

APPENDICES

APPENDIX A

COOPERATIVE MANAGEMENT AGREEMENT BETWEEN THE COUNTY AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT



St. Johns River Water Management District

Hans G. Tanzler III, Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500
On the Internet at floridaswater.com.

March 28, 2012

Randall Sleister
Director of Land Management
Volusia County Growth & Resource Management Department
123 West Indiana Avenue, Room 202
DeLand, FL 32720

Dear Randy,

Please find enclosed two, executed original copies of the Cooperative Management Agreement for the Deep Creek Preserve/Kemcho property.

Thank you for all of your efforts to make this happen.

Sincerely,

J.B. Miller

J.B. Miller
Bureau of Real Estate Services

Enclosures

GOVERNING BOARD

Lad Daniels, CHAIRMAN JACKSONVILLE	John A. Miklos, VICE CHAIRMAN ORLANDO	Douglas C. Bournique, SECRETARY VERO BEACH	Maryam H. Ghyabi, TREASURER ORMOND BEACH
Chuck Drake ORLANDO	Richard G. Hamann GAINESVILLE	George W. Robbins JACKSONVILLE	Fred N. Roberts, Jr. OCALA
			W. Leonard Wood FERNANDINA BEACH

**COOPERATIVE MANAGEMENT AGREEMENT
KEMCHO PARCEL
VOLUSIA COUNTY**

THIS COOPERATIVE AGREEMENT ("Agreement") between THE GOVERNING BOARD OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, a public body existing under Chapter 373 of the Florida Statutes, whose mailing address is P.O. Box 1429, Palatka, Fl 32178-1429 (the "District") and VOLUSIA COUNTY, a political subdivision of the State of Florida, whose mailing address is 123 W. Indiana Avenue, Deland, Florida 32720 (the "County") is effective March 27, 2012.

The District is owner in fee simple of approximately 3,200 acres of land (known as the Kemcho Parcel), located in Volusia County, south of State Road (SR) 44, east of Interstate 4, just east of the town of Lake Helen, as described in the attached Exhibit "A" and depicted in the attached Exhibit "B", (the "Property").

The County is owner in fee simple of approximately 4,806 acres of land (known as Deep Creek Preserve), located adjacent to the Property in Volusia County, west of County Road 415, as depicted in Exhibit "B."

The District purchased the Property for the conservation and protection of water resources, consistent with section 373.139, Florida Statutes, and for the conservation of wildlife habitats and natural areas suitable for resource-based recreation.

The District and the County desire to manage the Property as an addition to the Deep Creek Preserve for conservation, water resource protection, and recreation.

In consideration of the premises above and the terms and conditions below, the District and County agree as follows:

1. The purpose of this Agreement is to designate the County as the lead management entity for the conservation, protection, management, and enhancement of natural and cultural resources within the Property, as well as the development and management of resource-based outdoor recreation and other uses as provided herein.
2. The term of the Agreement commences on the effective date of the Agreement and continues for a period of twenty years, unless terminated earlier pursuant to the provisions of this Agreement. This Agreement will automatically renew, in twenty-year increments.
3. Either party may terminate this Agreement with or without cause by giving 90 days written notice of its intent to do so.

4. The County will develop a Management Plan (the "Plan") for the Property within twelve (12) months of the effective date of this Agreement. The Plan may encompass both the County and District properties as depicted in Exhibit "B." The Plan and all future revisions of the Plan shall include strategies for forest, ecological and fire management, long-term management, public recreation uses, access and use of existing roads, and establishment of environmental education programs and shall also include a maintenance/control plan for invasive/exotic species. Either party to this Agreement at any time may propose amendments to the Plan, however, both parties must agree in writing to Plan amendments affecting the Property.
5. If additional parcels adjacent to either the Property or the Deep Creek Preserve are acquired by either the District or the County, each parcel may be incorporated within the Plan and managed as a whole upon written request by the owner of the additional parcel and the written consent of the other Party. If the acquired parcel is a District parcel, the District request or consent must specifically reference this Agreement and the County or District consent must then be attached to this Agreement.
6. Use or development of Property shall be subject to the minimum conditions and guidelines:
 - a. The function and condition of the Property with respect to the management of water and other natural resources, water supply and the conservation and protection of water resources will be maintained in their present condition or enhanced.
 - b. The Property shall be managed for multiple uses, including forest and fire management, and for public resource-based (i.e., dependent on existing elements of the natural environment) educational and recreational purposes, which may include hiking, hunting, wildlife viewing, picnicking, nature study, jogging, equestrian activities, camping and other related passive outdoor activities as set forth in the Plan.
 - c. All educational and recreational uses and activities on the Property shall be consistent with the water management purposes of the District as provided in Chapter 373, Florida Statutes, and all uses are subordinate to District responsibility under Chapter 373 to manage the water resources.
 - d. The development of recreational facilities shall be restricted to trails, boardwalks, or other alterations, as set forth in the approved Plan which facilitate access for recreational users. It is understood by both parties that there shall be no facilities on the Property except those directly related to the operation and maintenance of the Property for conservation, public recreational and environmental educational purposes as set forth in the Plan.
7. Except for a District hunt agreement that is scheduled to expire April 29, 2013, the County shall coordinate and oversee all public recreation activities on the Property, including trail

construction and maintenance, trail brochure development and other passive recreation activities that are consistent with the Plan.

8. The District will assist the County as requested for purposes of natural resource management, including fire management and exotic and nuisance species control.
9. The County may enter into leases of the Property for the purposes of cattle grazing. Responsibility of the County for cattle grazing leases include the following:
 - a. Develop a lease, interview and select a lessee(s) for the Property in a manner substantially consistent with Section 373.093, Florida Statutes;
 - b. Monitor the cattle grazing operation for compliance with the cattle lease provisions;
 - c. Maintain an inspection schedule for the identification of tropical soda apple (*Solanum viarum*) ("TSA");
 - d. Coordinate with the lessee(s) the proper procedures for the quarantine of cattle for TSA;
 - e. Ensure implementation of Best Management Practices ("BMPs") for cattle operation by the lessee(s); and
 - f. Monitor cattle stocking rates and grazing impacts to natural communities, ranges, and improved pastures.
10. The District and County may harvest wiregrass and other seed for restoration planting.
11. The District agrees to plant pine on 500 acres as depicted in Exhibit "C". The composition, density and species will be determined, upon mutual agreement, between the District and the County land managers.
12. The District reserves the right to engage in construction or other activities necessary for water management purposes on the Property. Such activities include scientific investigation, surveying, the taking of soil borings, and the drilling, operation, and maintenance of monitoring wells
13. In the event of a boundary discrepancy or dispute with respect to the Property, the District is solely responsible for resolution of said discrepancy or dispute.
14. The County may enter into agreements with third parties to develop and implement the Plan or to subcontract day-to-day management responsibilities upon the Property consistent with the approved Plan; provided however, that any such third party agreements entered into by the County shall be subject to the prior written approval of the District, and such third parties shall agree to comply with the terms and conditions of this Agreement. The District shall not

unreasonably withhold approval of such third party agreements. Any such third party agreements necessary for routine maintenance or previously agreed upon minor improvement of the Property shall not require the District's written approval.

15. Revenues generated on the Property by the County or the District or third parties hired by the County or the District through compatible secondary-use management, such as the sale of timber, shall be utilized for the benefit of the Property to implement approved activities on the Property to the extent allowable under existing laws and consistent with the Plan.
16. Any structures, improvements and facilities placed upon or moved in or upon the Property by the County or the District shall be at the sole cost, expense and liability of the initiating party, and shall be identified in the approved Plan.
17. Each party shall pay all lawful debts incurred by that party with respect to the Property and shall satisfy and properly established liens of contractors, subcontractors, mechanics, laborers, and materialmen in respect to any construction, alteration and repair in and on the Property, and any improvements thereon authorized by that party, its agents or employees, and shall be responsible for its own legal costs and charges, including reasonable attorney fees on appeal, in any suit involving claims, liens, judgments or encumbrances suffered by that party as a result of the use or occupancy of the Property or any part thereof by such party, its agents or employees.
18. The County will pay all special assessments and fees that are imposed as a result of the County's management or use of the Property. Third party management agreements must include a provision passing on the responsibility for payment of any and all taxes to third party managers or lessees, for any tax imposed as a result of the third party's or lessees' actions on the Property.
19. Neither the District nor the County shall use or permit the Property to be used in violation of any valid present or future laws, ordinances, rules, or regulations of any public or governmental authority at any time applicable thereto relating to sanitation or the public health, safety or welfare, relating to listed species, either state or federal; or related to archeological and historical sites.
20. The District authorizes and consents to the County amending the Property's future land use designation to Conservation (C) and to the County rezoning the Property to the Conservation Classification (C).
21. The District, the County, and other governmental agencies or organizations involved in managing the Property shall, throughout the term of this Agreement, provide, maintain, and keep in force a program of insurance or self-insurance covering that agency's or organization's liabilities as prescribed by Section 768.28, Florida Statutes. The District's liability is limited by the provisions of Section 373.1395, Florida Statutes. The County shall not impair that immunity by charging for admission or use of the Property or acting in any

other statutorily inconsistent manner. Nothing in this Agreement shall be construed as a waiver of the District's or the County's sovereign immunity under Section 768.28, Florida Statutes or any other provision of law.

22. Nothing contained in this Agreement or in the Plan prepared pursuant to this Agreement shall be construed as a waiver of or contract with respect to the regulatory or permitting authority of the District or County as it now or hereafter exists under applicable laws, rules and regulations.
23. Nothing contained herein affects any of the Parties' obligations pursuant to Chapter 267, Florida Statutes, regarding archaeological and historical sites. The collection of artifacts or the disturbance of archaeological and historical sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources.
24. All notices, consents, approvals, waivers and elections which any party makes under this Agreement shall be in writing and shall be sufficiently made or given (i) when mailed by Certified Mail, postage prepaid, return receipt requested, or (ii) by hand delivery to the named individuals below, or (iii) by private parcel delivery services or (iv) facsimile transmission for which a receipt is provided; and shall be made to the parties at the addresses listed below or to such other address designated by like notice.

DISTRICT: ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
P.O. Box 1429
Palatka, FL 32178-1429
Attention: Director, Bureau of Operations South
Fax: (386) 329-4848

COUNTY: COUNTY OF VOLUSIA
123 W. Indiana Avenue
Deland, FL 32720
Attention: Land Management Manager,
Growth and Resource Management
Fax (386) 740-5277

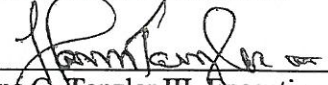
Notices, consents, approvals, waivers and elections given or made as aforesaid shall be deemed to have been given and received on the date of the mailing, delivery or transmission.

25. The Parties shall allow public access to all project documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should either Party assert an exemption to the requirements of Chapter 119 and related statutes, the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon that Party.

26. The County shall not assign, delegate, or otherwise transfer its rights and obligations as set forth in this Agreement without the District's prior written consent. Any attempted assignment in violation of this provision shall be void.
27. This Agreement constitutes the entire agreement of the parties, and there are no understandings dealing with the subject matter of this Agreement other than those contained herein. This Agreement may not be modified, changed or amended, except in writing signed by the parties hereto or their authorized representatives. This Agreement shall be construed and interpreted according to the laws of the State of Florida.
28. As part of the consideration for this Agreement, the Parties hereby waive trial by jury in any action or proceeding brought by any Party against any other Party pertaining to any matter whatsoever arising out of or in any way connected with this Agreement, or with the products or services provided under this Agreement; including but not limited to any claim of quantum meruit.

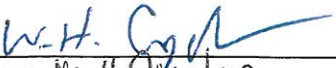
The parties are signing this Agreement on the dates next to each signature, the last of which shall be inserted in the first paragraph.

**ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT**

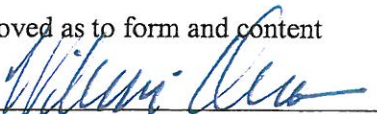
By: 
Hans G. Tanzler III, Executive Director

Date: 3.27.12

Attest:


Name: W.H. Canyon
Title: General Counsel

Approved as to form and content

By: 
Office of General Counsel, SJRWMD

Witnessed by:

Darla Zakaluzny

Darla Zakaluzny
(Print/Type Witness Name)

Susan M. Whittaker

Susan M. Whittaker
(Print/type Witness Name)

**COUNTY COUNCIL
VOLUSIA COUNTY, FLORIDA**

By:

Frank T. Bruno, Jr.

Frank T. Bruno, Jr., County Chair

Attest:

James T. Dinneen, County Manager/Clerk

Executed on 3/13 2012
(SEAL)

Approved as to form and content

By:

Danielle E. Seaman, Deputy
Volusia County Attorney

EXHIBIT "A"

A PARCEL OF LAND LYING IN SECTIONS 14, 15, 21, 22, 23, 26, 27, 34, 35 & 36,
TOWNSHIP 17 SOUTH, RANGE 31 EAST, VOLUSIA COUNTY, FLORIDA,
DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF THE NORTHEAST QUARTER
OF SECTION 15, TOWNSHIP 17 SOUTH, RANGE 31 EAST, THENCE RUN SOUTH
89°10'39" WEST ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF
SAID SECTION 15, A DISTANCE OF 2625.83 FEET TO THE NORTHWEST
CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 15; THENCE
DEPARTING SAID NORTH LINE RUN SOUTH 01°23'30" EAST ALONG THE
WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 15, A
DISTANCE OF 838.89 FEET TO A POINT LYING ON THE SOUTHERLY RIGHT-
OF-WAY LINE OF STATE ROAD 44, POINT ALSO BEING THE POINT OF
BEGINNING; THENCE RUN THE FOLLOWING (6) COURSES ALONG THE
SOUTHERLY RIGHT-OF-WAY LINE; (1) NORTH 52°00'50" EAST, A DISTANCE
OF 32.02 FEET; (2) NORTH 01°09'55" EAST, A DISTANCE OF 51.14 FEET; (3)
NORTH 60°56'56" EAST, A DISTANCE OF 111.31 FEET; (4) NORTH 65°44'01"
EAST, A DISTANCE OF 292.02 FEET; (5) TO A POINT OF CURVATURE OF A
CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 3543.30 FEET AND
CHORD BEARING OF NORTH 77°00'59" EAST; THENCE RUN
NORTHEASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL
ANGLE OF 22°33'56" FOR AN ARC DISTANCE OF 1395.50 FEET TO A POINT OF
TANGENCY; (6) NORTH 88°17'57" EAST, A DISTANCE OF 50.70 FEET; THENCE
DEPARTING SAID SOUTHERLY RIGHT-OF-WAY LINE RUN SOUTH 59°15'21"
EAST, A DISTANCE OF 165.67 FEET; THENCE RUN SOUTH 33°35'52" EAST, A
DISTANCE OF 437.97 FEET; THENCE RUN SOUTH 32°31'46" EAST, A DISTANCE
OF 276.13 FEET; THENCE RUN SOUTH 13°12'04" EAST, A DISTANCE OF 226.84
FEET; THENCE RUN SOUTH 36°05'05" EAST, A DISTANCE OF 245.67 FEET;
THENCE RUN SOUTH 12°12'17" EAST, A DISTANCE OF 277.33 FEET; THENCE
RUN SOUTH 08°51'41" EAST, A DISTANCE OF 446.26 FEET; THENCE RUN
SOUTH 09°02'32" EAST, A DISTANCE OF 438.27 FEET; THENCE RUN SOUTH
06°52'12" EAST, A DISTANCE OF 269.83 FEET; THENCE RUN SOUTH 19°58'45"
WEST, A DISTANCE OF 148.19 FEET; THENCE RUN SOUTH 04°42'26" EAST, A
DISTANCE OF 290.91 FEET; THENCE RUN SOUTH 07°54'53" EAST, A DISTANCE
OF 169.19 FEET; THENCE RUN SOUTH 00°22'41" WEST, A DISTANCE OF 168.53
FEET; THENCE RUN SOUTH 29°13'44" EAST, A DISTANCE OF 159.43 FEET;
THENCE RUN SOUTH 06°40'44" EAST, A DISTANCE OF 136.88 FEET; THENCE
RUN SOUTH 07°32'54" WEST, A DISTANCE OF 305.17 FEET; THENCE RUN
SOUTH 07°24'54" WEST, A DISTANCE OF 555.67 FEET; THENCE RUN SOUTH
06°28'16" WEST, A DISTANCE OF 441.08 FEET; THENCE RUN SOUTH 07°22'22"
WEST, A DISTANCE OF 398.43 FEET; THENCE RUN SOUTH 25°26'16" EAST, A
DISTANCE OF 235.17 FEET; THENCE RUN SOUTH 25°27'59" EAST, A DISTANCE
OF 264.88 FEET; THENCE RUN SOUTH 54°42'47" EAST, A DISTANCE OF 208.79

