with an approximation of the population's size. Given the amount of potential habitat on JBWMA and surrounding areas, Bachman's sparrows should persist under current and planned management. The measurable objective is to:

- 1) Conduct an initial survey for Bachman's sparrows in all suitable habitat by spring 2015, and repeat every 3 years.

3.2.5: Brown-Headed Nuthatch

Brown-headed nuthatches are common on JBWMA. A 1993 Breeding Bird Census and a 1997-1998 winter bird population study documented this species in Zone D ([Figure 2](#)). Staff also hears nuthatches in other areas of JBWMA. There are brown-headed nuthatch sightings confirmed on ANF from Breeding Bird Survey route and e-bird records. Brown-headed nuthatches also likely occur on private lands in the surrounding landscape.

The brown-headed nuthatch triggers 2 of 6 prioritization parameters ([priorities table](#)) and is currently experiencing range-wide declines due to habitat loss and degradation. This species depends on open stands of mature pine interspersed with snags for excavating nesting cavities. Nuthatches prefer older, decaying hardwood snags with a diameter at breast height of <10 inches. Older pine forests (>35 years for longleaf and slash pine) and stands with basal area between 35–50 ft²/ac (8-11 m²/ha) are preferred, although nuthatches can use pine stands with younger trees and higher basal areas.

Literature suggests that this species requires 1,000 acres of suitable habitat to support a viable population. There are 5,221 acres of potential habitat modeled for the brown-headed nuthatch on JBWMA: 1,096 acres on the FWC-lead, 1,016 acres on the co-lead, and 3,109 acres on the FFS-lead. Models indicate 5,757 acres of habitat if management could restore all natural communities to their historic condition: 1,570 acres on the FWC-lead, 998 acres on the co-lead, and 3,189 acres on the FFS-lead. The potential habitat acreage on the FWC-lead, the co-lead, and the FFS-lead, exceeds the estimated amount of suitable habitat required by this species, indicating that JBWMA can likely support a viable population of brown-headed nuthatches. There is a high level of opportunity to influence this species on JBWMA given its dependence on managed communities, the amount of suitable habitat available, and the amount of habitat to be gained with restoration.

The potential habitat in and surrounding Zone D is currently suitable for brown-headed nuthatches. Portions of Zone G and Zone F would need additional ground cover restoration and timber management to increase habitat suitability for this species. The [Ground Cover Restoration Plan](#) outlines actions that will improve habitat for this species. The frequent application of prescribed fire (<3 year rotation) in upland pine, sandhill, and mesic and wet flatwoods will also maintain and enhance suitable habitat for brown-headed

nuthatches. [Section 4.3.5](#) contains additional land management recommendations for this species, including consideration for protecting current and potential nest sites.

As brown-headed nuthatches can be indicators of well-managed pinelands, we recommend monitoring this species to ensure management is having the desired effect. Spring-time call counts can track changes in presence and distribution over time. Staff will use a standardized playback method to document brown-headed nuthatches in all suitable habitat during the breeding season ([Section 5.2.2](#)). Staff should coordinate with FFS to ensure that surveys include suitable habitat on the FFS-lead and co-lead. Surveys should be conducted once every 3 years in conjunction with Bachman's sparrow surveys.

The goal is to enhance and maintain the suitability of habitat to support a viable population of brown-headed nuthatches on JBWMA. Staff will achieve this goal through the use of prescribed fire, timber management, groundcover restoration, and protection of snags. Brown-headed nuthatches will likely persist on the area under current and planned management. The measurable objective is to:

- 1) Conduct an initial survey for brown-headed nuthatches in all suitable habitat by spring 2015, and repeat every 3 years.

3.2.6: Cooper's Hawk

The Cooper's hawk is commonly observed on JBWMA, although nesting has not been documented. Cooper's hawk's nests are cryptic, and there is a high possibility that nesting is occurring on the property. Staff has incidentally captured Cooper's hawks in mourning dove traps during USFWS harvest studies. The nearest occurrence records from surrounding areas are from e-bird records near the Lake Talquin dam and a WildObs record from Leon County.

The Cooper's hawk triggers 1 of 6 prioritization parameters ([priorities table](#)) and the species is not considered management dependent. Commonly associated with woodlands, this species will nest in a variety of habitats including swamps, floodplain and bottomland forests, sand pine scrub, and baygalls. Cooper's hawks primarily feed on other birds and are found nesting in areas managed for upland game birds, such as the northern bobwhite. Nests usually are placed near the crown of a tree close to an edge in dense stands of oaks. Cooper's hawks use a variety of natural communities and most of JBWMA is modeled as potential habitat. There are 10,276 acres of potential habitat modeled for the Cooper's hawk on JBWMA: 2,840 acres on the FWC-lead, 2,064 acres on the co-lead, and 5,372 acres on the FFS-lead. Models indicate 10,125 acres of habitat if management could restore all natural communities to their historic condition: 2,674 acres on the FWC-lead, 2,064 acres on the co-lead, and 5,387 acres on the FFS-lead.

Despite the amount of potential habitat, it is unlikely that JBWMA can independently support a population of this wide-ranging species. However, JBWMA can help support the regional population by providing areas for Cooper's hawks to hunt, as well as areas for

roosting, and possibly nesting. Cooper's hawks often predate on upland birds, and will therefore benefit from management for northern bobwhite. Managing timber for mature stands and applying prescribed fire to maintain natural community structure and function will continue to provide suitable habitat for this species. Additionally, the numerous wildlife openings maintained on JBWMA will continue to provide suitable areas for this species to hunt. [Section 4.3.6](#) contains additional land management recommendations, including nest protection guidelines.

Given the high mobility of this species, it is not appropriate to monitor as an indicator of the effects of management actions. Initially, staff will document any opportunistic observations of Cooper's hawks to determine the species' occurrence on the area. After reducing this initial effort, staff should continue to opportunistically document Cooper's hawk nests in order to protect them from land management activities during the April-June nesting season ([Section 5.2.4](#)).

The goal is to provide suitable foraging and nesting habitat for Cooper's hawks that will allow individuals using JBWMA to function as part of a regional population. While the continued presence of this species depends on conditions that influence the regional population, Cooper's hawks will likely persist on JBWMA given the amount of suitable habitat on the area as well as on surrounding private and conservation lands.

3.2.7: Louisiana Waterthrush

The Louisiana waterthrush has been documented on JBWMA, although abundance and breeding status are unknown. There have been no attempts to monitor the species on JBWMA using survey techniques. The nearest records from surrounding areas include an e-bird record from the Lake Talquin dam and a Breeding Bird Survey route on ANF.

This species triggers 3 of 6 prioritization parameters ([priorities table](#)). Louisiana waterthrushes are neo-tropical migrants that arrive earlier (as early as March 1) and nest earlier than most other migrant songbirds. Nests are frequently located under stream overhangs in exposed roots of fallen trees. There are 588 acres of potential habitat modeled for the Louisiana waterthrush on JBWMA: 295 acres on the FWC-lead, 50 acres on the co-lead, and 243 acres on the FFS-lead. If natural communities could be restored to their historic condition, models indicate 518 acres of potential habitat on JBWMA: 225 acres on the FWC-lead, 50 acres on the co-lead, and 243 acres on the FFS-lead. This species prefers large tracts (>247 acres) of mature deciduous and mixed-deciduous forests along deep ravines with running water. The steep-sided rivers and creeks preferred by waterthrushes occur on JBWMA; however, it's possible that stream-flow may be too intermittent to support enough aquatic prey to sustain a breeding population.

Research suggests that the Louisiana waterthrush is sensitive to deforestation and habitat fragmentation. Waterthrushes are also negatively affected by low aquatic insect populations resulting from poor water quality. Waterthrushes do not use actively-managed

natural communities; therefore, it is unlikely that current and planned management actions will negatively impact waterthrushes on JBWMA. If conducting management activities along wooded streambanks, however, staff should follow FFS Silviculture Best Management Practices (BMPs) to protect habitat for the Louisiana waterthrush ([Section 4.3.7](#)).

Workshop participants agreed that a formal monitoring program is not necessary since it is unlikely that the waterthrush will be affected by current and planned management actions. Therefore, monitoring for Louisiana waterthrushes on JBWMA will be opportunistic ([Section 5.2.4](#)). If opportunities arise where researchers develop a monitoring protocol for the Louisiana waterthrush, we encourage staff to work with partners to conduct a baseline survey for waterthrushes on JBWMA.

The goal is to provide suitable habitat to ensure the continued persistence of the Louisiana waterthrush on JBWMA. Staff will accomplish this goal by following BMPs if conducting management activities in potential waterthrush habitat. Louisiana waterthrushes using JBWMA will benefit from the protections to water quality provided by having conservation land bordering the rivers and creeks in which they feed. Due to the amount of contiguous conservation lands in the area, JBWMA will likely support regional populations of the Louisiana waterthrush with current and planned management.

3.2.8: Northern Bobwhite

The northern bobwhite is occasionally observed on JBWMA and nesting has been documented. Bobwhites are most frequently observed around the office and other portions of Zone G ([Figure 2](#)). Staff has also heard bobwhite in other areas throughout JBWMA. This species also occurs on private lands in the surrounding landscape.

The northern bobwhite triggers 2 of 6 prioritization parameters ([priorities table](#)) and is an important game species in Florida. This species has experienced significant range-wide population declines since the 1980s and is currently a focus of many conservation initiatives. FWC approved the [Strategic Plan for Northern Bobwhite Restoration in Florida](#) in 2007, which calls for identifying areas across the state where habitat restoration can help achieve a sustainable harvest for northern bobwhite.