FEET; THENCE RUN SOUTH 44°24'30" EAST, A DISTANCE OF 160.88 FEET;
THENCE RUN SOUTH 51°16'00" EAST, A DISTANCE OF 140.73 FEET; THENCE
RUN SOUTH 27°09'53" EAST, A DISTANCE OF 151.29 FEET; THENCE RUN
SOUTH 44°00'44" EAST, A DISTANCE OF 217.03 FEET; THENCE RUN SOUTH
21°03'56" EAST, A DISTANCE OF 295.71 FEET; THENCE RUN SOUTH 43°01'09"
WEST, A DISTANCE OF 524.13 FEET; THENCE RUN SOUTH 37°01'19" WEST, A
DISTANCE OF 242.85 FEET; THENCE RUN SOUTH 40°15'17" WEST, A
DISTANCE OF 407.37 FEET; THENCE RUN SOUTH 05°14'39" EAST, A DISTANCE
OF 372.54 FEET; THENCE RUN SOUTH 00°31'58" EAST, A DISTANCE OF 463.14
FEET; THENCE RUN SOUTH 01°19'44" EAST, A DISTANCE OF 716.08 FEET;
THENCE RUN SOUTH 01°19'33" EAST, A DISTANCE OF 585.30 FEET; THENCE
RUN SOUTH 01°03'55" EAST, A DISTANCE OF 1005.63 FEET; THENCE RUN
SOUTH 01°22'15" EAST, A DISTANCE OF 812.13 FEET; THENCE RUN SOUTH
01°27'05" EAST, A DISTANCE OF 717.25 FEET; THENCE RUN SOUTH 00°49'32"
EAST, A DISTANCE OF 656.97 FEET; THENCE RUN SOUTH 64°24'46" EAST, A
DISTANCE OF 731.84 FEET; THENCE RUN SOUTH 67°20'21" EAST, A DISTANCE
OF 660.70 FEET; THENCE RUN SOUTH 23°10'15" EAST, A DISTANCE OF 330.95
FEET; THENCE RUN SOUTH 27°46'27" EAST, A DISTANCE OF 341.29 FEET;
THENCE RUN SOUTH 09°49'52" EAST, A DISTANCE OF 321.80 FEET; THENCE
RUN SOUTH 01°01'34" WEST, A DISTANCE OF 457.78 FEET; THENCE RUN
SOUTH 01°45'35" EAST, A DISTANCE OF 522.88 FEET; THENCE RUN SOUTH
01°30'26" EAST, A DISTANCE OF 481.97 FEET; THENCE RUN SOUTH 13°59'10"
WEST, A DISTANCE OF 463.92 FEET; THENCE RUN SOUTH 00°48'42" EAST, A
DISTANCE OF 1142.27 FEET; THENCE RUN SOUTH 85°45'25" EAST, A
DISTANCE OF 344.59 FEET; THENCE RUN NORTH 89°29'44" EAST, A
DISTANCE OF 511.67 FEET; THENCE RUN NORTH 89°29'45" EAST, A
DISTANCE OF 617.12 FEET; THENCE RUN NORTH 89°20'46" EAST, A
DISTANCE OF 538.54 FEET; THENCE RUN NORTH 88°49'40" EAST, A
DISTANCE 464.54 FEET; THENCE RUN NORTH 89°32'09" EAST, A DISTANCE
OF 449.60 FEET; THENCE RUN NORTH 89°12'24" EAST, A DISTANCE OF 930.61
FEET; THENCE RUN SOUTH 02°28'58" WEST, A DISTANCE OF 579.96 FEET;
THENCE RUN NORTH 60°04'31" EAST, A DISTANCE OF 364.61 FEET; THENCE
RUN NORTH 75°31'39" EAST, A DISTANCE OF 297.54 FEET; THENCE RUN
SOUTH 19°35'49" EAST, A DISTANCE OF 1190.97 FEET; THENCE RUN NORTH
78°08'21" EAST, A DISTANCE OF 682.99 FEET; THENCE RUN NORTH 66°40'10"
EAST, A DISTANCE OF 309.97 FEET; THENCE RUN NORTH 62°25'43" EAST, A
DISTANCE OF 246.21 FEET; THENCE RUN NORTH 55°29'01" EAST, A
DISTANCE OF 233.55 FEET; THENCE RUN NORTH 54°05'31" EAST, A
DISTANCE OF 227.51 FEET; THENCE RUN NORTH 56°16'18" EAST, A
DISTANCE OF 1111.75 FEET; THENCE RUN NORTH 00°00'09" EAST, A
DISTANCE OF 161.31 FEET; THENCE RUN NORTH 87°55'10" EAST, A
DISTANCE OF 1902.19 FEET TO THE EAST LINE OF THE NORTHEAST
QUARTER OF SECTION 36, TOWNSHIP 17 SOUTH, RANGE 31 EAST; THENCE
RUN SOUTH 00°55'26" EAST, ALONG SAID EAST LINE A DISTANCE OF 656.31
FEET TO THE EAST QUARTER CORNER OF SAID SECTION 36; THENCE
SOUTH 00°56'11" EAST ALONG THE EAST LINE OF THE SOUTHEAST

QUARTER OF SAID SECTION 36, A DISTANCE OF 2696.96 FEET TO A CONCRETE MONUMENT BEING THE SOUTHEAST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 36; THENCE RUN SOUTH $88^{\circ}47'35''$ WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36, A DISTANCE OF 1263.67 FEET TO A CONCRETE MONUMENT; THENCE RUN SOUTH $88^{\circ}47'59''$ WEST ALONG SAID SOUTH LINE, A DISTANCE OF 1407.76 FEET TO A CONCRETE MONUMENT BEING THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 36; THENCE RUN SOUTH $88^{\circ}47'19''$ WEST ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 36, A DISTANCE OF 1219.06 FEET TO A CONCRETE MONUMENT; THENCE RUN SOUTH $88^{\circ}53'23''$ WEST ALONG SAID SOUTH LINE, A DISTANCE OF 1454.99 FEET TO AN IRON ROD AND CAP BEING THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 36; THENCE RUN SOUTH $88^{\circ}42'30''$ WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 35, TOWNSHIP 17 SOUTH, RANGE 31 EAST, A DISTANCE OF 2627.57 FEET TO AN IRON ROD AND CAP BEING THE SOUTH QUARTER CORNER OF SAID SECTION 35; THENCE RUN SOUTH $88^{\circ}40'49''$ WEST ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 35, A DISTANCE OF 278.67 FEET TO A CONCRETE MONUMENT; THENCE RUN SOUTH $79^{\circ}06'15''$ WEST ALONG SAID SOUTH LINE, A DISTANCE OF 2350.79 FEET TO A ROUND CONCRETE MONUMENT BEING THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 35; THENCE RUN NORTH $01^{\circ}17'43''$ WEST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 35, A DISTANCE OF 1379.81 FEET; THENCE DEPARTING SAID WEST LINE RUN SOUTH $88^{\circ}31'12''$ WEST ALONG THE NORTH LINE OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 34, TOWNSHIP 17 SOUTH, RANGE 31 EAST, A DISTANCE OF 2634.59 FEET TO A IRON ROD AND CAP LYING ON THE EAST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 34; THENCE RUN NORTH $00^{\circ}38'28''$ WEST ALONG SAID EAST LINE, A DISTANCE OF 1345.50 FEET TO AN IRON ROD AND CAP BEING THE CENTER SECTION CORNER OF SAID SECTION 34; THENCE RUN SOUTH $87^{\circ}47'45''$ WEST ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 34, A DISTANCE OF 1355.72 FEET TO AN IRON ROD AND CAP BEING THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 34; THENCE RUN NORTH $00^{\circ}27'50''$ WEST ALONG THE EAST LINE OF THE WEST HALF OF THE NORTHWEST QUARTER OF SAID SECTION 34, A DISTANCE OF 2671.71 FEET TO AN IRON ROD AND CAP LYING ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 34; THENCE RUN SOUTH $86^{\circ}19'09''$ WEST ALONG SAID NORTH LINE, A DISTANCE OF 1349.09 FEET TO A ROUND CONCRETE MONUMENT BEING THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 34; THENCE RUN NORTH $01^{\circ}21'04''$ WEST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 17 SOUTH, RANGE 31 EAST, A DISTANCE OF 2654.43 FEET TO AN IRON ROD AND CAP BEING THE WEST QUARTER CORNER OF SAID SECTION 27; THENCE RUN

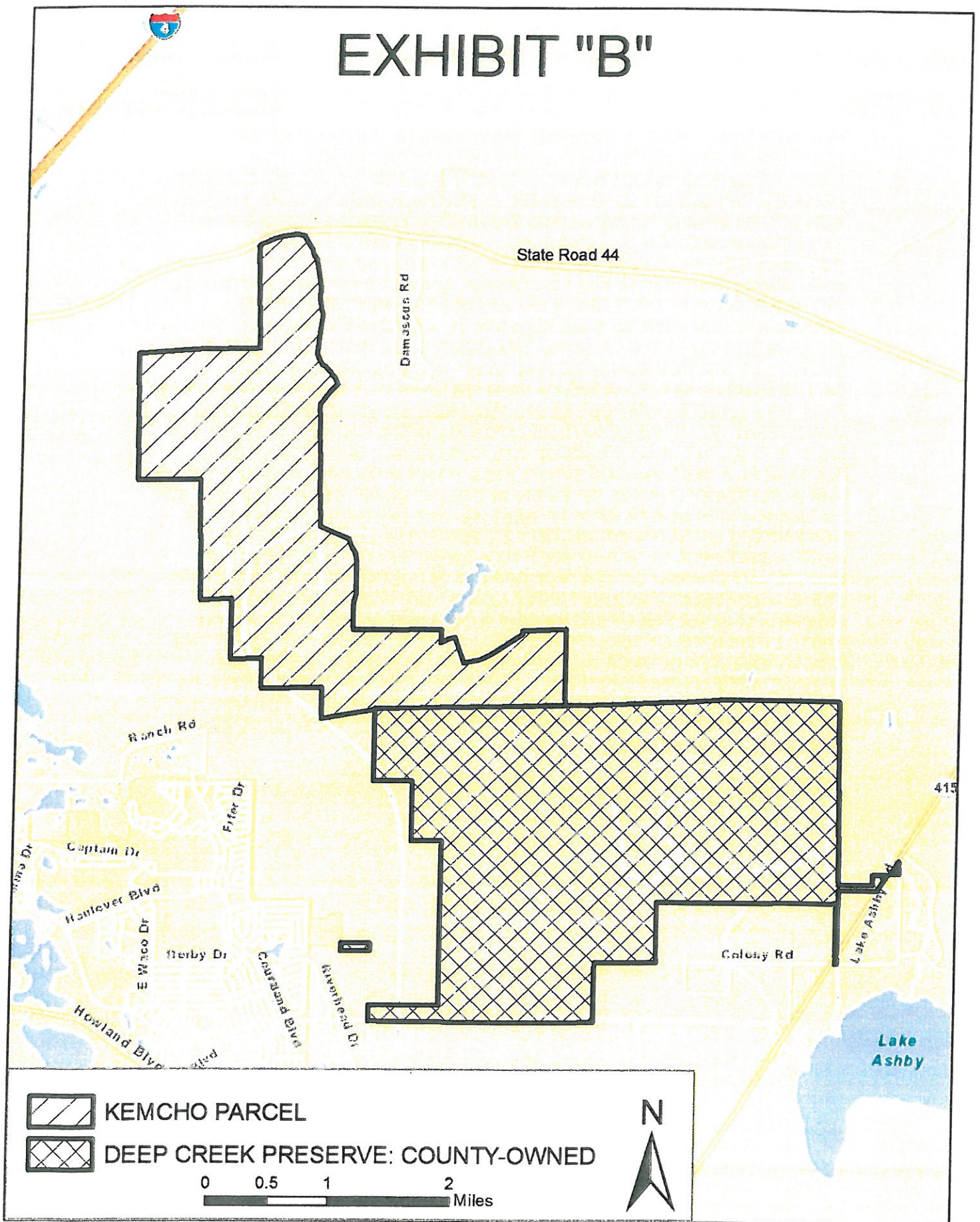
NORTH 01°22'35" WEST ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 27, A DISTANCE OF 2654.05 FEET TO A LIGHTWOOD POST BEING THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF SECTION 22, TOWNSHIP 17 SOUTH, RANGE 31 EAST; THENCE RUN SOUTH 89°42'42" WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 17 SOUTH, RANGE 31 EAST, A DISTANCE OF 2666.77 FEET TO AN IRON ROD AND CAP BEING THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 21; THENCE RUN NORTH 01°10'24" WEST ALONG THE WEST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 21, A DISTANCE OF 2766.67 FEET TO AN IRON ROD AND CAP BEING THE CENTER SECTION CORNER OF SAID SECTION 21; THENCE RUN NORTH 01°05'27" WEST ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 21, A DISTANCE OF 2774.75 FEET TO A LIGHTWOOD POST BEING THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 21; THENCE RUN NORTH 85°55'48" EAST ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 21, A DISTANCE OF 2670.71 FEET TO AN IRON ROD AND CAP BEING THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 21; THENCE RUN NORTH 89°04'45" EAST ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 17 SOUTH, RANGE 31 EAST, A DISTANCE OF 2579.67 FEET TO A LIGHTWOOD POST BEING THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 22; THENCE RUN NORTH 01°23'30" WEST ALONG THE WEST LINE OF THE SOUTHEAST QUARTER OF SECTION 15, TOWNSHIP 17 SOUTH, RANGE 31 EAST, A DISTANCE OF 2642.41 FEET TO AN IRON ROD AND CAP BEING THE CENTER SECTION CORNER OF SAID SECTION 15; THENCE RUN NORTH 01°23'30" WEST ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 15, A DISTANCE OF 1803.53 FEET TO A POINT LYING ON THE SOUTH RIGHT-OF-WAY LINE OF STATE ROAD 44, SAID POINT ALSO BEING THE POINT OF BEGINNING.

CONTAINING 139,392,026 SQUARE FEET OR 3,200.00 ACRES MORE OR LESS.