Northern bobwhite are typically associated with open-canopy forests and grassland communities that contain native warm-season grasses, legumes, and patchy bare ground. The species uses weedy areas for raising broods and foraging, and shrubs or other thickets as roosting habitat or escape cover. Literature suggests that this species requires 2,000-4,000 acres of suitable habitat to support a viable population. There are 5,474 acres of potential habitat modeled for northern bobwhite on JBWMA: 1,454 acres on the FWC-lead, 1,020 acres on the co-lead, and 3,000 acres on the FFS-lead. Models indicate 5,530 acres of habitat if management could restore all natural communities to their historic condition: 1,476 acres on the FWC-lead, 998 acres on the co-lead, and 3,056 acres on the FFS-lead. This suggests that the FWC-lead likely cannot support a viable population on its own, but there is enough potential habitat available when including the co-lead and FFS-lead.

The frequent use of prescribed fire can create the mosaic of vegetation conditions this species requires to meet its life history needs. Current and planned management that includes application of prescribed fire in a 2-3 year rotation for upland pine, sandhill, and mesic flatwood communities will maintain and enhance suitable habitat for this species. Continued upland pine restoration efforts in the areas outlined in the [Ground Cover Restoration Plan](#) will benefit northern bobwhite. Additionally, the numerous wildlife openings maintained on JBWMA will continue to provide habitat for this species. [Section 4.3.8](#) contains additional land management recommendations for this species.

There is a moderate to high level of opportunity to influence this species on JBWMA given its dependence on managed communities and the amount of suitable habitat available. Due to higher priorities for monitoring identified elsewhere in this document, monitoring for northern bobwhite on JBWMA is not recommended at this time. Northern bobwhite and Bachman's sparrows have similar habitat requirements and monitoring Bachman's sparrows every 3 years will also indicate habitat quality for bobwhite. Also, by monitoring check station data for "harvest per unit effort," staff can gain information about bobwhite persistence on the area.

The goal is to enhance and maintain the suitability of habitat to support northern bobwhite on JBWMA. Staff will achieve the goal through the use of prescribed fire, groundcover restoration, and maintaining wildlife openings. Bobwhite will likely persist on JBWMA under current and planned management. Due to the large amount of potential habitat on the FFS-lead areas, coordination with FFS is important to supporting a viable population of northern bobwhite on JBWMA ([Section 6.2](#)).

3.2.9: Southern Bald Eagle

Bald eagles are commonly observed on JBWMA. One nest was last documented as active in 2003 near Lake Talquin between Zones B and C ([Figure 2](#)), and has since been destroyed by a storm. Area staff suspects there may be a roost site or another nest in Zone D because they frequently hear eagles calling in this area. The closest known active nests occur on ANF, to the south of JBWMA.

The bald eagle does not trigger any of the [prioritization parameters](#), but is protected at the federal level under the Bald and Golden Eagle Protection Act and at the state level by species-specific rule. FWC approved the [Bald Eagle Management Plan](#) in 2008 to ensure the continued recovery of this species in Florida. This plan designated 16 Core Nesting Areas, which are defined as areas containing high densities of bald eagle nesting territories. Regionally, JBWMA and the greater complex of surrounding conservation lands are located near the St. Vincent and St Marks National Wildlife Refuge Core Nesting Areas.

Bald eagles use a number of natural communities with the best nesting habitat occurring in forested areas close to open water. Much of JBWMA is modeled as potential eagle habitat due to its proximity to Lake Talquin. Models estimate 7,832 acres of potential

habitat modeled on JBWMA: 1,886 acres on the FWC-lead, 2,046 acres on the co-lead, and 3,900 acres on the FFS-lead. Models indicate 8,252 acres of habitat if management could restore all natural communities to their historic condition: 2,156 acres on the FWC-lead, 2,050 acres on the co-lead, and 4,046 acres on the FFS-lead.

Despite the amount of potential habitat, it is unlikely that JBWMA can independently support a population of this wide-ranging species. However, JBWMA can help support the regional population by providing roost sites, loafing sites, and possibly nest sites for bald eagles. Additionally, the protections to water quality provided by conservation lands bordering Lake Talquin will benefit eagles that feed in that area. Current and planned actions that include managing timber for mature stands, and applying prescribed fire to maintain natural community structure and function, will continue to provide suitable habitat for eagles. However, when conducting land management activities, staff should follow nest protection guidelines to the greatest degree practicable. [Section 4.3.9](#) contains land management recommendations for this species, including the protection of current and potential nest trees.

The bald eagle is not appropriate to monitor as an indicator of the effects of management actions given that it is highly mobile and not dependent on actively managed communities. However, we recommend documenting nests through aerial surveys so that they can be adequately protected ([Section 5.2.3](#)). Aerial surveys are the preferred method because nests are more easily located from the air than from the ground. JBWMA staff will coordinate the timing of surveys with staff from Aucilla WMA and the Fish and Wildlife Research Institute (FWRI), as both currently conduct aerial surveys for eagle nests. Documented nests will be reported to FWRI. [Section 6.1.1](#) and [Section 6.1.3](#) describe coordination recommendations.

The goal is to provide suitable foraging and nesting habitat for bald eagles that will allow individuals using JBWMA to function as part of a regional population. To meet this goal, staff will continue to conduct timber management and prescribed burns to maintain habitat in a condition that will support the species. Staff will also protect bald eagle nests during management activities and follow the recommendations in the Bald Eagle Management Plan. While the continued presence of this species depends on conditions that influence the regional population, eagles will likely persist on JBWMA given its proximity to Lake Talquin. The measurable objective is to:

- 1) Conduct an initial aerial survey for bald eagle nests by 2015, and repeat the survey at least every 3 years.

3.2.10: Wading Birds

All focal species of wading birds except the roseate spoonbill (*Platalea ajaja*) and reddish egret (*Egretta rufescens*) were documented on Lake Talquin during surveys conducted from 1995-2000. During that time, FWC staff annually surveyed the lake by helicopter during the winter and by boat during spring and fall to document potential impacts

of a reservoir draw-down on bird use. Great egrets (*Ardea alba*) and little blue herons (*Egretta caerulea*) were commonly observed during this survey, and snowy egrets (*Egretta thula*), tri-colored herons (*Egretta tricolor*), white ibis (*Eudocimus albus*), and wood storks (*Mycteria americana*) were rarely observed. While nesting colonies of focal wading bird species have not been documented on Lake Talquin, a statewide wading bird breeding survey conducted by FWRI in 1999 documented 3 colonies composed of non-focal species, including great blue herons (*Ardea herodias*), anhingas (*Anhinga anhinga*), and double-crested cormorants (*Phalacrocorax auritus*). Additionally, there are 2 known wood stork colonies in Leon County within 5 miles of JBWMA. An aerial survey in May 2013 documented approximately 150 nests in one of the colonies; the other colony was inactive.

Statewide, this group of species is a moderate priority ([priorities table](#)). Several species are state-listed and the wood stork is federally listed as Endangered. The Millsap biological scores for the little blue heron and wood stork are high. The snowy egret and little blue heron have declining Legacy population trends, while the tricolored heron and white ibis have unknown trends.

Potential habitat for wading birds on JBWMA consists primarily of the river floodplains and a few isolated wetlands. There are 2,590 acres of potential habitat modeled: 1,041 acres on the FWC-lead, 460 acres on the co-lead, and 1,089 acres on the FFS-lead. Models indicate 2,429 acres of habitat if management could restore all natural communities to their historic condition: 877 acres on the FWC-lead, 460 acres on the co-lead, and 1,092 acres on the FFS-lead.

Since the documented colonies occur on or near Lake Talquin, current and planned management actions are unlikely to affect them. Additionally, conservation of these species is largely influenced by water levels and other conditions occurring at the regional level. As such, the opportunity to influence wading birds on JBWMA is low. However, if colonies are ever documented in areas where they could be negatively affected by management actions, staff should establish buffers around the colonies to protect them from disturbance ([Section 4.3.10](#)). Wading birds using JBWMA will benefit from the protections to water quality provided by having conservation lands bordering Lake Talquin and other nearby water bodies.

Monitoring wading birds to measure the effects of management actions is not appropriate given their low management opportunity and high mobility. However, staff will document nests opportunistically to ensure their protection ([Section 5.2.4](#)). Workshop participants agreed that monitoring through aerial surveys should not be a requirement of the Strategy since staff can likely detect colonies from the ground. Additionally, colonies will most likely occur in areas that will not be impacted by management actions. However, JBWMA staff may choose to coordinate with staff from Aucilla WMA to conduct aerial surveys, if feasible.

The goal is to provide suitable habitat on JBWMA that will allow individuals of this focal species group to function as part of a regional population. Staff will achieve this goal

by protecting nesting colonies from disturbance. Wading birds using JBWMA will also benefit from the protections to water quality provided by bordering conservation land. While the continued presence of these species depends on conditions that influence regional populations, wading birds will likely persist on JBWMA given its proximity to Lake Talquin.

3.2.11: Florida Black Bear

JBWMA staff commonly observes bear tracks while monitoring transects used for deer track counts. Bear tracks are most frequently observed in Zone F ([Figure 2](#)), as the tracks of a sow and 3 cubs were observed in this zone. Additionally, a wildlife camera documented a bear in Zone G near the office in March 2013. Located within the East Panhandle Bear Management Unit, JBWMA is within the secondary range of the Apalachicola subpopulation and falls just outside this subpopulation's primary range boundary. If observations of females with cubs become more frequent, JBWMA may be included within the primary range of this subpopulation in the future. From a regional perspective, the WMA is part of a large complex of conservation areas that provide habitat and dispersal corridors for this species ([Locator Map](#)).

The Florida black bear triggers 2 of 6 prioritization parameters ([priorities table](#)) and FWC approved the [Florida Black Bear Management Plan](#) in 2012 to ensure the continued recovery of this species. The bear is a wide-ranging species capable of significant dispersal. Because females tend to establish a home range near where they were born, this species is slow to colonize new breeding territory and tends to grow out from existing populations. Home range sizes vary according to resource availability and the level of habitat fragmentation on the landscape. A mosaic of flatwoods, swamps, scrub oak ridges, bayheads, and hammocks provide adequate den sites, diverse food sources, and cover for bears.

There are 6,978 acres of potential habitat modeled for the Florida black bear on JBWMA: 2,095 acres on the FWC-lead, 1,049 acres on the co-lead, and 3,834 acres on the FFS-lead. Models indicate 6,549 acres of habitat if management could restore all natural communities to their historic condition: 1,734 acres on the FWC-lead, 1,066 acres on the co-lead, and 3,749 acres on the FFS-lead. Though the models indicate a loss of 429 acres with continued restoration, this is a product of the modeling as upland pine is not mapped as potential habitat. The majority of the acreage loss is in Zone G that is currently mapped as ruderal, but historically considered upland pine. Bears would still use this habitat if restored to its historic condition, despite the stated habitat loss in of potential habitat models.

JBWMA contains a variety of natural communities ([Table 2](#)) that are currently suitable for Florida black bears. Current management actions to restore natural community structure and function include timber management to meet target basal areas ([Table 3](#)). In addition, the frequent application of prescribed fire in fire-maintained natural communities will sustain or improve forage for bears; whereas, natural communities that remain in fire

shadows or are not maintained by fire, will provide den sites and escape cover. [Section 4.3.11](#) contains additional land management recommendations for this species.

Monitoring on a local scale is not appropriate given the wide-ranging and generalist nature of Florida black bears. However, staff will document dens if encountered so that they can be protected during management activities. Also, staff will document cubs and cub sign to aid in defining the primary range boundary ([Section 5.2.4](#)). Sections [6.1.3](#) and [6.1.5](#) describe coordination recommendations for this species.

The goal is to provide suitable habitat for Florida black bears that will allow individuals using JBWMA to function as part of a regional population. Staff will achieve this goal through management actions, such as the application of prescribed fire to promote a mosaic of vegetation structure across the landscape. While the continued presence of this species depends on conditions that influence the regional population, bears will likely persist on JBWMA given the amount of suitable habitat on the area, adjacent private lands, and nearby conservation lands. Additionally, the proximity of JBWMA to other large tracts of conservation lands will contribute to the persistence of bears on the area.

3.2.12: Fox Squirrel

It is unclear which subspecies of fox squirrel occurs on JBWMA, the southeastern fox squirrel (*Sciurus niger niger*) or state-listed Sherman's fox squirrel (*Sciurus niger shermani*). The Sherman's fox squirrel range stretches from the Aucilla River east to Nassau County, south to the Caloosahatchee River in southwestern Florida, and to Miami-Dade County along the east coast. Some researchers extend the range westward to the Apalachicola River, although this extension is not universal. The [SAP](#) for Sherman's fox squirrel calls for genetic research to help define the boundaries of its range. Researchers at the University of Florida are currently using genetic markers to refine the distribution of fox squirrel subspecies ([Section 5.3.1](#)). Depending on how the range is defined, JBWMA may be too far west to support Sherman's fox squirrels. However, to address the needs of all subspecies present on JBWMA, workshop participants chose to include fox squirrels in this assessment regardless of taxonomy.

Fox squirrels are common on JBWMA and area staff suspect that reproduction occurs on the area. Fox squirrels are also commonly observed on a hunt club that is adjacent to the co-lead. The Sherman's fox squirrel is an FWC-listed species of special concern that triggers 4 of 6 prioritization parameters ([priorities table](#)). Suitable habitat for fox squirrels includes longleaf pine sandhills or flatwoods with a mixture of pines and oaks, and a sparse to moderate shrub layer. Fox squirrels appear to do best in mature longleaf pine stands maintained with fire that results in an open understory with an oak component. Mast-producing hardwoods, especially large mature oaks, are often used by fox squirrels for nest sites and daytime refugia. In addition, acorns provide a major part of their diet. Mature longleaf pines that produce seed-bearing cones are also an important energy-rich food source.

particularly during summer. A mosaic of habitat conditions across the landscape, including a variety of oaks, ensures a year-round supply of food items that vary seasonally.

Literature suggests that this species requires approximately 2,000-9,000 acres of suitable habitat to support a viable population. There are 7,935 acres of potential habitat modeled for the fox squirrel on JBWMA: 1,858 acres on the FWC-lead, 1,604 acres on the co-lead, and 4,473 acres on the FFS-lead. Models indicate 8,003 acres of habitat if management could restore all natural communities to their historic condition: 1,926 acres on the FWC-lead, 1,604 acres on the co-lead, and 4,473 acres on the FFS-lead. This suggests that JBWMA can support a viable population of fox squirrels across the lead, co-lead, and FFS-lead areas. JBWMA contains a variety of natural communities that include the longleaf pine and oak component required by fox squirrels, and the habitat is currently suitable to support this species. There is a moderate to high level of opportunity to affect this species on JBWMA given its dependence on managed communities and the amount of available habitat that is in a suitable condition.

Current and planned timber management for mature stands of site-appropriate species, and the frequent application of prescribed fire (≤ 3 year rotation) in upland pine, sandhill, and mesic flatwoods will maintain and enhance suitable habitat for this species. Based on the habitat models, the FWC-lead may not be able to support a viable population of fox squirrels on its own but there is likely enough modeled habitat available when including the co-lead and FFS-lead. Therefore, it is important for both FWC and FFS to follow the additional land management recommendations in [Section 4.3.12](#), which include retaining some oaks during timber operations.

We do not recommend monitoring because this species naturally occurs at low densities and can be difficult to detect. Additionally, the species is common on JBWMA so opportunistic monitoring is not necessary. Research is necessary to determine the subspecies that persists on JBWMA in order to designate proper management actions [Section 5.3.1](#).

The goal is to enhance and maintain the suitability of habitat to support fox squirrels on JBWMA. Staff will achieve this goal through the use of prescribed fire and timber management that maintains open conditions and an oak component in suitable habitat. Under current and planned management, fox squirrels will likely persist on JBWMA. The amount and quality of habitat on surrounding private and conservation lands will also contribute to the persistence of this species on the area.

3.2.13: Southeastern Myotis

The southeastern myotis occurs on JBWMA but its abundance is unknown. The Southeastern Bat Diversity Network's Bat Blitz, which was co-sponsored by FWC, documented this species on JBWMA in May of 2012. During this Bat Blitz, southeastern myotis were also documented on ANF. The closest known maternity colonies occur

approximately 10 miles east of JBWMA in storm drains located under the Tallahassee Mall and north of Interstate-10 near Meridian Road.

This species triggers 2 of 6 prioritization parameters ([priorities table](#)) and is a moderate statewide priority. The southeastern myotis forages primarily over rivers, creeks, and lakes, but will also forage along hammock edges and in flatwoods. Roosting habitat varies seasonally. Outside the breeding season, individuals may roost in caves, culverts, bridges, hollow trees, and occasionally houses. During the maternity season (April-May), most known maternity roosts in Florida occur in caves where females gather to rear young. Hollow trees and manmade structures also serve as maternity sites, but the prevalence and importance of these to the population is not fully understood. Models estimate 8,002 acres of potential habitat modeled for the southeastern myotis on JBWMA: 1,901 acres on the FWC-lead, 2,046 acres on the co-lead, and 4,055 acres on the FFS-lead. If management could restore all natural communities to their historic condition, models indicate 8,509 acres of habitat could exist on JBWMA: 2,217 acres on the FWC-lead, 2,050 acres on the co-lead, and 4,242 acres on the FFS-lead.

Southeastern myotis using JBWMA forage over Lake Talquin, rivers, and creeks on the area. The floodplain forest and swamps may provide roost sites. The protections to water quality provided by conservation lands bordering JBWMA will benefit bats that feed in the area. Current management actions that maintain or enhance habitat for southeastern myotis on JBWMA include the use of prescribed fire along habitat edges to prevent shrubby encroachment. [Section 4.3.13](#) contains additional land management recommendations for this species including the protection of roost sites.

Before removing or destroying potential roosts such as large hollow trees, culverts, or old buildings, staff should check first to ensure southeastern myotis are not using them. We recommend opportunistic documentation of roost sites and subsequent protection ([Section 5.2.4](#)). Staff should coordinate with the Species Conservation Planning (SCP) section and FWRI for maternity roost protections and further monitoring actions ([Section 6.1.1](#) and [Section 6.1.3](#)).

The goal is to provide suitable habitat for southeastern myotis that will allow individuals using JBWMA to function as part of a regional population. Staff will achieve this goal through the use of prescribed fire to maintain natural communities, and by documenting and protecting roosts. While the continued presence of this species depends on conditions that influence the regional population, southeastern myotis will likely persist on JBWMA due to the availability of water bodies for foraging and conservation lands that provide forested corridors to these foraging sites.