Approved SJRWMD 5/25/2011

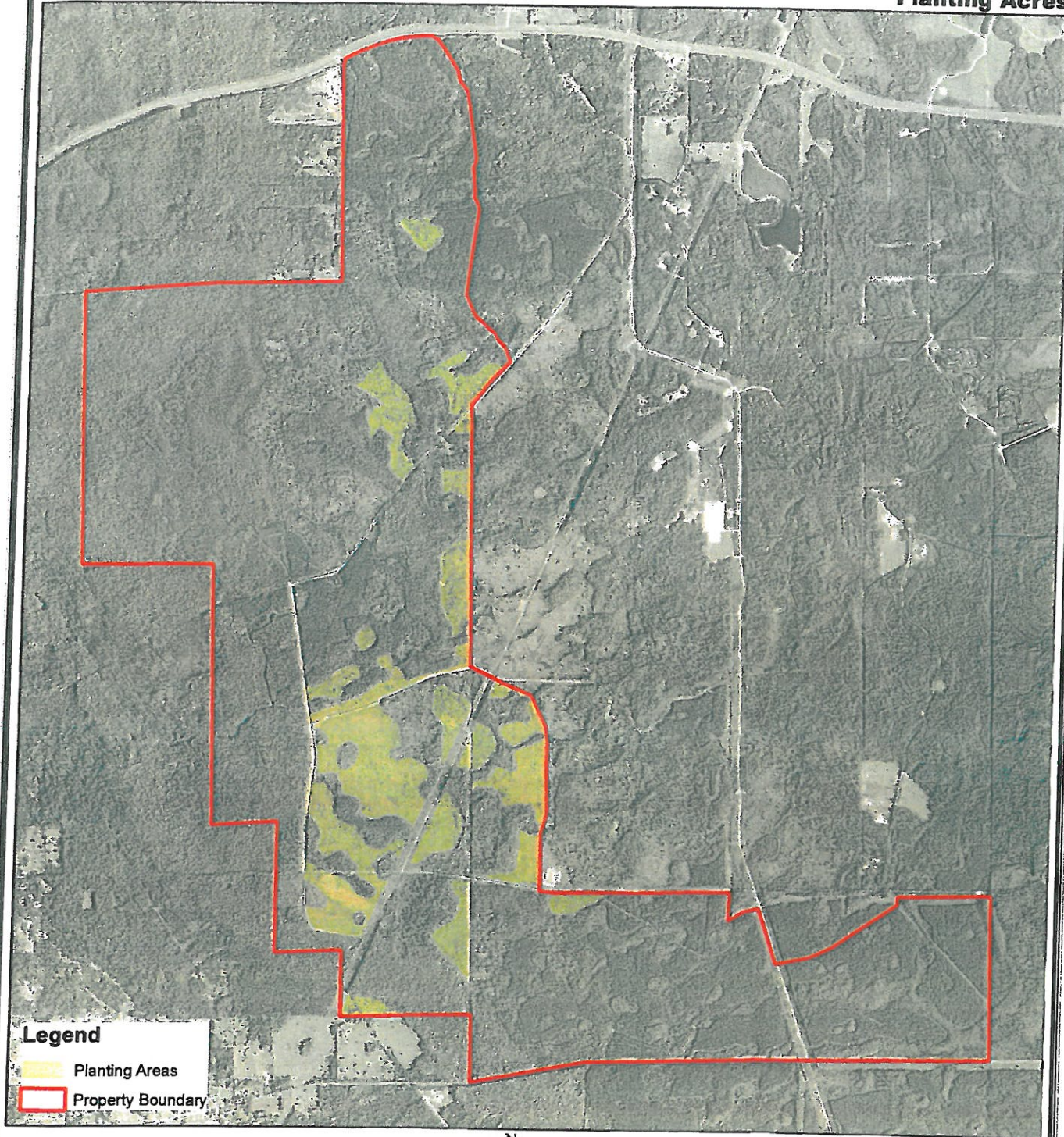


EXHIBIT "B"





Kemcho Property
Volusia County, Florida

Exhibit "C"
Planting Acres



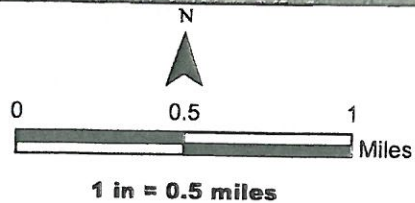
Legend

-  Planting Areas
-  Property Boundary

NOTICE:

THIS MAP IS NOT A SURVEY. THEREFORE ANY DERIVED ACREAGE NUMBERS OR ACCOMPANYING REPORT ARE APPROXIMATE AND SHOULD ONLY BE USED FOR PLANNING OR MANAGEMENT.

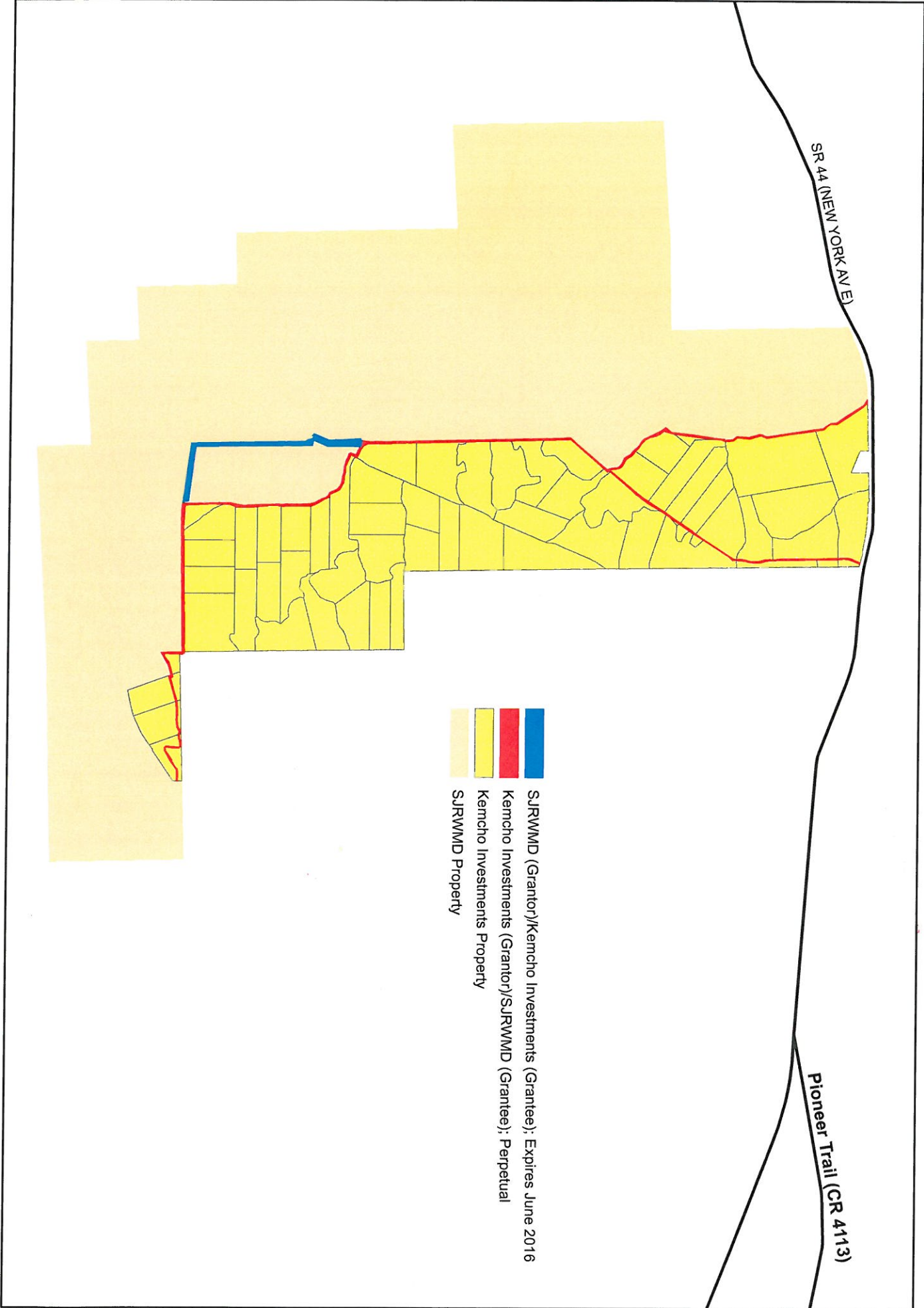
THIS MAP IS NOT SUITABLE FOR ENGINEERING DESIGN OR CONSTRUCTION. FURTHER, THE USE OF ANY ASSOCIATED ACREAGE NUMBERS FOR SALES OR NEGOTIATIONS IS ENTIRELY AT THE RISK OF THE BUYER AND SELLER.



APPENDIX B

EASEMENTS BETWEEN THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND
KEMCHO INVESTMENT GROUP, LLC.

Non-Exclusive Access Easements



05/31/2011 08:05 AM
Doc stamps .70
(Transfer Amt \$ 10)
Instrument# 2011-089033 # 1
Book : 6596
Page : 3996

THIS DOCUMENT PREPARED BY
AND SHOULD BE RETURNED TO:
Donald F. Wright, Esquire
Wright, Fulford, Moorhead & Brown, P.A.
505 Maitland Avenue, Suite 1000
Altamonte Springs, Florida 32701

**NON-EXCLUSIVE PERPETUAL
ACCESS EASEMENT**

THIS EASEMENT is made and entered into this 24 day of May, 2011, by **KEMCHO INVESTMENT GROUP, LLC**, a Florida limited liability company, whose address is 437 N. Magnolia Avenue, Orlando, Florida 32801 ("Grantor") for the benefit of **ST. JOHNS RIVER WATER MANAGEMENT DISTRICT**, a public body existing under Chapter 373 of the Florida Statutes, whose address is 4049 Reid Street, Palatka, Florida 32177 ("Grantee").

(Wherever used herein, the terms "Grantor" and "Grantee" include all the parties to this instrument and their heirs, legal representatives and assigns of the individuals, and the successors and assigns of corporations, partnerships [including joint ventures], public bodies and quasi-public bodies.)

WITNESSETH

WHEREAS, Grantor is the owner of certain real property lying and being in Volusia County, Florida, as more particularly depicted on Exhibit "A", attached hereto and by reference made a part hereof ("Grantor's Property"); and

WHEREAS, Grantee has requested, and Grantor has agreed to grant and convey to Grantee, a non-exclusive access easement and/or right of way over, on, upon and across the property also described and shown on Exhibit "A" (the "Easement Property") for the specific and limited purposes hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual covenants, promises, terms and conditions set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. **Recitals.** The above recitals are true and correct, form a material part of this Easement, and are incorporated herein by reference.

2. **Grant of Easement.** Grantor hereby gives, grants, bargains, sells and conveys to Grantee and Grantee's agents, employees, contractors and invitees, including members of the general public, a non-exclusive easement for access and/or right of way purposes over, upon, across and through the Easement Property (the "Easement"), with full right and authority of ingress and egress over, on, upon and across the Easement Property at all times for the purpose of access to and from Grantee's property lying west of the Easement Property ("Grantee's Property"). This Easement includes the right but

Instrument# 2011-089033 # 2
Book: 6596
Page: 3997

not the obligation for Grantee to develop, improve and maintain the Easement Property for the purposes set forth herein. By acceptance of the benefits of this Easement, Grantee agrees to perform and comply with any obligations imposed on the Grantee herein.

3. **Limitation on Easement.** This Easement is given by Grantor to Grantee subject to the following terms, conditions and limitations: (i) the Easement granted herein is solely for the purpose of providing access for ingress and egress to and from Grantee's Property by Grantee, its agents, employees, contractors and invitees, and the general public, and for no other purpose whatsoever; and ii) Grantee, at Grantee's sole cost and expense, shall perform maintenance and repair damage occasioned by Grantee's use of the Easement Property for the purpose set forth herein.

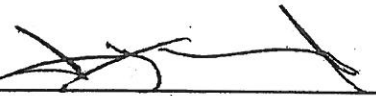
4. **Reservation of Use by Grantor.** This Easement is non-exclusive and the Grantor reserves to itself, its successors and assigns, the right to utilize the Easement Property for any purpose which does not interfere with the use of the Easement Property by Grantee for the purposes set forth herein. Each party shall use the rights granted and reserved by this Easement with due regard for the rights of the other party to use and enjoy the Easement Property.

5. **Successors and Assigns.** The Easement shall be binding upon and inure to the benefit of the parties specified herein, their respective legal representatives, successors and assigns, and the benefit and burdens hereof shall run with the Easement Property in perpetuity.

6. **Modification.** This Easement may be modified or amended only upon the mutual written consent of Grantee and Grantor.

IN WITNESS WHEREOF, the Grantor has subscribed its name and has caused this Easement to be executed as of the day and year first above written.

**KEMCHO INVESTMENT
GROUP, LLC, a Florida limited
liability company**

By: 
**J. Christy Wilson, III, as
Attorney-in-Fact for Sadique
M. Jaffer, as Managing
Member of Kemcho
Investment Group, LLC**

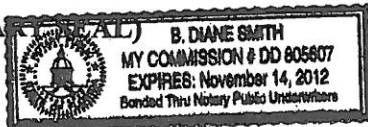
Instrument# 2011-089033 # 3
Book: 6596
Page: 3998

STATE OF FLORIDA

COUNTY OF Crow

I HEREBY CERTIFY that the foregoing instrument was acknowledged before me this 27 day of May, 2011, by J. Christy Wilson, III, as Attorney-in-Fact for Sadique M. Jaffer, as Managing Member of Kemcho Investment Group, LLC, a Florida limited liability company, [X] who is personally known to me or [] who produced _____ as identification.

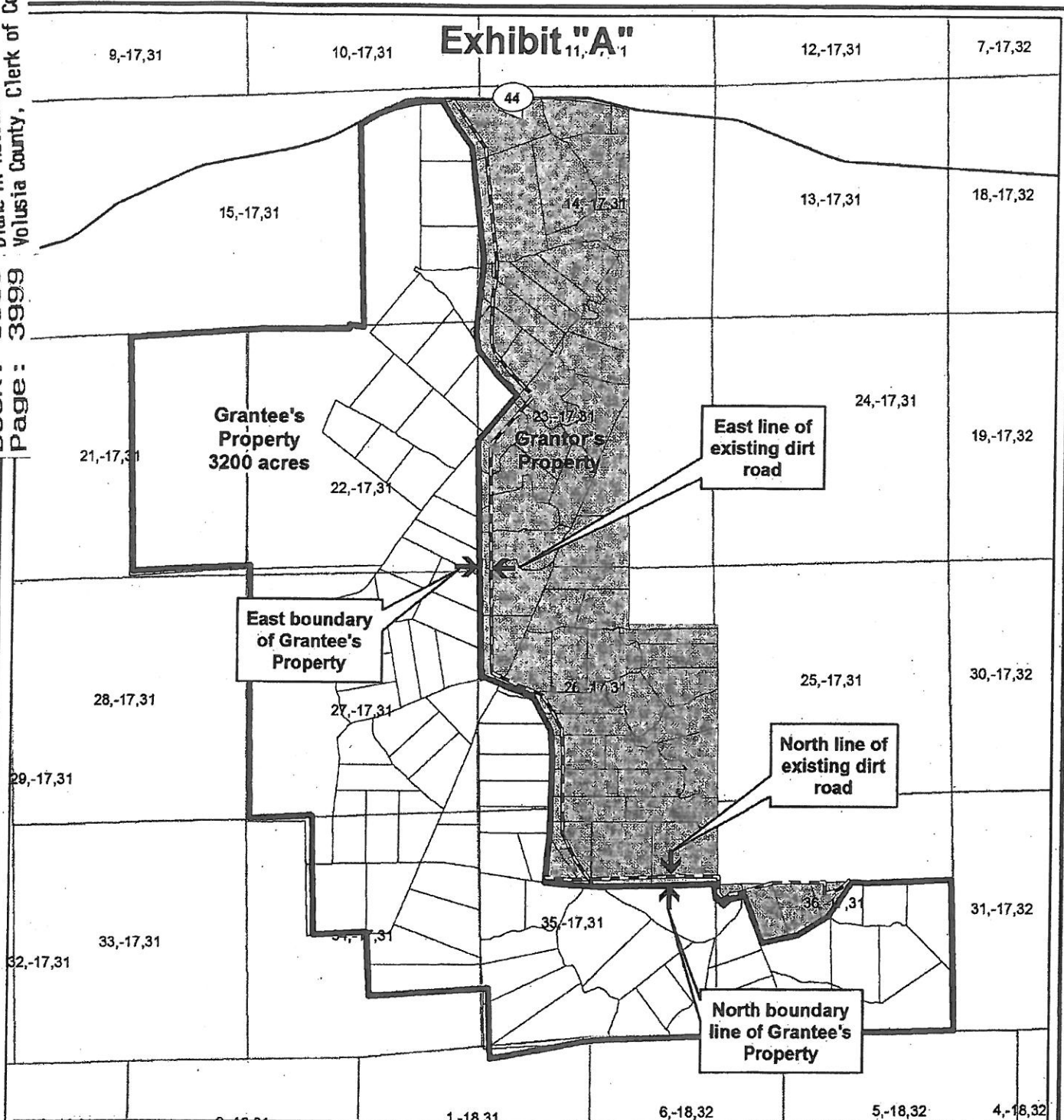
(NOTARY PUBLIC)



B. Diane Smith
NOTARY PUBLIC, State of Florida
My Commission Expires:

Instrument# 2011-089033 # 4
Book: 6596 Diane M. Matousek
Page: 3999 Volusia County, Clerk of Court

Exhibit "A"



Description of Easement Property: A variable width Access Easement located between the easterly and northerly boundary line of Grantee's Property and the easterly and northerly line of an existing dirt road/trail as generally shown above.



Volusia County



0 0.2 0.4 0.8 Miles

- Existing Dirt Road
- Grantee's Property
- Grantor's Property

The St. Johns River Water Management District prepares and uses this information for its own purposes and this information may not be suitable for other purposes. Other data provided the District is not responsible for. This information is provided as is. Further documentation of this data can be obtained by contacting: St. Johns River Water Management District, Geographic Information Systems, Program Management, P.O. Box 1428, 4048 Reid Street, Palatka, Florida 32177-1428 Tel: (386) 329-4170.

05/31/2011 08:05 AM
Doc stamps .70
(Transfer Amt \$ 10)
Instrument# 2011-089032 # 1
Book : 6596
Page : 3992

THIS DOCUMENT PREPARED BY
AND SHOULD BE RETURNED TO:
Donald F. Wright, Esquire
Wright, Fulford, Moorhead & Brown, P.A.
505 Maitland Avenue, Suite 1000
Altamonte Springs, Florida 32701

**NON-EXCLUSIVE PERPETUAL
ACCESS EASEMENT**

THIS EASEMENT is made and entered into this 24th day of May, 2011, by **KEMCHO INVESTMENT GROUP, LLC**, a Florida limited liability company, whose address is 437 N. Magnolia Avenue, Orlando, Florida 32801 ("Grantor") for the benefit of **ST. JOHNS RIVER WATER MANAGEMENT DISTRICT**, a public body existing under Chapter 373 of the Florida Statutes, whose address is 4049 Reid Street, Palatka, Florida 32177 ("Grantee").

(Wherever used herein, the terms "Grantor" and "Grantee" include all the parties to this instrument and their heirs, legal representatives and assigns of the individuals, and the successors and assigns of corporations, partnerships [including joint ventures], public bodies and quasi-public bodies.)

WITNESSETH

WHEREAS, Grantor is the owner of certain real property lying and being in Volusia County, Florida, as more particularly depicted on Exhibit "A", attached hereto and by reference made a part hereof ("Grantor's Property"); and

WHEREAS, Grantee has requested, and Grantor has agreed to grant and convey to Grantee, a non-exclusive access easement and/or right of way over, on, upon and across the property also described and shown on Exhibit "A" (the "Easement Property") for the specific and limited purposes hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual covenants, promises, terms and conditions set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. **Recitals.** The above recitals are true and correct, form a material part of this Easement, and are incorporated herein by reference.

2. **Grant of Easement.** Grantor hereby gives, grants, bargains, sells and conveys to Grantee and Grantee's agents, employees, contractors and invitees, including members of the general public, a non-exclusive easement for access and/or right of way purposes over, upon, across and through the Easement Property (the "Easement"), with full right and authority of ingress and egress over, on, upon and across the Easement Property at all times for the purpose of access to and from Grantee's property lying west of Grantor's Property ("Grantee's Property"). By acceptance of the benefits of this

Instrument# 2011-089032 # 2
Book: 6596
Page: 3993

Easement, Grantee agrees to perform and comply with any obligations imposed on the Grantee herein.

3. **Limitation on Easement.** This Easement is given by Grantor to Grantee subject to the following terms, conditions and limitations: (i) the Easement granted herein is solely for the purpose of providing access for ingress and egress to and from Grantee's Property by Grantee, its agents, employees, contractors and invitees, and the general public, and for no other purpose whatsoever; and (ii) Grantee, at Grantee's sole cost and expense, shall perform maintenance and repair damage occasioned by Grantee's use of the Easement Property for the purpose set forth herein.

4. **Relocation.** Grantor reserves the right to relocate the Easement Property, at Grantor's sole cost and expense; provided, however, that if Grantor exercises its right to relocate the Easement Property, the relocated easement must provide access comparable to the Easement granted herein, be over a then existing road of comparable width and quality as the currently existing road, and be on terms substantially similar to this Easement. If Grantor exercises such right, Grantor shall prepare and furnish to Grantee, for Grantee's approval, an instrument, in recordable form, amending this Easement ("Amended Easement"), together with a description and sketch of said Amended Easement acceptable to Grantee. Grantor shall have up to five (5) years from the date hereof to relocate the Easement after which Grantor's right to relocate the Easement Property shall terminate.

5. **Reservation of Use by Grantor.** This Easement is non-exclusive and the Grantor reserves to itself, its successors and assigns, the right to utilize the Easement Property for any purpose which does not interfere with the use of the Easement Property by Grantee for the purposes set forth herein. Each party shall use the rights granted and reserved by this Easement with due regard for the rights of the other party to use and enjoy the Easement Property.

6. **Successors and Assigns.** The Easement shall be binding upon and inure to the benefit of the parties specified herein, their respective legal representatives, successors and assigns, and the benefit and burdens hereof shall run with the Easement Property in perpetuity, subject to the rights of the Grantor to relocate said Easement.

7. **Duration.** The easement granted herein, and this agreement, shall remain in effect unless terminated or amended in accordance with the terms and conditions herein.

8. **Modification.** This Easement may be modified or amended only upon the mutual written consent of Grantee and Grantor.

IN WITNESS WHEREOF, the Grantor has subscribed its name and has caused this Easement to be executed as of the day and year first above written.

Instrument# 2011-089032 # 3
Book: 6596
Page: 3994

**KEMCHO INVESTMENT
GROUP, LLC, a Florida limited
liability company**

By: _____

Sadique M. Jaffer
**Sadique M. Jaffer, as
Managing Member**

STATE OF FLORIDA

COUNTY OF Orange

I HEREBY CERTIFY that the foregoing instrument was acknowledged before me this 24 day of May, 2011, by **Sadique M. Jaffer**, as Managing Member of **Kemcho Investment Group, LLC**, a Florida limited liability company, [☒] who is personally known to me or [☐] who produced _____ as identification.

(NOTARY SEAL)

B. Diane Smith

NOTARY PUBLIC, State of Florida

My Commission Expires:

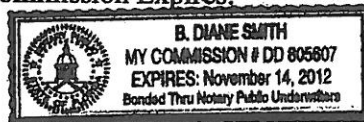


Exhibit "A"

Relocatable Access Easement




**Grantee's
Property
3200 acres**

Grantor's Property

Description of Easement Property: A parcel of land 60 feet in width lying 30 feet on each side of the centerline of an existing road in the location as generally depicted above.

**Volusia County**

A horizontal scale bar with tick marks at 0, 0.2, 0.4, and 0.8. The word "Miles" is written at the right end of the bar.

-  Relocatable Access Easement
-  Grantee's Property
-  Grantor's Property

The St. Johns River Water Management District prepares and uses this information for its own purposes and this information may not be available for other purposes. Other data provided the District is not responsible for. This information is provided as is. Further documentation of this data can be obtained by contacting: St. Johns River Water Management District, Geographic Information Systems, Program Management, P.O.Box 1425, 4049 Reid Street Palatka, Florida 32178-1429 Tel: (386) 329-4176.

06/17/2011 12:24 PM
Doc stamps .70
(Transfer Amt \$ 10)
Instrument# 2011-100891 # 1
Book : 6603
Page : 251

THIS DOCUMENT PREPARED BY
AND SHOULD BE RETURNED TO:

Donald F. Wright, Esquire
Wright, Fulford, Moorhead & Brown, P.A.
505 Maitland Avenue, Suite 1000
Altamonte Springs, Florida 32701

NON-EXCLUSIVE ACCESS EASEMENT

THIS EASEMENT is made and entered into this 14th day of June, 2011, by ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, a public body existing under Chapter 373 of the Florida Statutes, whose address is 4049 Reid Street, Palatka, Florida 32177 ("Grantor") for the benefit of KEMCHO INVESTMENT GROUP, LLC, a Florida limited liability company, whose address is 437 N. Magnolia Avenue, Orlando, Florida 32801 ("Grantee").

(Wherever used herein, the terms "Grantor" and "Grantee" include all the parties to this instrument and their heirs, legal representatives and assigns of the individuals, and the successors and assigns of corporations, partnerships [including joint ventures], public bodies and quasi-public bodies.)

WITNESSETH

WHEREAS, Grantor is the owner of certain real property lying and being in Volusia County, Florida, as more particularly depicted on Exhibit "A", attached hereto and by reference made a part hereof ("Grantor's Property"); and

WHEREAS, Grantee has requested, and Grantor has agreed to grant and convey to Grantee, a non-exclusive access easement and/or right of way over, on, upon and across the property also described and shown on Exhibit "A" (the "Easement Property") for the specific and limited purposes hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual covenants, promises, terms and conditions set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. **Recitals.** The above recitals are true and correct, form a material part of this Easement, and are incorporated herein by reference.

2. **Grant of Easement.** Grantor hereby gives, grants, bargains, sells and conveys to Grantee and Grantee's agents, employees, contractors and invitees, a non-exclusive easement for remediation and access and/or right of way purposes over, upon, across and through the Easement Property (the "Easement"), with full right and authority of ingress and egress over, on, upon and across the Easement Property at all times for the purpose of access to and from Grantee's property. By acceptance of the benefits of this Easement, Grantee agrees to perform and comply with any obligations imposed on the Grantee herein.

Instrument# 2011-100891 # 2
Book : 6603
Page : 252

3. **Limitation on Easement.** This Easement is given by Grantor to Grantee subject to the following terms, conditions and limitations: (i) the Easement granted herein is solely for the purpose of providing access for ingress and egress to and from Grantee's Property by Grantee, its agents, employees, contractors and invitees, and remediation purposes, and for no other purpose whatsoever; and (ii) Grantee, at Grantee's sole cost and expense, shall perform maintenance and repair damage occasioned by Grantee's use of the Easement Property for the purpose set forth herein.

4. **Reservation of Use by Grantor.** This Easement is non-exclusive and the Grantor reserves to itself, its successors and assigns, the right to utilize the Easement Property for any purpose which does not interfere with the use of the Easement Property by Grantee for the purposes set forth herein. Each party shall use the rights granted and reserved by this Easement with due regard for the rights of the other party to use and enjoy the Easement Property.

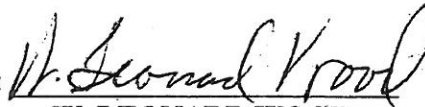
5. **Successors and Assigns.** The Easement shall be binding upon and inure to the benefit of the parties specified herein, their respective legal representatives, successors and assigns, and the benefit and burdens hereof shall run with the Easement Property for the duration of the Easement as described below.

6. **Duration.** The easement granted herein, and this agreement, shall remain in effect unless terminated or amended in accordance with the terms and conditions herein for a period of five (5) year from the date hereof.

7. **Modification.** This Easement may be modified or amended only upon the mutual written consent of Grantee and Grantor.

IN WITNESS WHEREOF, the Grantor has subscribed its name and has caused this Easement to be executed as of the day and year first above written.

ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT, a public body
existing under Chapter 373, Florida Statutes

By: 
W. LEONARD WOOD
Chairman

Attest:

By: 
JOHN A. MIKLOS
Secretary

Instrument# 2011-100891 # 3
Book: 6603
Page: 253

STATE OF FLORIDA
COUNTY OF PUTNAM

The foregoing instrument was sworn to, subscribed, and acknowledged before me on this 14th day of June, 2011, by W. Leonard Wood, Chairman of the Governing Board of ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, on behalf of the District, who is personally known to me.



Sandra L. Bertram
Notary Public - State of Florida
My Commission Expires: 1-29-2014

STATE OF FLORIDA
COUNTY OF PUTNAM

The foregoing instrument was sworn to, subscribed, and acknowledged before me on this 14th day of June, 2011, by John A. Miklos, Secretary of the Governing Board of ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, on behalf of the District, who is personally known to me.



Sandra L. Bertram
Notary Public - State of Florida
My Commission Expires: 1-29-2014

[Faint, illegible handwritten text]

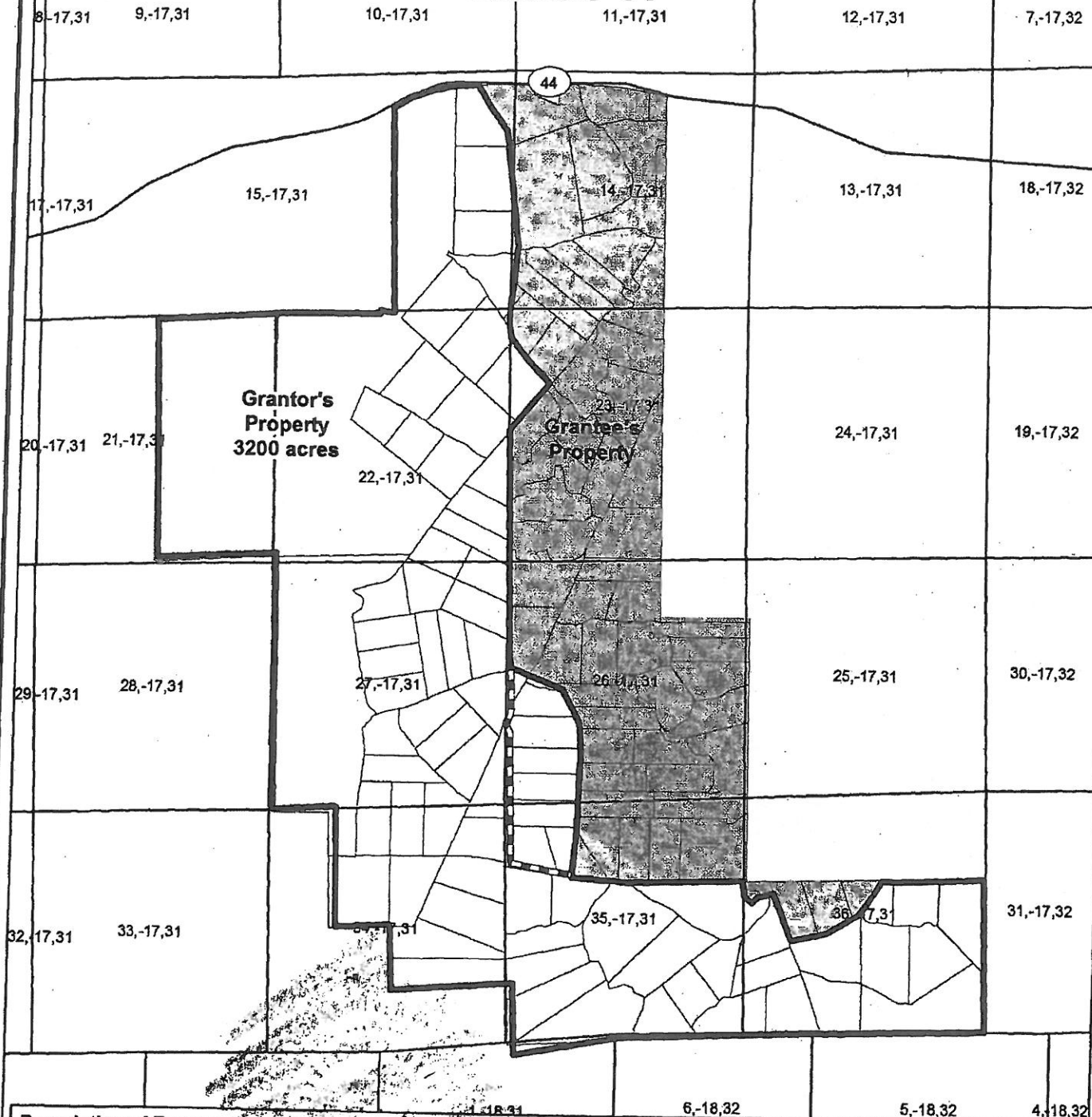
Instrument# 2011-100891 # 4

Book: 6603

Page: 254

Exhibit "A"

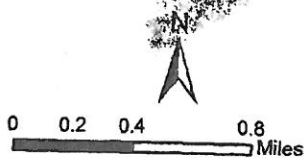
Diane M. Matousek
Volusia County, Clerk of Court



Description of Easement Property: A parcel of land 30 feet in width lying 15 feet on each side of the centerline of an existing road in the location as generally depicted above.



Volusia County



- Access to Grantee
- Grantor's Property
- Grantee's Property

The St. Johns River Water Management District prepares and uses this information for its own purposes and this information may not be suitable for other purposes. Other data provided by the District is not responsible for. This information is provided as is. Further documentation of this data can be obtained by contacting: St. Johns River Water Management District, Geographic Information Systems, Program Management, P.O. Box 1429, 4048 Reid Street, Palatka, Florida 32177-1429 Tel: (386) 328-4176.