3.2.14: Limited Opportunity Species

Using statewide data, 2 focal species (gopher frog and red-cockaded woodpecker) were modeled to have potential habitat on JBWMA; however, the area-specific assessment

concluded that the opportunity to affect these species on the area is limited. Staff will opportunistically document any observations of these species ([Section 5.2.4](#)). If gopher frogs or red-cockaded woodpeckers are documented on JBWMA in the future, the area's role in the conservation and recovery of these species will be re-visited.

Gopher frog - Despite survey efforts, gopher frogs have not been documented on JBWMA. Gopher frogs were not captured in drift fence arrays during a herpetological inventory in Zone F ([Figure 2](#)) from September 1996 through July 1997. In 2002 and 2003, FWC staff dip-netted 18 ponds for flatwoods salamanders (*Ambystoma* spp.); no gopher frogs were detected during these surveys. In March and April of 2013, area staff conducted calling surveys at potential gopher frog breeding ponds but did not detect any gopher frogs. The only gopher frog record from Gadsden County is from along the banks of the Ochlockonee River and its accuracy is disputed. Other than this occurrence, the nearest records are from Leon and Liberty Counties.

The gopher frog is currently state-listed as a species of special concern, but is proposed for delisting upon approval of ISMP. The gopher frog triggers 2 of 6 statewide prioritization parameters ([priorities table](#)). Gopher frogs breed in seasonally flooded grassy ponds that lack predatory fish. After breeding, frogs move into uplands and often occupy gopher tortoise burrows; however, they also use rodent and crayfish burrows, stump holes, and hollow logs. Gopher frogs are rarely found more than 1 mile from breeding habitat. The use of prescribed fire in isolated wetlands, and in upland habitat within 1 mile of potential breeding ponds will maintain or enhance habitat for this species. Firebreaks should not be placed along wetland ecotones because they can alter or destroy the herbaceous component of pond margins preferred by this species and other amphibians. Minimizing soil disturbance within 500 yards of potential breeding ponds will also maintain the ponds.

There are currently 1,728 acres of potential gopher frog habitat modeled to occur on JBWMA: 283 acres on the FWC-lead, 0 acres on the co-lead, and 1,445 acres on the FFS-lead. Models indicate 2,003 acres of habitat if all natural communities could be restored to their historic condition: 540 acres on the FWC-lead, 0 acres on the co-lead, and 1,463 acres on the FFS-lead.

Due to the lack of documented gopher frogs on JBWMA and surrounding areas, there is limited opportunity for JBWMA to contribute to the conservation of this species. The [SAP](#) for this species includes recommendations to restore degraded upland xeric habitat and maintain the suitability of that habitat with the frequent application of fire. Current and planned natural community management that includes timber management to meet target basal areas ([Table 3](#)) and the frequent application of prescribed fire (≤ 3 year rotation) in sandhill, and mesic and wet flatwoods will maintain and enhance suitable habitat for gopher frogs despite their absence from the area. Additionally, ongoing GCR and upland pine restoration will improve potential gopher frog habitat.

Red-cockaded woodpecker - Red-cockaded woodpeckers have not been documented on JBWMA. Area staff spends considerable time working in Zone D (Figure 2), which contains the best potential red-cockaded woodpecker habitat, but have never observed the species or its' cavity trees. The nearest known population occurs on ANF, <5 miles south of JBWMA across Lake Talquin and Lake Talquin State Forest. Lake Talquin presents a significant barrier to dispersal and red-cockaded woodpeckers from ANF are unlikely to disperse across such a wide, open area to colonize JBWMA. Red-cockaded woodpeckers are also unlikely to colonize from the north, as the nearest known grouping is part of the Red Hills Metapopulation and is separated from JBWMA by >30 miles of development and agriculture.

The red-cockaded woodpecker is a federally Endangered species that triggers 4 of 6 prioritization parameters (priorities table), making it a high statewide priority. A [FWC Management Plan](#) and [USEWS Recovery Plan](#) have been developed for this species. However, neither of these plans identifies JBWMA as a priority area for red-cockaded woodpecker conservation. Models estimate 5,221 acres of potential red-cockaded woodpecker habitat on JBWMA: 1,096 acres on the FWC-lead, 1,016 acres on the co-lead, and 3,109 acres on the FFS-lead. Models indicate 5,757 acres of habitat if all natural communities could be restored to their historic condition: 1,570 acres on the FWC-lead, 998 acres on the co-lead, and 3,189 acres on the FFS-lead. Only a small percentage of the potential habitat is currently suitable to support red-cockaded woodpeckers and much of this acreage is fragmented by natural hardwood streams and separate across lead-area boundaries. Red-cockaded woodpeckers prefer large stretches of contiguous habitat and are unlikely to persist on JBWMA even if there is colonization.

Due to the absence of recorded sightings, a lack of immigration potential, and because recovery plans do not identify a role for the area, there is limited opportunity for JBWMA to contribute to the conservation of red-cockaded woodpeckers. Current and planned natural community management that includes timber management for mature stands and the frequent application of prescribed fire (<3 year rotation) in upland pine, sandhill, and mesic and wet flatwoods will maintain and enhance suitable habitat. As habitat conditions improve, future Strategies may need to re-evaluate the role of JBWMA for this species. If the status of this species on JBWMA were to change within the lifetime of this Strategy, staff should update this assessment to provide appropriate goals and recommended actions.

3.3: Other Listed or Locally Important Species

While natural community management focused on a set of focal species provides benefits to a host of species reliant upon these natural communities, species that are imperiled sometimes require specific attention. Further, subsection 253.034(5) of the Florida Statutes (F.S.) requires all land management plans to include an analysis of the property to determine if significant natural resources, including listed species, occur on the property. If

significant natural resources occur, the plan shall contain management strategies to protect the resources. The Florida Forever Act (s. 259.105, F.S.) adds that all State lands that have imperiled species habitat shall include restoration, enhancement, management, and repopulation of such habitats as a consideration in the management plan. In this subsection, we discuss listed or locally important species that are not PLCP focal species.

It is possible other imperiled species occur on JBWMA, and if encountered, staff will document these encounters. Florida's imperiled species are adapted to natural communities and should continue to benefit from FWC's ongoing or planned ecological management that aims to restore natural community structure and function. Under FWC's ecological management, these species have a higher probability of persistence than in the absence of this management.

3.3.1: Other Imperiled Wildlife

In addition to the listed species discussed in [Section 3.2](#), the alligator snapping turtle (*Macrochelys temminckii*) and American alligator (*Alligator mississippiensis*) are the only other listed species known to occur on JBWMA. The eastern indigo snake (*Drymarchon couperi*) and southeastern American kestrel (*Falco sparverius paulus*) could potentially occur on JBWMA but have not been documented. In addition, several listed species have been documented in the Ochlockonee River, which borders the WMA to east. These species include the Barbour's map turtle (*Graptemys barbouri*) and several species of freshwater mussels, including the Ochlockonee moccasinshell (*Medionidus simpsonianus*), oval pigtoe (*Pleurobema pyriforme*), purple bankclimber (*Elliptoideus sloatianus*), and shiny-rayed pocketbook (*Lampsilis subangulata*).

Alligator snapping turtle – Area staff rarely observe alligator snapping turtles on JBWMA, but the species has been documented laying eggs in the uplands near Little River. The alligator snapping turtle is currently FWC-listed, but is proposed for delisting upon approval of the ISMP. Further management considerations for this species may be updated after approval of the ISMP.

American alligator – The American alligator is common in Lake Talquin and Little River, and also occurs in Budd Pond. Staff has occasionally observed alligators in upland areas, presumably when the alligators are moving between wetlands. The species is federally listed due to similarity of appearance with other listed crocodylians. Ongoing protections to water quality will benefit this species on JBWMA. No specific management actions are necessary to ensure the continued persistence of alligators on JBWMA.

Eastern indigo snake – The eastern indigo snake is federally listed as a Threatened species. There are some records of indigo snakes from the surrounding landscape; however,

there have not been any verified records in northwest Florida since 1999. Eastern indigo snakes have large home ranges and are vulnerable to habitat fragmentation, including the loss of travel corridors between areas of suitable habitat. Additionally, the species faces increased mortality in areas with a high density of roads. Management actions that maintain or enhance habitat for the Florida pine snake will also benefit the eastern indigo (Section 3.2.1 and 4.3.1). Opportunistic monitoring is recommended (Section 5.2.4).

Ochlockonee River species – The Barbour’s map turtle is a FWC species of special concern and may soon be listed as Threatened based on the recommendations of the SAP. The Ochlockonee moccasinshell, oval pigtoe, and shiny-rayed pocketbook are federally listed as Endangered, while the purple bankclimber is federally listed as Threatened. These species occur in the Ochlockonee River and may use habitats adjacent to the river. Ongoing protections to water quality will benefit this species on JBWMA. As these habitats are not actively managed, management actions on JBWMA will not likely impact these species. Staff will continue to avoid actions that could potentially affect water flow or quality. The protections afforded to these species by existing on and around conservation lands will continue to benefit these and other aquatic species.