APPENDIX C

GRAZING LEASE BETWEEN THE COUNTY OF VOLUSIA
AND DEEP CREEK CATTLE, LLC.

**GRAZING LEASE BETWEEN
THE COUNTY OF VOLUSIA
AND
DEEP CREEK CATTLE, LLC
DEEP CREEK PRESERVE PROPERTY
964 S. SR 415, OSTEEN, FLORIDA**

**"ORIGINAL - DO NOT REMOVE
FROM PROJECT FILE"**

THIS GRAZING LEASE is made as of the date of the last signature on this Lease by and between **COUNTY OF VOLUSIA**, herein called "Landlord," and Deep Creek Cattle, LLC, herein called "Tenant".

WITNESSETH:

SECTION 1. PREMISES. Landlord, in consideration of the performance by Tenant of those duties and obligations imposed upon Tenant under this Lease and Tenant's compliance with the terms and conditions of this Lease, has leased and let, and hereby leases and lets, to Tenant, for an initial term of five (5) year with one, five (5) year renewal and annual renewals thereafter exercisable at the option of the County and tenant. Unless sooner terminated as provided for in this Lease, beginning on , September 01, 2013, for the purposes and subject to the provisions set forth in this Lease, all that certain real property comprised of approximately 3200 acres, more or less, of land (the "Demised Premises"), together with all appurtenances thereto and such improvements owned by Landlord, if any, as presently exist thereon situated in the County of Volusia, Florida, which Demised Premises is more particularly described in Exhibit A, attached hereto and made a part hereof for all purposes, subject to all matters of record or visible on the ground affecting the Demised Premises.

SECTION 2. RENT. The Tenant shall pay at the time and place herein provided, as follows:

- A. **Annual Payments.** Tenant agrees to pay to Landlord as rental for the use and occupancy of the Demised Premises the sum of \$6900.00, payable annually based on the optimal stock rates proposed. Tenant agrees to pay all compensation to the County at the time and in the manner provided in this Lease in lawful money of the United States of America, without demand, deduction or set off.
- B. **Place For Payments And Statements.** All payments shall be made by the Tenant to the Landlord hereunder and shall be made at the office of the Landlord located at 123 West Indiana Avenue, Room 201, DeLand, Florida, made payable to the Division of Environmental Management

SECTION 3. PURPOSES; RESERVED RIGHTS.

- A. **Permitted Purposes.** This Lease is only for the purposes of grazing, pasturing, feeding and raising cattle on the Demised Premises. Tenant shall, during the term of this Lease

and raising cattle on the Demised Premises. Tenant shall, during the term of this Lease provide services as described in Exhibit B, Scope of Services and Exhibit C, the Florida Department of Agriculture and Consumer Services, Office of Agricultural and Water Policy, Water Quality Best Management Practices for Florida Cow/Calf Operations.

B. **Reservations.** Landlord reserves the full use and enjoyment, including the right of ingress and egress, to all of the Demised Premises for any and all purposes other than for the purposes stated above, including but not limited to:

(i) all rights of every kind and character (directly, through agents, lessees or otherwise) reasonably incident to any oil, gas and mineral estate in the Demised Premises, including, but not limited to, all rights to such use of the surface estate in the Demised Premises as may be reasonably necessary or appropriate for purposes of exploring (specifically including but not limited to every character of geophysical exploration), mining, drilling, and developing and operating the Demised Premises for oil, gas and other minerals, and producing, storing, treating, transporting and marketing them;

(ii) the right to grant other surface leases or contracts for purposes other than those stated above, including but not limited to exploitation of sand, gravel, shell deposits, and timber;

(iii) the right enter—and the right to grant prospective purchasers of the Demised Premises the right to enter—the Demised Premises at all reasonable times to take groundwater and core samples, install monitoring wells, make soil tests, test borings, geophysical borings, topographical and fault studies and all other surveys, studies, tests and analyses that Landlord or any such prospective purchaser may deem necessary; and

(iv) the right to grant rights-of-way and permits for canals roads, pipelines, telephone and telegraph lines, and electric transmission lines.

C. **Prohibited Uses.** All uses by Tenant of the Demised Premises not expressly permitted by this Lease are prohibited, including, but not limited to:

(i) operation of feedlot;

(ii) committing, or suffering to be committed, any nuisance or other act that might disturb the quiet enjoyment of any person or business located within a reasonable distance of the Demised Premises;

(iii) harvesting timber;

(iv) mining or removing any topsoil, gravel, shell deposits or other substances from the soil;

(v) conducting, or permitting the conduct of, any dangerous activities on the Demised Premises, including, but not limited to, the setting of any open fires or the use of any explosive devices;

(vi) bringing any firearm on the Demised Premises; or

(vii) fishing or hunting.

- D. **Environmental and Other Laws.** Tenant, at his sole expense, will comply, and will cause Tenant's Agents (hereinafter defined) to comply, with any and all applicable laws, statutes, ordinances, permits, orders, decrees, guidelines, rules and regulations in any way applicable to Tenant, Tenant's property or the Demised Premises ("Legal Requirements"), including any Legal Requirement pertaining to health or the environment ("Applicable Environmental Laws"), including, without limitation, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Resource Conservation and Recovery Act, Toxic Substances Control Act (TSCA) and Title III, and the regulations promulgated pursuant thereto, and in all other Environmental Regulations applicable to Tenant, any of the Leased Premises or the business operations conducted by Tenant thereon, as each of the foregoing may be amended from time to time. Tenant will not keep, store, generate or dispose of or permit to be kept, stored, generated or disposed of, any substance in or conduct, or permit to be conducted, any operation from the Demised Premises which might emit offensive or hazardous odors or conditions onto or into the Demised Premises or the property located outside the Demised Premises, including, without limitation, any "hazardous materials," "hazardous substances," or "solid waste" (as such terms are defined under the Applicable Environmental Laws) or otherwise take any actions which could impose liability on Landlord or any of Landlord's Related Parties (defined below) under any Applicable Environmental Law.

SECTION 4. CONDITIONS; MAINTENANCE.

- A. **Condition.** Tenant has inspected and examined the Demised Premises, is fully familiar with the present condition of the Demised Premises, has determined that the Demised Premises is fully suitable to Tenant for Tenant's intended uses, and accepts the Demised Premises in its present condition, "AS IS," "WHERE IS," and "WITH ALL FAULTS" without recourse to Landlord.
- B. **Repairs and Improvements—Landlord.** Landlord shall not be required to make any repairs or improvements of any kind or nature whatsoever on or to the Demised Premises during the term of this Lease.
- C. **Repairs and Improvements—Tenant.** Tenant shall, promptly after this Lease becomes effective and with reasonable diligence thereafter, repair all fences on the Demised Premises which are subject to the terms of this Lease. Tenant may construct and/or install, after first obtaining written consent of Landlord, such like or other improvements on the Demised Premises as are reasonably required to effectively use the Demised Premises for the purposes permitted by this Lease. Furthermore, except for plowing the land or digging post holes, Tenant shall never materially disturb the soil of the Land (for example, by constructing a ditch, levee, pond, terrace or elevated road, or pouring any concrete, or installing any culverts) without first obtaining the written consent of Landlord.
- D. **Tenant's General Obligations to Maintain the Demised Premises.** Tenant shall at all times during the term of this Lease maintain the Demised Premises in a condition equal

to the condition in which a reasonably prudent cattle operator interested in the long-term profitability of his operations and value of his property would maintain his own lands under the same or similar circumstances. For example, Tenant shall maintain all existing fences, and fences required to be built by Tenant, in good condition, normal wear and tear excepted, and repair and replace all broken or deteriorated wires, posts, stays, gates and cattle guards, so that cattle shall be prevented from straying off the Demised Premises or between separately fenced pastures. Tenant shall also mow and clear all existing pastures as reasonably necessary to maintain them in a condition capable of being further maintained by normal tractor-powered mowers and brush hogs. As a further example, Tenant shall also avoid depleting the fertility of the soil, overgrazing the pastures, or causing the existing native and improved dryland grasses to be killed or replaced by brush, weeds, vines or other less desirable vegetation. Tenant shall abide to the conditions set forth in Exhibit B, Scope of Services.

SECTION 5. SERVICES OF NOTICES. All notice required under this Agreement shall be in writing and shall be sent by certified United States Mail or national parcel service, postage prepaid, return receipt requested, or by hand-delivery with a written receipt of delivery, addressed to the party for whom it is intended at the place last specified. The place for giving notice shall remain the same as set forth herein until changed in writing in the manner provided in this section. For the present, the parties designate the following:

In the case of Tenant:	with a copies of legal notices to:
County of Volusia Attn: County Attorney Address: 123 W. Indiana Ave., Rm. 301 DeLand, Florida 32720 Phone: 386-736-5950	County of Volusia Attn: County Attorney Address: 123 W. Indiana Ave., Rm. 301 DeLand, Florida 32720 Phone: 386-736-5950
In the case of Landlord:	with a copy of legal notices to:
Attn: Mr. James LeFils Address: 1750 S. SR 415 New Smyrna Beach, Florida 32168 Phone: 386-804-4030	Attn: Mr. James LeFils Address: 1750 S. SR 415 New Smyrna Beach, Florida 32168 Phone: 386-804-4030

SECTION 6. ALTERATIONS AND COVENANT AGAINST LIENS. Tenant shall submit to Landlord any request for alterations, changes or improvements to the Demised Premises, in writing, with plans and specifications therefore. Landlord, at its reasonable discretion, shall have the right to approve or disapprove such alterations, changes or improvements. If permitted by the Landlord, all improvements shall be done at the sole cost of the Tenant, and no liens of any kind shall be permitted ever to attach to Landlord's property. Tenant shall have no power or authority to create any lien or permit any lien to be attached against the property of Landlord; all parties contracting with Tenant are hereby charged with notice that they must look solely to the Tenant to secure payment for work done or materials furnished. Landlord shall have the right to record a Memorandum of Lease which prohibits the attachment of any kind of lien to Landlord's property on account of activities by Tenant. If a lien is nevertheless filed against the Landlord's property based

on alterations, improvements or other activities by Tenant, Tenant shall remove such a lien at Tenant's sole expense within five (5) business days after demand for such removal from Landlord.

Any additions, alterations, improvements, repairs or replacements, and any fixtures attached to the premises, shall become and be a part of the Demised Premises and shall belong to the Landlord as Landlord's property

SECTION 7. UTILITIES. The Tenant shall pay promptly all charges for meters installed and all charges for water, sewage disposal, electricity, gas, garbage collection and other utilities supplying the Demised Premises. In the event the Tenant should fail to make any of the utility payments when due, the Landlord may require the amounts due to be paid by Tenant as additional Rent on the date the next Rent payment is due or thereafter.

SECTION 8. INSURANCE.

Insurance

A. Required Types of Insurance

The Tenant shall purchase and maintain at its own expense, during the term of this Contract the following types and amounts of insurance with limits no less than those shown below, in the form and from companies satisfactory to the County:

<u>SCHEDULE</u>	<u>LIMITS</u>
Workers' Compensation	Florida Statutory Coverage
Commercial General Liability	\$2,000,000. General Aggregate
Premises-Operations	\$2,000,000. Products/CompOps Aggregate
Products Completed Operation	\$1,000,000. Personal/Advertising Injury
Contractual Liability	\$1,000,000. Each Occurrence

(The County of Volusia shall be named as an additional insured under all of the above Commercial General Liability coverage.)

Auto Liability\$500,000. CSL
All autos-owned, hired or no-owned
(Symbol 1 Coverage)

1. Minimum underlying coverages shall include Commercial General Liability, Automobile Liability and Workers' Compensation/Employer's Liability.
2. Umbrella or Excess Liability policies may be used to obtain the total limits of liability required to meet the required limits of coverage stated above. Evidence of such coverage should clearly demonstrate the underlying coverages/policies that are included.

3. Workers' Compensation Insurance. Per Section 3.23, A, Workers' Compensation insurance is required for all employees of the Tenant, employed or hired to perform or provide Work or Services under this Contract or that is in any way connected with Work or Services performed under this Contract, without exclusion for any class of employee, and shall comply fully with the Florida Workers' Compensation Law (Chapter 440, Florida Statutes, Workers' Compensation Insurance) and include Employers' Liability Insurance with limits no less than the statutory amount shown above per occurrence.
 - a. Tenant and its Subcontractors, or any associated or subsidiary company doing Work on County property or under this Contract must be named in the Workers' Compensation coverage or provide proof of their own Workers' Compensation coverage, without exclusion of any class of employee, and with a minimum of the statutory limits per occurrence for Employer's liability coverage. Further, if the Tenant's Subcontractors fail to obtain Workers' Compensation insurance and a claim is made against the County by the uncovered employee of said Subcontractor of the Tenant, the Tenant shall indemnify, defend, and hold harmless the County from all claims for all costs including attorney's fees and costs arising under said employee(s) Workers' Compensation insurance claim(s).
4. Commercial General Liability Insurance. Per Section 3.23, A, Commercial General Liability insurance, with a limit of not less than the amounts shown above with an aggregate limit and per occurrence basis, including coverage for the Tenant's operations, independent Contractors, Subcontractors and "broad form" property damage coverages protecting itself, its employees, agents, Contractors or subsidiaries, and their employees or agents for claims for damages caused by bodily injury, property damage, or personal or advertising injury, products liability/completed operations including what is commonly known as groups A, B, and C (libel, false arrest, slander). Such policies shall include coverage for claims by any person as a result of actions directly or indirectly related to the employment of such person or entity by the Tenant or by any of its Subcontractors arising from Work or Services performed under this Contract. Public liability coverage shall include either blanket contractual insurance or a designated contract contractual liability coverage endorsement, indicating expressly the Tenant's contract to indemnify and hold harmless the County as provided in this Contract. The commercial general liability policy shall be endorsed to include the County as an additional insured. The commercial general liability policy shall provide exclusive coverage for the location or project site where the Work or Services are to be performed under this Contract. In the alternative, the commercial general liability policy shall be endorsed to provide the designated aggregate per location endorsement or equivalent on a form approved or requested by the County Risk Manager.

5. Motor Vehicle Liability. The Tenant shall secure and maintain during the term of this Contract, motor vehicle coverage in the split limit amounts of no less than the amounts shown above per person, per occurrence for bodily injury and for property damage or a combined single limit of the amount shown above with "Any Auto", Coverage Symbol 1, providing coverage for all autos operated regardless of ownership, and protecting itself, its employees, agents or lessees, or subsidiaries and their employees or agents against claims arising from the ownership, maintenance, or use of a motor vehicle.
6. Primary and Excess Coverage. Any insurance required may be provided by primary and excess insurance policies.

B. Insurance Requirements

1. General Insurance Requirements:

- a. All insurance policies shall be issued by insurers licensed and/or duly authorized under Florida Law to do business in the State of Florida and all insuring companies are required to have a minimum rating of A- in the "Best Key Rating Guide" published by A.M. Best & Company, Inc.
- b. Approval by County of any policy of insurance shall not relieve Tenant from its responsibility to maintain the insurance coverage required herein for the performance of Work or Services by the Tenant or its Subcontractors for the entire term of this Contract and for such longer periods of time as may be required under other clauses of this Contract.
- c. Waiver of Subrogation. The Tenant hereby waives all rights against the County and its Subcontractors to the extent of the risk coverage by any insurance policy required hereunder for damages by reason of any claim, demand, suit, or settlement (including workers' compensation) for any claim for injuries or illness of anyone, or perils arising out of this Contract. The Tenant shall require similar waivers from all its Subcontractors. This provision applies to all policies of insurance required under this Contract (including Workers' Compensation, and general liability).
- d. County Not Liable for Paying Deductibles. For all insurance required by Tenant, the County shall not be responsible or liable for paying deductibles for any claim arising out of or related to the Tenant's business or any Subcontractor performing Work or Services on behalf of the Tenant or for the Tenant's benefit under this Contract.
- e. Cancellation Notices. During the term of this Contract, Tenant shall be responsible for promptly advising and providing County of Volusia's Risk Management Division and the Purchasing and Contracts Division

with copies of notices of cancellation or any other changes in the terms and conditions of the original insurance policies approved by the County under this Contract within two (2) business days of receipt of such notice of change.