Southeastern American kestrel – Models do not indicate potential habitat for the southeastern American kestrel on JBWMA; however, staff commonly observe the migratory American kestrel (*Falco sparverius*) during fall. We recommend opportunistic monitoring of kestrels during April-June to determine if the FWC-listed subspecies occurs on JBWMA (Section 5.2.4). If staff observes kestrels during the breeding season, this assessment will be revisited to ensure JBWMA is contributing appropriately to conservation efforts.

3.3.2: Rare Plants

The Florida Natural Areas Inventory (FNAI) conducted a rare plant survey on JBWMA from January through June 1997. FNAI documented 10 listed plant species that occur on JBWMA. In addition to this survey, area staff continually document and monitor rare plants while conducting other activities, but also occasionally conduct specific searches for rare plants. For example, area staff in cooperation with FFS conducted a search for Carolina lily (*Lilium michauxii*) in 2009. The Carolina lily, Florida merrybells (*Uvularia floridana*), Flyr’s brickell-bush (*Brickellia cordifolia*), pyramid magnolia (*Magnolia pyramidata*), silky camellia (*Stewartia malacodendron*), sweet-shrub (*Calycanthus floridus*), and dimpled trout lily (dog-tooth violet; *Erythronium umbilicatum*) are state-listed as Endangered. The hooded pitcher plant (*Sarracenia minor*), heartleaf (*Hexastylis arifolia*), and scare-weed (*Baptisia simplicifolia*) are state-listed as Threatened. The protections afforded to these species by existing on conservation lands will continue to benefit these and other rare plants, particularly as most of these species occur in non-actively managed natural

communities such as upland hardwood forest and bottomland forest. Ongoing treatment of exotic vegetation in these communities will also benefit listed plants.

Carolina lily – The Carolina lily is found along slopes in hardwood forests along the southern Appalachian Mountains and into northwestern Florida. Conservation actions for this species include following Silvicultural BMPs when working along streamsides and slope forests and minimizing firebreaks along ecotones. The protection afforded to natural communities in which the Carolina lily occurs will help meet the conservation needs of this species. Actions to benefit this species may include allowing fire to burn into the edges of streamside forests during adjacent land management.

Florida merrybells – This species is mostly found in bottomland and floodplain forests, where it is generally restricted to moist ravines. There are only 8 known populations of Florida merrybells throughout the state, and the majority are not located on conservation lands. This makes protection of JBWMA specimens a high priority. Ongoing management considerations should include following Silvicultural BMPs when working in mature, floodplain pine forests. Exotic control will also benefit its persistence on JBWMA.

Flyr's brickell-bush – This species depends on dry upland forests and can be found along openings and edges of shady, overgrown trees. Conservation actions for this species include allowing fire to burn through wooded edges or manually creating openings along trail edges or fire breaks. Managers should avoid clearcutting and conversion of upland woods to pine plantations, while continuing to create fire-maintained open edges.

Pyramid magnolia – This species is found in upland hardwood forests within slopes, bluffs, and floodplains. Although control of encroaching hardwoods is a priority in sandhill and upland pine communities on JBWMA, staff does not control for hardwoods in mature hardwood communities where this species occurs. Conservation recommendations include avoiding clearcutting and logging in sloped floodplains that would disturb soils.

Silky camellia – The silky camellia is found within the understory of stream-side bluffs and sloped forests. Conservation actions for this species include following Silvicultural BMPs when working along streamsides and slope forests and minimizing firebreaks along ecotones. By allowing fire to burn into the edges of streamside forests, JBWMA will meet the conservation needs for this species.

Sweet-shrub – Sweet-shrub depends on well-drained soils in low to medium shade. It is adapted to upland pine communities and will benefit from management that includes lowered basal area, ground cover restoration, and frequent fire.

Dimpled trout lily – This species is found in the leaf litter of upland hardwood forests. Protections provided to conservation lands will continue to provide suitable habitat for dimpled trout lily, primarily within non-managed mature hardwood communities where this species occurs. Conservation recommendations include avoiding clearcutting and intensive logging in hardwood forests that would heavily disturb soils.

Hooded pitcher plant – This species grows within swampy low-land areas that are periodically inundated throughout the year. Hooded pitcher plants occur in actively-managed natural communities and benefit from prescribed fire and focused exotic plant control.

Heartleaf – Also known as heartleaf wild ginger or little brown jug, this species grows in moderately dry to wet soils in wooded areas. It is listed as threatened by the Florida Department of Agriculture and Consumer Services, although the appropriate management actions for this species have not been assessed. The protection afforded to natural communities in which the heartleaf occurs will help meet the conservation needs of this species.

Scare-weed – Also known as coastal plain wild indigo, this species occurs in longleaf pine-deciduous oak ridges and along mesic flatwoods. It is often associated in areas alongside wiregrass. This species occurs in actively-managed natural communities that receive focused exotic plant control, and would most likely benefit from frequent fire.

Section 4: Land Management Actions and Considerations

Models identified potential habitat for 15 focal species on the area ([Section 3.1](#)); however, not all of these species have the same level of management opportunity or need ([Section 3.2](#)). The FWC's natural community-based management, which emphasizes frequent growing season prescribed fire, will promote the habitat conditions necessary for most of these species, without the need for further strategic management actions. We may designate Strategic Management Areas (SMAs) when actions over and above ongoing natural community management are required in a specific location ([Section 4.1](#)). In addition, to ensure natural community management addresses the needs of these focal species, we evaluate the OBVM Desired Future Conditions (DFCs) for natural communities ([Section 4.2](#)). [Section 4.3](#) provides recommendations for species that need specific protective measures or land management considerations to ensure their continued use of the property.

4.1: Strategic Management Areas

The intent on JBWMA is to apply management actions that maintain intact natural communities in good condition and restore degraded or altered natural communities to a condition that will better suit focal and listed species. However, SMAs focus management actions on Management Units (MUs) with the highest possibility of success, and or MUs most critical for the conservation of a species on the WMA. Staff designates SMAs to achieve at least one of the following:

- Identify the area in which to apply specific land or species management that creates the highest probability for persistence and conservation of a species or suite of species. These specific actions should aid in restoring, enhancing, or maintaining the habitat or population.
- Identify an area in which to focus specific land or species management actions for the best chance of success, when there is more restoration and enhancement than can be accomplished in short order on the WMA. This might be the first or next step in a sequential series of management actions that will increase the likelihood of occupation and or persistence of a specific species.
- Identify an area that is so critical to the persistence of a species on the WMA that it warrants special designation to ensure protection against negative alteration.
- Identify areas that are critical for research or monitoring.
- Recommend MU-specific natural community DFCs that differ from the DFCs in the natural community area-wide, when this is necessary to benefit a specific species.

The WCPR workshop gave participants the opportunity to evaluate if there was the need for SMAs to meet the needs of focal species. Workshop participants agreed that planned and ongoing management actions across JBWMA will meet the needs of the focal species; therefore, we did not designate any SMAs.

4.2: Objective-Based Vegetation Management Considerations

OBVM is an approach to land management that emphasizes maintaining and restoring natural plant communities towards pre-determined desired conditions. The OBVM DFCs (Table 3) target a range in values for various habitat attributes within actively managed communities. However, if a focal species requires a more restricted range in habitat attributes than is reflected in the area-wide DFCs, or depends on an attribute that is not currently monitored on JBWMA, we may recommend adjusting the DFC range or adding the attribute. The workshop gave participants the opportunity to evaluate if the current DFCs meet the needs of focal species and if not, to suggest modifications. The following are common reasons to modify DFCs:

- To obtain maximum habitat suitability for a species that requires a more restricted range of DFC values than the current DFC values.
- To benefit a particular species in specific MUs; typically when we have designated a SMA that requires a change in natural community DFCs only within the SMA and not in the natural community area-wide.
- To add an attribute that was not previously monitored.

The OBVM 'data collection protocol' and 'attribute range in values' have changed since the JBWMA OBVM workshop. The data collection protocols for OBVM changed due to program review and budgetary issues. Additionally, the OBVM workshop occurred prior to the identification of reference sites. Reference sites are areas identified by FNAI as representing the highest quality examples of natural communities in the State. At the WCPR workshop, participants agreed using the reference site values would meet the needs of JBWMA's focal species.

Table 3A. Desired Future Conditions for specific vegetative attributes in actively managed wet flatwoods at JBWMA based on FNAI recommended values from reference sites.

COMMUNITY	ATTRIBUTE	UNITS	FNAI Reference Site DFCs
Wet Flatwoods	Basal Area of Pine	ft ² /acre	10-50
	Non-Pine Stem Density > 4in DBH	count/7m radius	0
	Subcanopy Stem Density 2-4in DBH	average count/4m quadrat	<1
	Shrub Stem Density > 1m	average count/4m quadrat	<1
	Maximum Shrub Stem DBH	average maximum DBH in inches	<0.5
	Average Maximum Shrub Height	average maximum height in ft	<3
	Shrub Cover < 1m	average % cover/4m quadrat	>10
	Serenoa Petiole Density > 1m	average count/4m quadrat	0
	Serenoa Cover < 1m	average % cover/4m quadrat	<25
	Average Maximum Serenoa Height	average maximum height/4m quadrat in ft	<3
	Herbaceous Cover	average % cover/4m quadrat	>1

Table 3B. Desired Future Conditions for specific vegetative attributes in actively managed mesic flatwoods at JBWMA based on FNAI recommended values from reference sites.