- f. For any on-site Work performed by or on behalf of Tenant on County property, the County shall be named as an additional insured or additional named insured subject to review and determination by County's Risk Manager on all policies required under this Contract except professional liability and workers compensation.
- g. Deductibles. Tenants that maintain and administer a self-insured retention or a large deductible program exceeding the insurance requirements listed in this solicitation using a formal program to fund either program may submit an exception in accordance with Section 3.8 Questions/Exceptions re: RFP #13-P-23JD to be considered for this solicitation.

The request must include a summary of the program's design, funding method, and the program's supporting financial information. If additional information is necessary, the County will request more specific information, which must be provided by the Tenant. The County's Risk Manager will review the information submitted and determine whether the program is acceptable to the County.

Tenant with no formal risk management program in place to manage and fund deductibles or self-insured retentions may not be considered. Subject to County approval, Tenant may obtain a letter of credit in the amount equivalent to the deductible, which shall remain in effect during the term of the Agreement at no additional cost to the County.

C. Proof of Insurance

1. The Tenant shall be required to furnish evidence of all required insurance in the form of certificates of insurance which shall clearly outline all hazards covered as itemized herein, the amounts of insurance applicable to each hazard, and the expiration dates.
2. The Tenant shall furnish proof of insurance acceptable to the County prior to or at the time of execution of this Contract and the Tenant shall not commence Work or provide any Service until the Tenant has obtained all the insurance required under this Contract and such insurance has been filed with and approved by the County. Upon request from the County, the Tenant shall furnish copies of the following types of insurance policies and any changes or amendments thereto, immediately, to the County and County's Risk Management and Purchasing and Contracts Divisions prior to the commencement of any contractual obligations. This Contract may be terminated by the County, without penalty or expense to County if at

any time during the term of this Contract proof of any insurance required hereunder is not provided to the County.

3. All certificates of insurance shall clearly indicate that the Tenant has obtained insurance of the type, amount and classification required by this Article. No Work or Services by Tenant or its Subcontractors shall be commenced until County has approved these policies or certificates of insurance. Further, the Tenant agrees that the County shall make no payments pursuant to the terms of this Contract until all required proof or evidence of insurance has been provided to the County. This Tenant may be terminated by the County, without penalty or expense, if proof of any insurance required hereunder is not provided to the County.
4. The Tenant shall file replacement certificates with the County at the time of expiration or termination of the required insurance occurring during the term of this Contract. In the event such insurance lapses, the County expressly reserves the right to renew the insurance policies at the Tenant's expense or terminate this Contract but County has no obligation to renew any policies.

- D. The provisions of this Article shall survive the cancellation or termination of this Contract.

SECTION 9. ASSIGNMENT. The Tenant shall not assign this Lease or any estate or interest herein, whether by sublease, underlease, license, concession or otherwise which would permit the occupancy or possession of the Demised Premises or any part thereof by anyone other than tenant. In addition, the Landlord, shall not assign the property without prior notice to the Tenant.

SECTION 10. TENANT'S ADDITIONAL COVENANTS. Tenant shall comply with all reasonable rules and regulations which may be imposed by Landlord concerning the care and use of the Demised Premises and the common areas including those attached to this Lease. Tenant shall comply with all laws, rules, regulations and ordinances of all governmental authorities having jurisdiction over the Demised Premises. Tenant shall not perform or allow to be performed any acts or practices, or sell any goods or merchandise or render any services in violation of any law or which may be a nuisance or menace to the public or other tenants, or commit waste or permit waste to be committed on the premises, or engage in or permit any illegal activities to take place on the premises.

Tenant shall not allow any loud noises to emanate from its premises which are objectionable to Landlord or other tenants.

SECTION 11. INDEMNITY AND LIABILITY.

Limitation of Liability and Indemnification of County

- A. The Tenant shall indemnify, defend, and hold harmless the County and its agents, officers, and employees, from and against all claims, damages, losses, and expenses, including, but not limited to, attorney's fees arising out of or resulting from the performance of this Contract provided that the claim, damage, loss, and expense is caused in whole or in part by any negligent act or omission of the Tenant, the County, any Tenant, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable hereunder, except the Tenant will not be required to indemnify and hold the County harmless if such claim, damage, loss, and expense is the result of the sole negligence of the County or of anyone directly or indirectly employed by the County or anyone for whose acts the County may be liable.
- B. In all claims against the County, or any of its public officials (elected and appointed), successors and successors in interest, officers, agents, attorneys, and employees by any employee of Tenant, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, no indemnification obligation shall be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Tenant, or any Subcontractor or Sub-subcontractor under Florida's Workers' Compensation acts, disability benefit acts, or other employee benefit acts.
- C. Tenant's indemnification obligations under this Section, Limitation of Liability and Indemnification of County, are subject to County or the indemnified party giving Tenant (a) prompt written notice of any indemnifiable claim; (b) reasonable assistance in Tenant's defense of the indemnifiable claim; and (c) sole authority to defend or settle the indemnifiable claim, provided that County or the indemnified party shall have the right to approve any settlement of an indemnifiable claim to the extent such settlement imposes any obligations on County or the indemnified party. County, or the indemnified party, may retain its own legal counsel at its own expense to monitor such litigation.
- D. Sovereign Immunity. County expressly retains all rights, benefits and immunities of sovereign immunity in accordance with Section 768.28, Florida Statutes (as amended). Notwithstanding anything set forth in any Article of this Agreement to the contrary, nothing in this Agreement shall be deemed as a waiver of immunity of limits of liability of County beyond any statutory limited waiver of immunity of limits of liability which may have been adopted by the Florida Legislature or may be adopted by the Florida Legislature and the cap on the amount and liability of County for damages regardless of the number or nature of claims in tort, equity, or contract shall not exceed the dollar amount set by the legislature for tort. Nothing in this Agreement shall inure to the benefit on any third party for the purpose of allowing any claim against County which would otherwise be barred under the Doctrine of Sovereign Immunity or operation of law.

E. In no event shall either party be liable to the other for any incidental, indirect, special, punitive, or consequential damages even if the party knew or should have known about the possibility of such damages for any provision of the Agreement.

C. No Third Party Beneficiaries.

Nothing in this Agreement shall inure to the benefit of any third party for the purpose of allowing any claim against Landlord, which would otherwise be barred under the Doctrine of Sovereign Immunity or by operation of law.

SECTION 12. WAIVER. One or more waivers of any covenant or condition by either party shall not be construed as a waiver of a subsequent breach of the same covenant or condition, and a consent or approval to or of any act requiring consent or approval shall not be deemed to waive or render unnecessary such consent to or approval of any subsequent similar act.

SECTION 13. QUIET ENJOYMENT. The Tenant, performing all the other covenants and conditions aforesaid on Tenant's part to be observed and performed, shall and may peaceably and quietly have, hold and enjoy the premises hereby demised for the term aforesaid, free from disturbance by the Landlord, or by anyone claiming by, through or under the Landlord.

SECTION 14. SURRENDER. Tenant shall yield and deliver possession of the Leased Premises to Landlord at the termination of this Agreement, by expiration of time or otherwise, or the expiration of any renewal or extension hereof, in good condition, excepting only reasonable wear and tear, fire or other casualty, and Tenant shall have the right at any time during said term, or any renewal or extension hereof, and for thirty (30) days after the termination thereof, to remove its property therefrom, excluding any buildings or fixtures.

SECTION 15. MISCELLANEOUS. This Lease and the Exhibits, Rules, Regulations Rider and/or Addenda, if any, attached hereto, set forth the entire agreement between the parties. Any prior conversations or writings have been merged herein and are extinguished. No subsequent amendment to this Lease shall be binding upon Landlord or Tenant unless reduced to writing and signed by all parties. Submission of this Lease for examination does not constitute an option for the Demised Premises and the Lease shall become effective as a Lease only upon execution by the parties and delivery thereof by Landlord to Tenant. If any provision contained in a rider or addenda is inconsistent with the printed provision of the Lease, the provision contained in said rider or addenda shall supersede said printed provision in the Lease.

The captions, numbers and index appearing herein are inserted only as a matter of convenience and are not intended to define, limit, construe or describe the scope or intent of any paragraph, nor in any way affect this Lease.

This Commercial Lease Agreement shall be construed in accordance with the laws of the State of Florida. All litigation arising out of this Lease or in connection therewith shall be commenced in the County where the Demised Premises is located.

THE LANDLORD AND TENANT HEREBY KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVE THE RIGHT EITHER OF THEM MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY

LITIGATION BASED UPON THIS LEASE OR ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS LEASE AND ANY AGREEMENT CONTEMPLATED TO BE EXECUTED IN CONJUNCTION HERewith, OR ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER VERBAL OR WRITTEN) OR ACTIONS OF ANY PARTY. THIS PROVISION IS A MATERIAL INDUCEMENT FOR THE LANDLORD ENTERING INTO A LEASE WITH TENANT.

This Commercial Lease Agreement shall be binding upon and the benefits hereunder shall inure to the heirs, personal representatives, estates, successors and assigns of the parties hereto. Tenant shall not record this Lease or any of its Exhibits or any Memorandum relating thereto, without the prior written consent of the Landlord.

SECTION 16. COMPLIANCE WITH LAW. Tenant, at Tenant's expense, shall comply with all laws, rules, orders, ordinances, dictions, regulations and requirements of federal, state, county and municipal authorities pertaining to Tenant's use of the Premises and with the recorded covenants, conditions and restrictions, regardless of when they become effective, including, without limitation, all applicable federal, state, and local laws, regulations or ordinances pertaining to air and water quality, waste disposal, air emissions and other environmental matters, all zoning and other land use matters, and utility availability, and with any direction of any public officer or officers, pursuant to law, which shall impose any duty upon Landlord or Tenant with respect to the use or occupation of the Premises

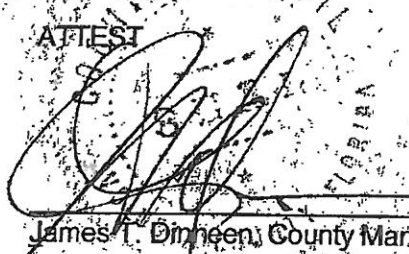
SECTION 17. Termination

- A. The resulting Agreement may be terminated by (a) either party upon the material breach by the other party if such breach is not cured within thirty (30) days written notice from the non-breaching party, or (b) by County upon at least 30 (thirty) calendar days, prior written notice to tenant whenever the County shall determine that such termination is in the best interest of the County.
- B. County may terminate the resulting Agreement for convenience or non-appropriation upon at least thirty (30) calendar days' prior written notice to Tenant.
- C. The Respondent may cancel the resulting contract with one-hundred eighty (180) days written notice to the Director of Purchasing and Contracts. Failure to provide proper notice to the County may result in the Bidder being barred from future business with the County.
- D. After Tenant's receipt of a notice of termination pursuant to Paragraph A above (or to the extent Tenant has not cured a material breach within 30 (thirty) days notice from County), and except as otherwise directed by the County, the Tenant shall:
 - 1. Stop work under the Agreement or applicable statement of work on the date specified in the notice of termination.
 - 2. Place no further orders or subcontracts for materials, services or facilities.

3. Terminate all orders and subcontracts to the extent that they relate to the performance of work or Services terminated by the Notice of Termination.
 4. With the approval of the County and to the extent required by the County, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts. County's approval of such settlements shall be final for all the purposes of Section, Termination.
- E. After receipt of a notice of termination, the Tenant shall submit to the County its termination claim for amounts owed by County (which shall include without limitation all amounts due for work or Services performed through the date of termination), in the form and with a certification as prescribed by the County. Such claim shall be submitted promptly but in no event later than thirty (30) days from the effective date of termination, unless one or more extensions in writing are granted by the County, upon request of the Tenant made in writing within such thirty (30) days period or authorized extension thereof. Upon failure of the Tenant to submit its termination claim within the time allowed, the County may determine on the basis of information available to it, the amount, if any, due to the Tenant by reason of the termination and shall thereupon pay to the Tenant the amount so determined. In the event County terminates for convenience or non-appropriation, Tenant shall not be obligated to refund to County any prepaid fees.

IN WITNESS WHEREOF the parties have set their hands and seals the day and year first above written.

ATTEST


James T. Dinneen, County Manager

LANDLORD:

COUNTY OF VOLUSIA

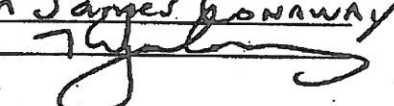
By: 

Jason P. Davis, County Chair

Dated: 8/22/2013

ATTEST

TENANT: DEEP CREEK CATTLE, LLC.

Kim James Bonaway
Name: 

By: James C. LeFits

Name: James C. LeFits

Exhibit A-Deep Creek Preserve Boundary

Exhibit B-Scope of Services

Exhibit C, The Florida Department of Agriculture and Consumer Services, Office of Agricultural and Water Policy, Water Quality Best Management Practices for Florida Cow/Calf Operations

Deep Creek Preserve

EXHIBIT A

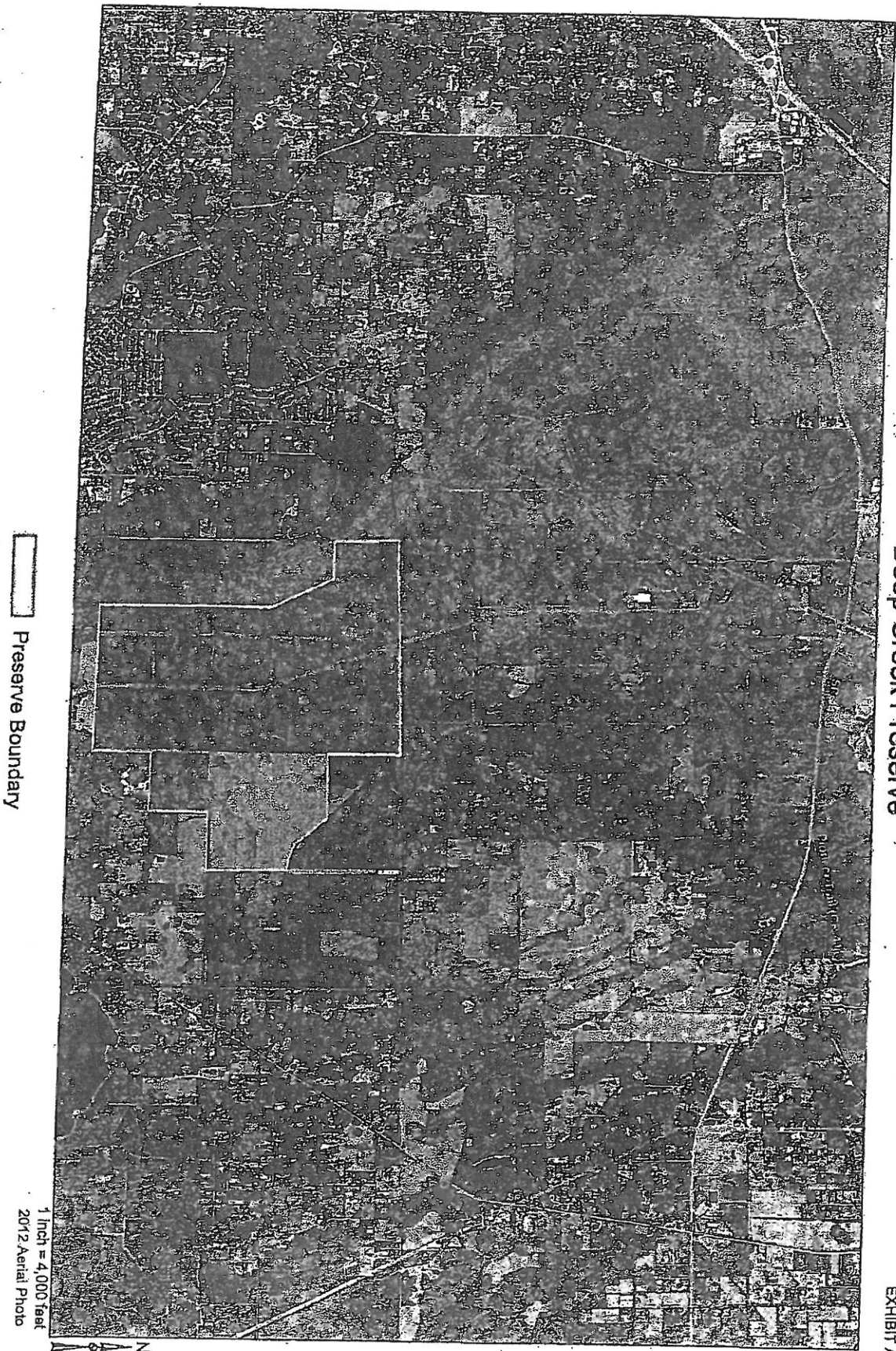


Figure __. Aerial Photograph

EXHIBIT B-SCOPE OF SERVICES

- Cattle grazing operation with the total number of cattle units maintained at a rate that is optimal to the site;
 - Treat and eradicate invasive species, including but not limited to soda apple;
 - Assist in the protection of the property against trespassers, poachers, and vandals to the best of his ability and report all acts of trespass and vandalism to the County and to the proper authorities;
 - Maintain property utilizing the UF BMP - Best Quality Management Practice for Water Quality for Beef Cattle operations as developed by the Natural Resource Conservation Services and the Institute of Food and Agriculture Sciences (IFAS), Best Management Practices;
 - Maintain fencing and gates in a manner that is suitable to contain cattle;
- The awarded lessee shall be able to meet the following conditions:**
- Maintain optimal stock rates per the Stock Assessment Report
 - Utilize good animal husbandry practices;
 - Construct and/or maintain all structures (i.e. cattle pens, buildings, fencing, roadways, etc.) at Lessee's expense with no reimbursement from the County;
 - Quarantine of all new cattle for seven (7) days prior to releasing them on the property;
 - Abide by all applicable governmental rules, regulations, ordinances and laws with respect to Lessee's use of the property, and shall be responsible for obtaining and paying costs for any and all permits necessary for Lessee's cattle grazing operation, including but not limited to those of the United States Army Corps of Engineers, the Environmental Protection Agency, the Florida Department of Environmental Protection, and the St. Johns River Water Management District;
 - No hunting, illegal, unlawful, offensive or immoral activities shall take place on the property;
 - There shall be no dumping or placing of any garbage or refuse on the property. Lessee shall implement and carry on a program of stewardship to promote and maintain the land, and upon expiration or termination hereof, surrender the property in "better than found" condition;