COMMUNITY	ATTRIBUTE	UNITS	FNAI Reference Site DFCs
Mesic Flatwoods	Basal Area of Pine	ft ² /acre	20-80
	Non-Pine Stem Density > 4in DBH	count/7m radius	0
	Subcanopy Stem Density 2-4in DBH	average count/4m quadrat	<1
	Shrub Stem Density > 1m	average count/4m quadrat	<1
	Maximum Shrub Stem DBH	average maximum DBH in inches	<0.5
	Average Maximum Shrub Height	average maximum height in ft	<2
	Shrub Cover < 1m	average % cover/4m quadrat	<25
	Serenoa Petiole Density > 1m	average count/4m quadrat	0
	Serenoa Cover < 1m	average % cover/4m quadrat	10-25
	Average Maximum Serenoa Height	average maximum height/4m quadrat in ft	<3
	Herbaceous Cover	average % cover/4m quadrat	>25

Table 3C. Desired Future Conditions for specific vegetative attributes in actively managed upland pine at JBWMA based on FNAI recommended values from reference sites.

COMMUNITY	ATTRIBUTE	UNITS	FNAI Reference Site DFCs
Upland Pine	Basal Area of Pine	ft ² /acre	20-80
	Non-Pine Stem Density > 4in DBH	count/7m radius	<1
	Subcanopy Stem Density 2-4in DBH	average count/4m quadrat	<1
	Shrub Stem Density > 1m	average count/4m quadrat	<1
	Maximum Shrub Stem DBH	average maximum DBH in inches	<0.5
	Average Maximum Shrub Height	average maximum height in ft	<2
	Shrub Cover < 1m	average % cover/4m quadrat	<10
	Serenoa Petiole Density > 1m	average count/4m quadrat	0
	Serenoa Cover < 1m	average % cover/4m quadrat	<5
	Average Maximum Serenoa Height	average maximum height/4m quadrat in ft	<3
	Herbaceous Cover	average % cover/4m quadrat	<5

Table 3D. Desired Future Conditions for specific vegetative attributes in actively managed sandhill at JBWMA based on FNAI recommended values from reference sites.

COMMUNITY	ATTRIBUTE	UNITS	FNAI Reference Site DFCs
Sandhill	Basal Area of Pine	ft ² /acre	20-60
	Non-Pine Stem Density > 4in DBH	count/7m radius	<3
	Subcanopy Stem Density 2-4in DBH	average count/4m quadrat	<1
	Shrub Stem Density > 1m	average count/4m quadrat	0
	Maximum Shrub Stem DBH	average maximum DBH in inches	<1
	Average Maximum Shrub Height	average maximum height in ft	<3
	Shrub Cover < 1m	average % cover/4m quadrat	10-20
	Serenoa Petiole Density > 1m	average count/4m quadrat	0
	Serenoa Cover < 1m	average % cover/4m quadrat	<5
	Average Maximum Serenoa Height	average maximum height/4m quadrat in ft	<3
	Herbaceous Cover	average % cover/4m quadrat	>25

4.3: Further Land Management Considerations

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

4.3.1: Florida Pine Snake

Large upland snakes such as the Florida pine snake are relatively wide-ranging and elusive. Ongoing land management activities will enhance the suitability of habitat for this species, but specific actions could be directly detrimental. When using heavy equipment during land management activities, it is important to move slowly enough within pine snake habitat to avoid direct mortality. If contractors are used to accomplish land management objectives, they should be educated in what to do if they encounter a pine snake and directed to avoid damaging or destroying gopher tortoise burrows. Coarse woody debris and stumps should be left intact when possible to provide cover for pine snakes. While it is acceptable to pile and burn excess logging slash if necessary, ensure some debris remains in the stand.

Creating brush piles can also provide cover for this species if natural cover is sparse or absent.

4.3.2: *Gopher Tortoise*

Whenever possible, mechanical treatments that use heavy equipment (e.g., roller-chopping, timber removal) in areas where gopher tortoises occur should occur during the winter. Gopher tortoises are generally less active and remain in burrows during the winter months; therefore, mechanical equipment will be less likely to crush or otherwise harm foraging tortoises at this time. The timing of treatments will affect management results and should also be considered, as growing season treatments frequently are more successful in creating the diverse groundcover required by the gopher tortoise. Regardless of timing, managers should make efforts to minimize impacts to known burrows.

4.3.3: *American Swallow-Tailed Kite*

While kites have not been documented nesting on JBWMA, it is important to preserve potential nest trees. Managers should retain the largest, oldest trees on the landscape during timber management activities. Staff should document and attempt to locate nests if kite activity is observed during nesting season (March-June), particularly if kites are observed carrying nesting material, mobbing, or congregating in groups of 3 or more. Because swallow-tailed kites exhibit high nest site fidelity, protect known nest sites from disturbance and alteration, and retain the tallest pines in the area of nest sites. Maintain a 330-foot protective buffer around active nests during the nesting season to minimize the chance of disturbance. When possible, kite nesting areas should be managed to have a higher shrub height and density than surrounding areas as this may reduce the likelihood of nest predation. For information on how to locate swallow-tailed kite nests, see:

Avian Research and Conservation Institute, [Swallow-Tailed Kite Species Profile](#)

Meyer, K. D., and M. W. Collopy. 1995. [Status, distribution, and habitat requirements of the American swallow-tailed kite \(*Elanoides forficatus*\) in Florida](#). Project Report, Florida Game and Fresh Water Fish Commission, Tallahassee, Florida, USA.

4.3.4: *Bachman's Sparrow*

Frequent (<3 year rotation) use of prescribed fire improves habitat quality for Bachman's sparrows, and is the primary land management tool recommended to enhance and maintain habitat for this species. The occurrence of fire is critical to sustaining this species as use of an area by Bachman's sparrows declines rapidly around 18 months post-fire, and

the species may abandon habitat if fire is excluded for more than 3 years. Because males use small shrubs as singing perches, it is important to retain some small patches of shrubs during mechanical treatments to reduce understory. Follow mechanical treatments with a prescribed burn to stimulate grass and forb coverage.

4.3.5: Brown-Headed Nuthatch

Brown-headed nuthatches depend on the presence of snags for suitable nesting habitat. Ongoing management activities frequently knock over snags, especially the old, soft snags on which the nuthatch depends. Managers should evaluate the impact of land management on snags to ensure new snags replace consumed snags. If there is a net loss of snags during prescribed fire or mechanical treatments, consider taking efforts to protect snags or taking actions to create new snags. It is possible to create potential nest sites by girdling oaks with a diameter at breast height of <10 inches. Over time, these snags soften and become suitable nest sites. Managers should retain these particular types of snag.

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

4.3.6: Cooper's Hawk

During the nesting season (April-July), Cooper's hawks are secretive and intolerant of human disturbance near the nest site. Males show a strong fidelity to traditional territories. Managers should protect known nests from disturbance during land management activities by maintaining a 50-foot buffer around the nest during the nesting season. When practical, avoid heavy alteration of the habitat surrounding the nest. Whenever signs of Cooper's hawk nesting (e.g., carrying nesting material, aggressive dive bombing) are encountered, document the location and make an effort to protect the nest site.

4.3.7: Louisiana Waterthrush

Louisiana waterthrushes prefer unpolluted, headwater streams and large, contiguous forest tracts. Waterthrushes tend to abandon streamside breeding sites where the forest canopy has been cleared. Management activities that maintain habitat for the Louisiana waterthrush include measures to protect the water quality and forest structure of the riparian

areas on which it depends. "[Silviculture Best Management Practices](#)" provides guidance on protecting water quality during management activities.

4.3.8: Northern Bobwhite

The frequent (≤ 3 year rotation) use of prescribed fire improves habitat quality for northern bobwhite, and is the primary land management tool recommended to enhance and maintain habitat for this species. Ignite fires using a variety of firing techniques and environmental conditions with the goal of promoting mosaic burns. Mosaic burns result in a patchwork of burned and unburned areas that meet different life history requirements for northern bobwhite. Burning at different times of the year results in the diversity of vegetation structure and forage required by this species. Ruderal areas can be managed for northern bobwhite through mechanical actions like mowing and disking strips during the summer months to promote herbaceous growth.

4.3.9: Southern Bald Eagle

State and federal regulations require protection of bald eagles, including avoiding disturbance of nesting eagles. When planning activities within 660-feet of known eagle nests, managers should follow the management guidelines in the [state management plan](#), especially the guidelines for land management practices beginning on page 27. During management activities, retain large mature pines as potential eagle nesting sites, when feasible. Continue to manage stands in which eagle nests occur, but avoid negative impacts to eagles or nest trees per the guidance of the management plan. Staff can identify potential nests prior to management with the FWC [bald eagle nest locator](#). Contact the Bald Eagle Management Plan Coordinator for assistance interpreting the management plan or resolving possible conflict with management practices for other imperiled species ([Section 6.1.1](#)).

4.3.10: Wading Birds

It is possible that management actions (e.g., prescribed fire, timber thinning) could have negative impacts on wading birds if these activities disturb birds while they are nesting, or alter nest sites in ways that make them unsuitable. This is unlikely to occur on JBWMA since the documented wading bird colonies occur on or near Lake Talquin in areas that aren't actively managed. However, if colonies are ever documented in areas where they could be negatively affected by management actions, staff should establish a 330-foot buffer around nesting colonies to protect them from disturbance. Additionally, staff should plan any mechanical or chemical control of vegetation at a time that avoids disturbance to the colony, and use methods that do not damage the plants in which wading birds construct their nests.