EXHIBIT C

Water Quality Best Management Practices for Florida Cow/Calf Operations



**FLORIDA DEPARTMENT OF AGRICULTURE AND
CONSUMER SERVICES**

Office of Agricultural Water Policy



2008 Edition

DACS-P-01260

EXHIBIT C

EXHIBIT C

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EXHIBIT C

OFFICE OF THE COMMISSIONER
(850) 488-3022



THE CAPITOL
400 SOUTH MONROE STREET
TALLAHASSEE, FLORIDA 32399-0800

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES COMMISSIONER ADAM H. PUTNAM

COMMENTS BY COMMISSIONER ADAM H. PUTNAM

Dear Agricultural Producers:

This manual, *Water Quality Best Management Practices for Florida Cow/Calf Operations*, reflects the hard work of representatives of the industry; federal, state, and local government; and other stakeholders. In general, agricultural lands maintain valuable water recharge areas and preserve open spaces. The BMPs in this manual address water quality and quantity impacts from production activities and help maintain the environmental advantages of keeping the land in agriculture.

While best management practices have been in place for many years in our state, their role in environmental protection was formally established in 1999 with the passage of the Florida Watershed Restoration Act. This legislation provides the framework for implementing Florida's Total Maximum Daily Load program, which sets water quality targets for impaired waters. It also identifies best management practices implementation as the means for agriculture to help meet those targets.

As Florida's population continues to increase, there are more impacts to and competition for Florida's limited water resources. All Floridians must take part in conserving and protecting these resources. This manual represents the industry's commitment to do just that.

As a native Floridian whose family has long been involved in agriculture, I want to thank all who participated with the Department in the development of this important manual. With the active support and participation of so many dedicated people, I am optimistic about the future of Florida's agricultural industry. I trust that you will join me in supporting this valuable water resource protection effort.

Sincerely,

A handwritten signature in black ink, appearing to read "Adam H. Putnam".

Adam H. Putnam
Commissioner of Agriculture

EXHIBIT C

ACKNOWLEDGEMENTS

A Steering Committee was established in 2007 to update and revise the 1999 cow/calf BMP manual. A technical working group was formed to support the efforts of the Steering Committee, and was charged with developing and reviewing specific BMPs contained in the manual. An effort of this magnitude could not have been accomplished without the tireless dedication of all participants. The following is a list of individuals who participated in the development of this manual. Each of these individuals and their organizations made important contributions to the process, and their work is sincerely appreciated.

Steering Committee

Mike Adams – Adams Ranch
Bill Bartnick – Florida Department of
Agriculture and Consumer
Services
Pete Deal – USDA/Natural Resources
Conservation Service
Wade Grigsby – Private Consultant
Rick Hacht – H & H Liquid Sludge
Disposal, Inc.
Jim Handley – Florida Cattlemen's
Association
Matt Harrison – Private Rancher
Pat Hogue – University of Florida/IFAS
Clegg Hooks – Florida Department of
Agriculture and Consumer
Services
Flint Johns – Lykes Bros., Inc.
Billy Kempfer – Kempfer Ranch
Jim Lefils – Lefils Cattle Company
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INTRODUCTION

Opening Notes

Best Management Practices (BMPs) are practices or combinations of practices that, based on research, field-testing, and expert review, are determined to be the most effective and practicable means for improving water quality. BMPs are typically implemented as a *treatment train*. This normally includes a combination of nonstructural and structural practices that are effective in reducing or preventing pollutant discharges. BMPs must be based on sound science, technically feasible, and economically viable for landowners.

The practices outlined in this manual are intended for use statewide on beef cow/calf operations, and other cattle operations. This manual does not apply to concentrated animal feeding operations, which generally require a permit. The manual can be downloaded at www.floridaagwaterpolicy.com. If ranchers are involved in farming ventures other than cow/calf operations (row crops, sod, and silviculture), they should use the related BMP manuals, which are available at the same website.

Things to keep in mind as you use this manual are:

- Italicized words that appear in **red** are defined in the glossary.
- Specific record keeping requirements are noted using a "pencil mark" icon. ■
- Remember to fill out the BMP Manual Registration Form inside the front cover and return it to the Florida Department of Agriculture and Consumer Services in order to receive future updates to this manual.

Overview of the Industry

There are more than 11 million acres of total pasture and rangeland in Florida, of which 5 million acres are improved pasture. Florida's grazing lands provide significant benefits to society and the environment. Grazing lands release oxygen to the atmosphere, help to significantly cool surrounding surface temperatures, naturally filter pollutants from runoff water, reduce soil erosion, replenish our water supply, and provide aesthetic and recreational values. One thing to remember is that animals do not produce nutrients, but assimilate and distribute them.

Because of the large amount of pasture acreage, improperly managed pasture runoff may adversely affect the quality of our lakes and streams. The

industry remains committed to fostering water resource protection through the implementation of BMPs. This manual, which has been endorsed by the Florida Cattlemen's Association, has been developed to promote BMPs for beef cow/calf operations in Florida. Although these practices are designed primarily to protect water quality, the implementation of certain BMPs will also have water conservation benefits. In addition, the manual addresses other activities that normally occur in conjunction with beef cattle production. Examples include intermittent row cropping and silviculture.

BMP History and Purpose

The 1972 Federal Clean Water Act (FCWA) required states to assess the impacts of nonpoint sources of pollution on surface and ground waters, and establish programs to minimize these impacts. In 1978, Florida established a Nonpoint Source Management Program, which includes the use of structural and nonstructural BMPs to minimize nonpoint source pollution, through both regulatory and non-regulatory means.

Section 303(d) of the FCWA requires states to identify impaired waters and establish total maximum daily loads (TMDLs) for pollutants entering these waters. TMDLs establish the maximum amount of pollutants that can be discharged to a waterbody and still meet designated uses such as swimming, fishing, or as a potable water source. The 1999 Florida Watershed Restoration Act (FWRA) provided the framework for Florida's TMDL program. Under the FWRA, once the Florida Department of Environmental Protection (FDEP) establishes a TMDL, the agency may develop and adopt a Basin Management Action Plan (BMAP), which specifies the activities that watershed stakeholders will undertake to reduce point and nonpoint source pollutant loadings. In watersheds with adopted BMAPs and in some other areas, agricultural producers are statutorily required either to implement FDACS-adopted BMPs or conduct water quality monitoring prescribed by FDEP or the water management district.

The FWRA gives the Florida Department of Agriculture and Consumer Services (FDACS) the authority to develop interim measures, BMPs, cost-share incentives, and technical assistance programs to assist agriculture in reducing pollutant loads in TMDL watersheds and other areas. The law also stipulates that the FDEP must verify that these BMPs are effective in reducing pollutant loading to waters.

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Many of Florida's ranchers who produce food, fiber, and livestock on approximately 11 million acres will be required to help meet agricultural pollutant load allocations through BMP implementation.

Pursuant to sections 403.067(7)(c), and 570.085, F.S., implementation, in accordance with FDACS rule, of FDEP-verified and FDACS-adopted BMPs gives ranchers the following advantages:

- A presumption of compliance with state water quality standards
- A release from the provisions of s.376.307(5), F.S., for those pollutants addressed by the BMPs
- Assistance with BMP implementation

However, nothing in this manual shall be construed as restricting the authority of the FDEP or the water management districts (WMD) under Chapters 403 and 373, F.S.

Statutory Exemptions for Agricultural Activities

Under subsection 373.406(2), F.S., any person engaged in the occupation of agriculture may alter the topography of any tract of land for purposes consistent with the practice of agriculture. These

activities may not be for the sole or predominant purpose of impounding or obstructing surface waters. Agricultural activities that meet these criteria may qualify for a statutory exemption from an Environmental Resource Permit (ERP).

Pursuant to 373.406(9), F.S., environmental restoration activities on agricultural lands that have minimal or insignificant impacts to water resources may also be exempt from an ERP, upon written request by the producer and written notification from FDEP or the water management district that the proposed activity qualifies for the exemption.

Even if the two exemptions above apply, they do not relieve agricultural producers located within a watershed with an adopted BMAP from either implementing BMPs or conducting monitoring.

Also, persons engaged in the occupation of agriculture have protections under the Florida Right to Farm Act (section 823.14, F.S.). The Act states, with certain exceptions, that no farm which has been in operation for one year or more and was not a nuisance at the time of its established date of operation shall be a public or private nuisance, if the farm operation conforms to generally accepted agricultural and management practices.

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BMP ENROLLMENT AND IMPLEMENTATION

This manual contains Level I BMPs that are largely applicable to all ranchers, and Level II and III BMPs that will apply under specific circumstances. The manual includes a self-assessment tool to help ranchers determine which Level II and III BMPs are applicable to their operation. The self-assessment tool also guides ranchers in determining whether they need a formal Conservation Plan, which would be based on conservation practices contained in Section IV of the USDA-NRCS Field Office Technical Guide (FOTG), and would incorporate all the applicable BMPs in this manual.

Level I BMPs

All ranchers must implement the applicable Level I BMPs to establish a foundation for environmental protection. Depending on the site-specific conditions or geographical location of the ranch, not all of the Level I BMPs may be applicable to every site.

Advanced-Level BMPs

Ranchers may have to implement additional BMPs, based on their "score" after completing the *Advanced-Level BMP Needs Assessment*. The assessment identifies water quality risk features that require special attention or protection, and also identifies specific groups of BMPs that address these issues. These Level II and III BMPs focus on high-intensity areas, livestock use exclusion, address the need for grade stabilization structures for sediment control, and list situations that require comprehensive prescribed grazing management practices.

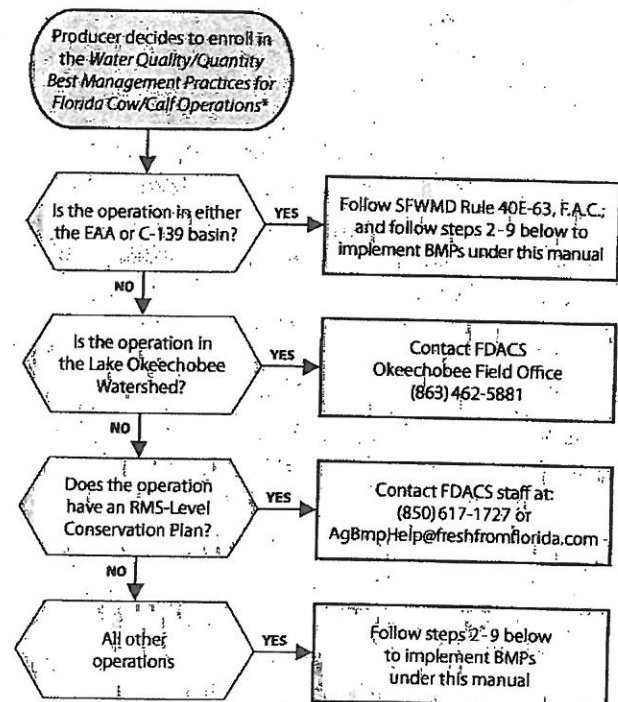
Conservation Plans

Conservation planning is a natural resource problem-solving and management process, with the goal of sustaining natural resources for future generations. A Conservation Plan may be developed for a single operation or for an area that crosses land ownership boundaries. A well-written Conservation Plan addresses landowner goals and objectives, and natural resource concerns. The plan includes strategies to maintain or improve yields, while also protecting soil, water, air, plant, animal, and human resources. Usually, Conservation Plans address all of the major activities on the ranch, but can be developed to target specific challenges. Conservation Plans are particularly well-suited to cow/calf operations and farming operations that produce multiple commodities.

Conservation Plans are developed in accordance with the USDA-NRCS FOTG. Because not all the specific BMPs in this manual may be contained in the FOTG, Conservation Plans must also include the applicable Level I, II, and III BMPs. Assistance in developing a plan can be obtained through the local SWCD, the USDA-NRCS, the Cooperative Extension Service, and private consultants who function as technical service providers. However, the decisions included in the Conservation Plan are the responsibility of the owner or manager of the ranch.

User's Guide to BMP Enrollment and Implementation

1. Choose the Pathway Applicable to You: In the flowchart below, identify the circumstances that best apply to you.



* Note: If operation is in an area where a BMAP has been adopted, the producer must implement BMPs for all applicable commodities or monitor water quality. Contact FDACS Field Office for more information.

2. Consult the manual: If you are proceeding with enrollment under this manual, begin by reading the following sections: *Introduction*; *Keys to Pollution Prevention*; and *General Information for Environmental Protection on Cow/Calf Operations*
3. Conduct an inventory: The selection of BMPs begins with a basic inventory of the farm's

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natural features, which will help you determine how the operation of your farm may affect environmentally sensitive areas. When developing the inventory, sketch your farm/facility, noting buildings, pastures, cowpens, electrical and plumbing lines, and water sources. Identify areas of particular concern that need to be addressed. These include streams, wetlands, springs, sinkholes, and poorly drained ponded areas, to name a few. You can use this list of concerns in selecting which BMPs are applicable to your farm.

To help you conduct your inventory effectively, the following tools are available:

- ✓ Aerial photographs (<http://earth.google.com/index.html>, or other providers)
- ✓ USDA-NRCS soil survey maps (<http://websoilsurvey.nrcs.usda.gov/app/>)
- ✓ USGS topographic maps (<http://www.topozone.com/>)
- ✓ National Wetlands Inventory (<http://www.fws.gov/wetlands/data/index.html>)
- ✓ Historic rainfall records (<http://www.ncdc.noaa.gov/oa/ncdc.html>)
- ✓ Local tax maps from property appraiser (<http://www.propertyappraiser.com/>)

4. **Take the Needs Assessment:** Complete the *Advanced-Level BMP Needs Assessment* that begins on page 23, to determine whether any Level II and III BMPs are applicable to your operation, or whether you need or would like to develop a Conservation Plan.

5. **Select the applicable BMPs:** Read BMP sections 1.0 through 13.0 and select all of the applicable Level I, II, and III BMPs, based on your farm inventory and on the *Advanced-Level BMP Needs Assessment*. Record the BMPs on the checklist in Appendix 11 of this manual, as described in step 6 below.