4.3.11: Florida Black Bear

Bears require some areas of dense vegetation for escape and denning cover. Efforts to restore natural communities to a more open landscape with reduced tree density, lower shrub height, and reduced shrub cover may reduce denning and escape cover for bears. However, these same efforts may increase availability of forage such as berries and tubers. To ensure some dense areas remain for denning and escape cover on JBWMA, managers should avoid “burning out” dense patches of vegetation that remain after the initial burn and resist forcing fire into fire shadows. When possible, avoid mechanical treatments and burning in likely den sites during the denning season (December – April). Land management activities that provide a mosaic habitat structure will provide both escape cover and foraging habitat for bears.

4.3.12: Fox Squirrel

FWC and FFS staff should retain some oaks during timber operations to benefit fox squirrels. Fox squirrels prefer a variety of oak species in a range of age classes, but this management should not interfere with other species’ needs and natural community maintenance. Additionally, staff should not conduct hardwood control in mature hardwood communities such as the upland hardwood forest. FWC’s [position statement](#) regarding hardwood control in the restoration of fire-adapted communities recognizes that hardwoods benefit wildlife by providing cover and forage (reference page 6 of the statement). Managers will retain a hardwood component in areas lacking habitat diversity and mast production for the benefit of the fox squirrel.

4.3.13: Southeastern Myotis

Large hollow trees, particularly hardwoods or cypress in forested wetlands are potential roost sites for southeastern myotis. Protect these important resources when possible during land management activities. Check for occupancy by bats before removing large hollow trees, old culverts, or abandoned buildings.

Section 5: Species Management Opportunities

Land management that considers the needs of a suite of focal species provides direct benefits to many associated species. However, land management actions alone are insufficient to maintain or recover some species. These species need species-specific management ([Section 5.1](#)). Additionally, monitoring ([Section 5.2](#)) is required to verify management is having the desired influence on wildlife, and in some cases, research is necessary to guide future management ([Section 5.3](#)).

5.1: Species Management

Species management as used here refers to actions other than land management, monitoring, or research, taken for a specific species. Species-specific management actions can include actions such as translocation, restocking, or installing artificial cavities. These actions may be needed for species that are currently present but occur at low densities, have low reproduction potential, or have other limitations that inhibit recovery. Additionally, species-specific management may be required for species that are not present on a site, have limited dispersal capabilities, or are unlikely to occupy a site without reintroduction. Workshop participants did not identify any species management needs for JBWMA.

5.2: Species Monitoring

Monitoring is critical to evaluating the effect of management on wildlife. While we are unable to monitor all of the focal species on JBWMA, the recommended monitoring will assess species in all actively managed communities. Opportunistic monitoring of uncommon or hard to monitor species is also included. The FWC will make monitoring data available to cooperating agencies and organizations, such as FNAI ([Section 6](#)).

This section lists the species monitoring recommended for JBWMA. We also provide the purpose for each monitoring effort. The FWC is in the process of standardizing monitoring protocols for a number of these species, and developing a central database for data storage with Sampling and Monitoring Protocol (SaMP). Area staff will work with the regional conservation biologist to implement standardized protocol, standardize ongoing monitoring that does not have a standardized protocol, and ensure data are included in the central database.

5.2.1: Gopher Tortoise

The purpose of monitoring gopher tortoises is to track population size and density over time to ensure management is having the desired effect. The gopher tortoise CCA recommends conducting surveys on state-owned properties using a line transect distance sampling method to camera-scope every burrow along a pre-designated transect. This protocol will enable managers to track changes in the population, rather than just changes in the number of burrows. Staff may need to use contractors to accomplish this monitoring.

In 2014, contractors conducted a pilot survey on the lead, co-lead, and FFS-lead to determine the survey effort required to estimate a baseline tortoise population. Area staff will coordinate with contractors to use this determination and complete the full baseline population survey by 2016. After the initial survey, managers will determine the frequency of future monitoring that will use the line transect distance sampling method. Surveys may

initially be conducted every 5 years to obtain a reliable baseline estimate, followed by surveys every 10 years to track changes in the gopher tortoise population over time.

5.2.2: Bachman's Sparrow and Brown-Headed Nuthatch

Bachman's sparrows and brown-headed nuthatches have been identified as 'indicator species' whose continued presence indicates well-managed upland pine communities. The purpose of monitoring Bachman's sparrows and brown-headed nuthatches is to track presence and distribution of these species across the area over time to ensure management is having the desired effect. These surveys will be conducted every 3 years during the breeding season (May 1–June 30) using a standardized playback protocol. Surveys should include suitable habitat on the FWC-lead, FFS-lead, and co-lead.

5.2.3: Southern Bald Eagle

Area staff will conduct aerial surveys to document bald eagle nests to ensure they receive adequate protection. To efficiently use resources, JBWMA staff should coordinate these surveys with staff from Aucilla WMA and the FWRI Wildlife Research Lab, as both currently conduct aerial surveys of eagle nest territories. Staff should survey for eagle nests at least every 3 years, but can survey more frequently if they observe behavior that may indicate an undocumented nest. These surveys should continue as long as funding allows.

5.2.4: Opportunistic Monitoring Opportunities

The purpose of opportunistic monitoring is to document the presence of specific species. Opportunistic monitoring is the process of recording important information as it is encountered. By following the [Opportunistic Observations for Wildlife Protocol](#), staff ensures their data are compatible with other opportunistic observations. Documentation of opportunistic sightings including information on species, date of the observation, observer, approximate lat/long or appropriate MU, number of individuals, behavior, and habitat type should be entered into SaMP. Monitoring data will be made available to cooperating agencies and organizations such as FNAI ([Section 6.4](#)). Record observations or sign of the following focal species:

- Florida pine snake
- Cooper's hawk (nesting activity, April-July)
- Louisiana waterthrush
- American swallow-tailed kite (aggregations of 3 or more birds on a regular basis in one area and any nesting activity, March-June)
- Wading birds (nesting colonies)
- Florida black bear (dens, cubs and cub sign)

- Southeastern myotis (roosts)
- Gopher frog
- Red-cockaded woodpecker
- Eastern indigo snake
- Southeastern American kestrel (presence April-June)
- Any other listed species that does not have a monitoring protocol in this section

5.3: Species Research Needs

Species management recommendations in other sections of this document are based on the most current information available. Cases may arise where little or no information is available to guide management, and research is needed. Many of the focal species do not have standard monitoring protocol. Research is needed to determine the most efficient means of monitoring these species. For many of the focal species, managers need research about aspects of natural history, such as minimum habitat patch size, preferred habitat parameters, and response to habitat management activities. Workshop participants identified the following research need on JBWMA:

5.3.1: Fox Squirrel Taxonomy

It is unclear which subspecies of fox squirrel occurs on JBWMA, the southeastern fox squirrel or state-listed Sherman's fox squirrel. The Sherman's fox squirrel [SAP](#) addresses this issue, and the University of Florida currently conducts genetic research to clarify the distribution of fox squirrel subspecies in Florida. If results of the genetic research determine that JBWMA is within the range of Sherman's fox squirrels, this assessment will be updated as necessary to meet objectives of the SAP.

Section 6: Intra/Inter Agency Coordination

The WCPR process identified many recommendations regarding possible management actions for focal species. WHM staff can handle most proposed management actions; however, coordination with other sections in FWC or with other agencies sometimes is necessary or more efficient. This part of the Strategy describes coordination that is necessary outside of the WHM section, identifies the entity to coordinate with, and provides position contacts for these entities. We attempt to provide the name, position, and contact information for the person holding the position when the Strategy was drafted. As positions experience turnover, when in doubt, contact the current Section Leader or supervisor to determine the appropriate person now holding the position.

6.1: Florida Fish and Wildlife Conservation Commission

6.1.1: Species Conservation Planning Section (SCP)

Monitoring wildlife populations on a WMA/WEA gives managers a way to gauge the effects of management. If this information is not shared with others, valuable data that can be used to assess statewide conservation efforts are often lost. Managers will share monitoring data with the appropriate taxa coordinator and with program coordinators for species that are part of conservation initiatives or other management programs. The regional SCP biologist is a good source of information on the regional status of non-game species. Additionally, FWC staff is authorized to handle federally listed species as long as actions are consistent with the requirements of the agency's [Endangered Species Act Section 6 Cooperative Agreement](#). To meet these requirements, staff will provide reporting as outlined in the Agreement to the agency's Endangered Species Coordinator. Please note some contacts will also be covered under [Section 6.1.3](#); FWRI, and [Section 6.1.6](#); Florida's Wildlife Legacy Initiative.

Contacts:

Brad Gruver, Species Conservation Planning Section Leader: (850) 617-9502
Craig Faulhaber, Avian Taxa Coordinator: (352) 620-7346
Terry Doonan, Mammalian Taxa Coordinator: (386) 754-1662
Vacant, Herpetofauna Taxa Coordinator: (850) 921-1143
Deborah Burr, Gopher Tortoise Management Plan Coordinator: (850) 921-1019
Michelle van Deventer, Bald Eagle Management Plan Coordinator: (941) 894-6675
Justin Davis, Regional Biologist: (850) 265-3676

6.1.2: Division of Hunting and Game Management (HGM)

As the FWC has a [statewide quail strategy](#), we recommend coordination with HGM—Game Species Management if issues regarding northern bobwhite arise on JBWMA.

Contacts:

Paul Schulz, Section Leader: (850) 617-9539
Greg Hagan, Northern Bobwhite Coordinator: (850) 893-4153

6.1.3: Fish and Wildlife Research Institute (FWRI)

Area staff will cooperate with FWRI staff conducting monitoring and research for focal species. Pertinent observations will be shared with the appropriate contact listed below (note: report observations of bald eagle nests to baldeagle@myfwc.com rather than directly

to Janell Brush). Report handling of migratory birds covered by FWC's [migratory bird scientific collection permit](#) to the Research Administrator in January of each year.

Contacts:

Robin Boughton, Section Leader: (352) 334-4218
Jeff Gore, Biological Administrator (mammals): (850) 767-3624
Andrew Cox, Research Administrator (migratory birds): (352) 334-4241
Janell Brush, Avian Research Biologist (bald eagle nest monitoring): (352) 334-4202
Karl Miller, Biological Administrator (avian): (352) 334-4215
Kevin Enge, Associate Research Scientist (herps): (352) 334-4209
Walter McCown, Biological Scientist (bears): (352) 334-4214
Brian Scheick, Biological Scientist (bears): (352) 334-4219

6.1.4: Office of Conservation Planning Services (CPS)

CPS works with private landowners and may be able to assist in making contacts or providing incentives for management activities on neighboring private lands. CPS also provides environmental commenting to ensure regional projects do not negatively influence the area. Maintaining communication regarding current and future projects will be critical.

Contacts:

Scott Sanders, Section Leader: (850) 617-9548
Arlo Kane, Regional Coordinator: (850) 767-3616
Mike Wilson, Wildlife Biologist: (850) 717-8734

6.1.5: Imperiled Species Management Section (ISM)

The Imperiled Species Management Section is responsible for the implementation and evaluation of imperiled species management and recovery plans, and have staff dedicated to management of Florida black bears. Area staff can coordinate with the Bear Management Plan Coordinator on issues related to bears.

Contacts:

Carol Knox, Section Leader: (850) 922-4330
Dave Telesco, Bear Management Plan Coordinator: (850) 922-4330

6.1.6: Florida's Wildlife Legacy Initiative (FWLI)

FWLI is an FWC led program developed to generate and coordinate cooperative conservation projects that address high priority issues identified in [Florida's State Wildlife](#)

Action Plan. FWLI can assist in identifying potential partners and assisting with collaborative efforts for monitoring and management of focal species. FWLI is a potential source of project funding via [Florida's State Wildlife Grants program](#). Regular communication with this section will be valuable.

Contacts:

Kate Haley, Program Administrator: (850) 617-9503

Jessica Graham, Wildlife Legacy Biologist: (850) 767-3617

6.1.7: Invasive Plant Management Section (IPM)

The Invasive Plant Management Section provides technical and financial assistance to assist in the control of upland and aquatic invasive exotic plants. The Invasive Plant Management Section may serve as a resource in identifying appropriate solutions to, and funding for, exotic plant issues.

Contacts:

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

Jeff Schardt, Aquatics Administrator: (850) 617-9420

Linda King, Uplands Administrator: (850) 617-9425

6.2: Florida Forest Service (FFS)

Coordination with FFS is critical since FFS is the lead manager on the majority of JBWMA, as well as co-lead on approximately 2,000 acres. Habitat models indicate that there is only enough habitat to support viable populations of northern bobwhite, Florida pine snakes, and fox squirrels when including potential habitat on the FFS-lead. Additionally, FWC-lead parcels are fragmented and the FFS-lead serves as a corridor between parcels. JBWMA staff will continue to coordinate prescribed fire, timber management, and other activities with FFS.

Contacts:

Chris Colburn, Tallahassee Forestry Center Manager: (850) 414-1131

Keith Cummings, Supervisor for Lake Talquin State Forest: (850) 414-1129

Daniel Stanley, Forest Area Supervisor for Gadsden County: (850) 627-3644

6.3: Avian Research and Conservation Institute (ARCI)

ARCI surveys and keeps data on American swallow-tailed kite populations. Staff should share observations of swallow-tailed kite nests or nesting behavior with ARCI.

Contacts:

Dr. Ken Meyer, Avian Researcher: (352) 335-4151; meyer@arcinst.org

Gina Kent, Research Ecologist and Coordinator: (352) 514-5607;

ginakent@arcinst.org

6.4: Florida Natural Areas Inventory (FNAI)

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

Contacts:

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

Kim Gullede, Senior Ecologist: (850) 224-8207

Section 7: Beyond the Boundaries Considerations

JBWMA encompasses a fairly large area, and with continued management, has enough potential habitat to support many focal species. Habitat models indicate that the FWC-lead alone can support viable populations of gopher tortoises, Bachman's sparrows, and brown-headed nuthatches. Models indicate that JBWMA can also support viable populations of northern bobwhite, Florida pine snakes, and fox squirrels if potential habitat on the FFS-lead and co-lead is included. Coordination with FFS is therefore important to the management of numerous focal and imperiled species (Section 6.2). The persistence of wide-ranging focal species such as the Florida black bear, southern bald eagle, Cooper's hawk, swallow-tailed kite, southeastern myotis, and wading birds depends on regional conditions. The surrounding network of conservation lands will help ensure that suitable habitat exists for these species.

The current management boundaries do not include all important habitat for focal species, such as the lands identified as Strategic Habitat Conservation Areas (SHCAs) for the Cooper's hawk, Florida black bear, and swallow-tailed kite. The FWC originally identified SHCAs in [Closing the Gaps in Florida's Wildlife Habitat Conservation System](#). The goal of SHCAs is to identify the minimum amount of land needed in Florida to ensure long-term

survival of key components to Florida's biological diversity. The SHCAs identify important habitat conservation needs remaining on private lands. A recent FWC update to Closing the Gaps entitled [Wildlife Habitat Conservation Needs in Florida](#) identified new SHCAs. Although it is unlikely that the state of Florida will acquire all property identified in SHCAs, encouraging land use and management that is compatible with the needs of JBWMA's focal species should be a priority.

Located at the north end of an expansive complex of conservation areas, JBWMA has a role in supporting individual species as a part of larger, regional populations. Due to the mosaic of management authorities that compose JBWMA, however, suitable habitat for these species is often fragmented into parcels managed by different agencies. FWC-lead management units are chumped into MUs 1-9 on the western portion of the area and 10-16 on the eastern portion, with Lake Talquin and FFS-lead areas separating the two tracts. For ground-dwelling species that prefer large tracts of contiguous habitat (such as the Florida pine snake and fox squirrel), the size and arrangement of suitable habitat influences whether these species will continue to use JBWMA. While some parcels may be too small to support these species on the area in isolation, FWC can partner with FFS to influence the condition of contiguous habitat across lead-area boundaries. Whenever possible, area staff should emphasize proper natural community management as a tool for species conservation within the larger complex of JBWMA and Lake Talquin State Forest.

While the current conditions and management within the vicinity of JBWMA provide an opportunity to further the conservation of many focal and imperiled species, these species could be significantly impacted by changes in management or land use beyond the boundaries. Any changes that impede the ability to use prescribed fire would be detrimental to the many fire-dependent focal species such as the Bachman's sparrow, brown-headed nuthatch, and gopher tortoise. Any changes that alter hydrologic resources could negatively affect species such as wading birds. According to the Florida 2060 future development report, there is little projected growth around JBWMA. However, there is significant projected growth around Midway and Tallahassee that may cause impacts such as increased visitor use and concerns over smoke management.

A number of neighboring private landowners to the north and east have applied for or are currently enrolled in the FWC's Landowner Assistance Programs, including Working Lands for Wildlife, a program to enhance and maintain habitat for gopher tortoises. Area staff should continue to coordinate with CPS ([Section 6.1.4](#)) to ensure private landowners around JBWMA are informed about incentive programs that encourage conservation-based management, and receive the proper technical assistance to affect this management. CPS should ensure environmental commenting includes recommendations for compatible uses of lands adjacent to JBWMA.

Document Map

Species	Species Assessment	Land Management Actions	Species Management Actions	Species Monitoring	Research
Florida Pine Snake	Section 3.2.1	Section 4.3.1		Section 5.2.4	
Gopher Tortoise	Section 3.2.2	Section 4.3.2		Section 5.2.1	
American Swallow-Tailed Kite	Section 3.2.3	Section 4.3.3		Section 5.2.4	
Bachman's Sparrow	Section 3.2.4	Section 4.3.4		Section 5.2.2	
Brown-Headed Nuthatch	Section 3.2.5	Section 4.3.5		Section 5.2.2	
Cooper's Hawk	Section 3.2.6	Section 4.3.6		Section 5.2.4	
Louisiana Waterthrush	Section 3.2.7	Section 4.3.7		Section 5.2.4	
Northern Bobwhite	Section 3.2.8	Section 4.3.8			
Southern Bald Eagle	Section 3.2.9	Section 4.3.9		Section 5.2.3	
Wading Birds	Section 3.2.10	Section 4.3.10		Section 5.2.4	
Florida Black Bear	Section 3.2.11	Section 4.3.11		Section 5.2.4	
Fox Squirrel	Section 3.2.12	Section 4.3.12			Section 5.3.1
Southeastern Myotis	Section 3.2.13	Section 4.3.13		Section 5.2.4	
Limited Opportunity Species (Gopher Frog and Red-Cockaded Woodpecker)	Section 3.2.14	Section 3.2.14		Section 3.2.14	
Other Listed Species	Section 3.3	Section 3.3		Section 3.3	