6. **File a Notice of Intent to Implement (NOI) BMPs:** Complete and submit to FDACS an NOI, contained in Appendix 11 of this manual. The NOI includes a checklist on which you must identify all the BMPs in the manual that are applicable to your operation and are technologically and economically feasible for you to implement. The checklist includes a column for you to schedule BMP implementation. If you have a Conservation Plan, there is space provided at the end of the checklist for you to list any additional BMPs not covered in the checklist. You must submit a

copy of the Conservation Plan with the NOI and checklist. Once received by FDACS, the Notice of Intent formally enrolls your operation under the BMP program. Implementation of the BMPs according to the NOI schedule provides a presumption of compliance with state water quality standards for the pollutants the BMPs address. Implementation includes ongoing record keeping and maintenance of the BMPs

7. **Implement the BMPs:** Implement all applicable Level I BMPs as soon as practicable, but no later than 18 months after submittal of the Notice of Intent to Implement. If you need additional time to implement the following Level I BMPs, you must justify the time needed in the space provided at the end of the checklist: 2.2 *Upland Pond Construction Criteria*; 2.3 *Other Watering Sources*; 5.3 *Installation of Water Control Structures*; 6.3 *Riparian Buffers*. Implement all other BMPs according to the schedule (month/year) you have indicated on the BMP checklist.

8. **Request on-farm technical assistance, as needed:** FDACS, UF-IFAS BMP Implementation Teams, Soil and Water Conservation Districts (SWCD), USDA-NRCS and/or UF-IFAS Extension staff are available to assist ranchers with the mechanics of BMP identification and selection. Contact information for these entities is in Appendix 3 of this manual.

9. **Keep records on BMP implementation:** FDACS rule requires record keeping to document BMP implementation. Fertilizer applications and rainfall amounts are two types of record keeping. Other record-keeping requirements in the manual are highlighted using this figure: ■. All BMP records should be accurate, clear, and well-organized. You may develop your own record-keeping form or use the one provided in Appendix 8. You must retain the records for at least 5 years. However, it is desirable to retain records for as long as possible, to address any potential future legal issues. All documentation is subject to inspection.

It is advisable to consolidate your inventory and all your BMP decision-making, including the BMP Checklist, into a simple implementation plan. This plan will serve as a record of scheduled and completed BMPs, including operation and maintenance activities. A well thought-out, written plan enables managers and owners to schedule their activities and accomplish their objectives.

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BMP Implementation Follow-Up

FDACS is developing a BMP "implementation assurance" program to help ensure that BMPs are being properly implemented, operated, and maintained. On a staggered schedule by commodity, FDACS will mail surveys to all BMP program participants, and will conduct site visits on selected operations. The benefits of this effort include:

- Demonstrating the level of producer participation in implementing BMPs.
- Identifying needs for additional education and implementation assistance for producers.
- Reinforcing to producers the importance of BMP implementation.
- Evaluating the effectiveness of FDACS BMP programs.
- Updating FDACS NOI records.

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KEYS TO POLLUTION PREVENTION

Over the years, the "common-sense" recommendations summarized below have been embraced by many cattle operations in order to help prevent pollution problems. However, these descriptions are provided as an overview, and the formal BMPs appear later in this manual.



Maintain adequate vegetative cover

Vegetative cover helps to filter pollutants from runoff, reduces runoff velocity, and controls soil erosion. Management practices that help maintain vegetative cover usually involve distributing cattle to prevent overgrazing and allow vegetation to recover following a grazing period.

- Use prescribed grazing systems to minimize the impact of grazing on water quality.
- Adjust the stocking rate in sensitive *watersheds*.



Carefully plan your watering and feeding sites

Most nonpoint source pollution problems occur in the vicinity of watering, supplemental feeding, or loafing areas where animals tend to congregate most often. This concentration of livestock can denude vegetation and affect soil conditions so that erosion is more likely and water percolation is diminished.

- Place *supplemental feeding* and mineral stations a reasonable distance away (approximately 100 feet) from streams, drainage canals, lakes, *wetlands*, wells, and sinkholes.
- Develop alternative water sources to attract animals away from streams, drainage canals, and lakes as much as possible.
- Plan your shading facilities to keep cattle away from streams, drainage canals, and lakes as much as possible. Leaving or planting small, scattered clusters of trees in upland areas of pastures can provide shade structures.
- When feasible, move feeding stations, alternative water supplies, or shade structures periodically to prevent areas of concentrated waste accumulation and denuded vegetation.



Carefully plan your temporary holding areas

Concentrated animal areas such as *cowpens* and other temporary holding areas have the potential to produce large pollutant loads.

- Locate new *cowpens* more than 200 feet away from a canal, stream, or lake, or include a berm to prevent runoff into the *watercourse*.
- For existing concentrated animal areas that are located near a *watercourse* and can't be relocated, use filter strips, grassed waterways, berms/diversions, or waste management systems to minimize the transport of pollutants.



Use structural techniques to abate pollution

Sometimes it may be impossible to locate supplemental feeding or shade facilities outside of sensitive water quality areas. In such cases, other techniques can be used to help keep sediment, nutrients, and organic matter out of the water.

- When feasible, re-establish natural flow patterns, plug drainage canals, and restore water through internal marshes, cypress ponds, or other natural wetlands that can assimilate nutrients. The plugging of canals and/or some diversion of natural surface flows may require permits under Chapter 373, F.S. Contact your water management district prior to making structural modifications and/or changes. In addition, if you are a USDA program participant, contact them before conducting any clearing, land leveling, excavation, ditches, or similar activity, to ensure that you retain your eligibility for USDA program benefits.
- Use practices such as grassed waterways, filter strips, diversions, sediment traps, swales, and retention and detention ponds.



Minimize offsite discharge

Pollutants are carried offsite by water. By reducing the amount of water leaving your property, you can reduce the offsite water quality impacts.

- Carefully control seepage irrigation to minimize tailwater.
- Use *water control structures*, such as a flashboard riser on culverts, to retard water flow.
- Heavy vegetative cover in ditches should be mechanically removed instead of using herbicides, due to high nutrient releases when the vegetation decomposes.
- When cleaning ditches:

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- Pile vegetation and sediment away from the ditch so nutrients don't wash back into the water.
- Use turbidity screens in the water at discharge points so turbid water does not leave your property.
- Plug unnecessary drainage conveyances.
- Use grassed waterways and vegetated areas to clean water before discharging offsite.
- Use man-made ponds or other watering facilities in upland areas to reduce cattle use of natural wetland systems.



Manage nutrients carefully

You can minimize pollutants leaving your property by carefully controlling imported materials that you use and apply on your ranch. Pollutants can come from fertilizers, sludge application, pesticides, chemicals, and fuels. If these materials are properly stored, applied, and disposed of, there is less chance they will be carried offsite in runoff.

- As appropriate, use soil and plant tissue tests to determine fertilization rates.
- Follow University of Florida, Institute of Food and Agricultural Sciences (UF-IFAS) fertilizer recommendations.
- Apply biosolids at agronomic rates, consistent with your FDEP Agricultural Use Plan.
- Do not apply fertilizer, organic fertilizer, or biosolids directly to wetlands or watercourses, or prior to forecasted heavy rainfall.
- Grass clippings from "sod mowing" should be stored away from wetlands and other watercourses.



Waste reduction strategies

You can also minimize pollutants leaving your property by carefully controlling pesticides, chemicals, and fuels. If these materials are properly stored, applied, and disposed of, there is less chance they will be carried offsite in runoff.

- Use pesticides in accordance with the label.
- Use cleaning agents and other chemicals carefully.
- Keep petroleum storage tanks in good working order.
- In the event of a spill, have a spill response plan.



Minimize the potential for erosion

Cows aren't the only ones contributing to soil erosion. Human activities, such as land clearing, culvert installation, road building, ditch and canal maintenance, pasture renovation activities, and production of certain short-term crops (watermelons, sod) can lead to erosion that can increase pollutant loading.

- When land is cleared, quickly plant a vegetative cover.
- Leave vegetated buffer strips during land clearing along drain areas, wetlands, and watercourses.
- During construction, follow erosion and sedimentation control practices.
- Minimize the number of vehicle crossings through streams and canals. If stream crossing cannot be avoided, locate the crossing in the area of least impact, considering habitat, soil types, slopes, streambed characteristics, and bank stability.
- Use stabilized culverts or hard surface crossings. Hard surface crossings can be concrete or geotextile fabric with rock on top.
- Don't mow canal banks too closely; leave enough leaf area to maintain a healthy vegetative cover.



Develop a ranch Conservation Plan

Results of the Advanced-Level BMP Needs Assessment may indicate that you need to develop a ranch Conservation Plan; however you may wish to do so in any case. Such a plan, developed with help through USDA-NRCS or other technical service providers, can help guide management decisions for improved water quality.



Employee training

Employees whose job duties relate to BMPs should be properly trained prior to implementing the BMPs. Training sessions should be documented in the Employee Training Log in Appendix 9 of this manual.

- Provide annual training on BMPs and record keeping to appropriate employees.
- Keep records to document training activities.
- Review the Conservation Plan with employees, so its goals and priorities are clear.

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General Information for Environmental Protection on Cow/Calf Operations

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SPECIFIC WATER QUALITY IMPACTS ASSOCIATED WITH RANCHING

Waste from animals grazing on native pastures generally does not increase the nutrient levels in an area, as long as sufficient space is provided for each animal. However, intense grazing on improved pastures with the addition of supplemental feed can increase the risk of dissolved nutrients entering surface waters. This can elevate nutrient levels and disrupt the natural balance, adversely affecting water quality and aquatic flora and fauna. This section discusses some of the typical water quality impacts associated with ranching.

Pollutants and Pollutant Sources

Nutrients

Excess nitrogen and phosphorus are the most common sources of water quality impairments in Florida. These nutrients usually enter waterbodies through stormwater runoff. However, they can be introduced directly into the water from animal waste if livestock are allowed to loaf in wetlands or waterbodies. High levels of nutrients in surface waters result in abnormal plant growth, or *eutrophication*. The nitrogen form most abundant in natural waters is nitrate. Due to its high mobility, nitrate can also leach into groundwater. Ammonia is an inorganic source of nitrogen and originates primarily from urine. Phosphorus is one of the key elements necessary for growth of plants and animals. In terms of freshwater lake ecology, it tends to be the (growth) limiting nutrient. Unlike nitrogen, phosphorus is generally retained in the soil by a complex system of biological uptake, absorption, and mineralization. Phosphorus enters waterbodies as particulate matter via sediment transport, or can be dissolved in water.

Sedimentation

Sedimentation occurs when eroded soils are washed into surface waters, creating a buildup of solids on the bottom and suspended solids in the water column. Sedimentation most commonly associated with cattle grazing comes from the erosion of denuded areas and streambanks. Suspended solids from sediments reduce the amount of sunlight available to aquatic plants, cover fish spawning areas and food supplies, clog and harm the gills of fish, and can adversely affect shellfish. These effects combine to reduce fish, shellfish and plant populations, and decrease the overall productivity of lakes, streams, estuaries, and coastal

waters. Recreation may also be limited because of decreased fish populations and reduced desirability of downstream swimming areas. Deposited sediment also reduces the flow capacity of roadside ditches, streams, rivers, and navigation channels, which can result in more frequent maintenance dredging or flooding. Chemicals, such as some pesticides, phosphorus, and ammonium, may be transported in sediment. Over time, the aquatic environment can cause these chemicals to be released from the sediment into the water column.

Fecal Coliforms

Fecal coliforms are bacteria that can cause disease, and are another source of water quality impairment. While high numbers do not result in eutrophic conditions, they can pose a health hazard to animals and humans. Furthermore, the decomposition of fecal and other organic matter in water can lead to increased biological oxygen demand and lower dissolved oxygen levels. Health impacts to humans and livestock include dysentery, gastrointestinal infections, ear infections, and skin infections, especially in open wounds. Fecal coliforms are an indication of recent contamination, since they have a relatively short survival period in water. The risk of fecal coliform contamination by animals that are allowed direct access to a waterbody is higher, although runoff from high-intensity areas may compound the problem. Spreading uncomposted manure, residuals, or septage as fertilizer may also lead to increased fecal coliform numbers in nearby waterbodies. The likelihood of pollution is increased if these materials are applied in excess of agronomic rates or when wet weather conditions prevail.

Water Quality Degradation Indicators

Algae

Algae are essential to aquatic systems. As a vital part of the food chain, algae provide the nutrition necessary to support all aquatic animal life. Certain types of algae also provide habitat for aquatic organisms. Blue-green algae (which are actually a photosynthetic bacteria known as cyanobacteria) are usually found in freshwater systems, most commonly in calm, warm waters with high levels of nutrients. While cyanobacteria are naturally present in low numbers, increased algal production can cause many problems in a waterbody.

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Cyanobacteria can become so abundant that they will cause a scum layer to form on the surface, shading the sunlight-dependent life below and disturbing the food chain. Cyanobacteria produce a small amount of toxin, which is generally harmless to animals and humans when algal populations are under control; however, livestock and pet deaths have been attributed to consumption of water with an abundance of cyanobacteria. The toxin is known to cause liver and nervous system effects in humans as well. Cyanobacteria toxin cannot be eradicated by boiling or ultraviolet irradiation, so untreated surface water (any water not obtained through a public water system) with increased cyanobacteria poses a risk. Potential risks from recreational contact include skin, respiratory, and mucous membrane irritation. Other algal blooms can significantly alter the natural balance of the flora and fauna by causing a waterbody to become anaerobic. This results in a failing or impaired ecosystem. Certain types of noxious weeds or a monoculture of one or two species of plants can indicate an imbalance of nutrients in a waterbody, which can also lead to further problems in the ecosystem.

Dissolved Oxygen

Water systems both produce and consume oxygen. Oxygen is obtained from the atmosphere and from plants through photosynthesis. The presence of algal blooms, noxious weeds, and too many floating aquatic plants can reduce the amount of oxygen available in a waterbody by blocking sunlight necessary for photosynthesis to occur. Respiration by aquatic animals, decomposition of organic material, and various natural chemical reactions consume oxygen. The amount of oxygen consumed by microorganisms in breaking down manure and other wastes is known as the biochemical oxygen demand or BOD. If BOD exceeds the amount of dissolved oxygen in a waterbody, widespread fish kills can occur. If dissolved oxygen levels are already lower due to algal blooms or other flora, the likelihood of a fish kill increases.

Turbidity

Turbid water as a result of excessive sedimentation is another water quality degradation indicator. Great care must be used to prevent livestock-induced erosion of stream banks and the loss of sediments to waterbodies. Soil and sediment can fill in water bodies, clog waterways and affect water clarity. Suspended sediment can have numerous effects on fish; decreased penetration of sunlight can affect the feeding and breeding behaviors of fish, and the sediments themselves can clog gills and cause irritation to the mucous membranes covering the eyes and scales. As the sediment settles, fish eggs are susceptible to suffocation due to burial. Nutrients and toxins can also attach to sediments, which can contribute to downstream eutrophication and pollution.

Strategy to Minimize Water Quality Impacts

Using BMPs to achieve water quality protection while maintaining, or even improving, agricultural productivity is not a new process. However, doing this most effectively requires a business model that includes the following steps:

- Evaluate the existing situation
- Plan what to do, incorporating the applicable BMPs in this manual*
- Implement the plan
- Check to make sure everything is working correctly, and if not
- Go back to the first bullet

As a critical part of this process, ranch operators should conduct an inventory of the farm's natural resource features, as noted in the *BMP Selection and Implementation* chapter. The outcome of this exercise will be a plan – remember to keep it available and update it regularly. The plan will also help you communicate with your employees and your county agent, USDA-NRCS staff, or others.

* Many of the BMPs in this manual will address more than one environmental issue. Therefore, by implementing the BMPs, you usually solve more than one problem.

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NUTRIENT MANAGEMENT ON RANCHES

The sections below describe managing plant nutrients to achieve optimum forage yields while minimizing the movement of nutrients to surface and ground water. Nutrient management considers the amount, source, form, placement, and timing of nutrient applications. All sources of plant nutrients, such as organic and inorganic fertilizers and nutrient reserves within the soil, must be considered when developing a nutrient management program for a field or a ranch.

Source Reduction

Perhaps the first thing to remember when developing plans for nutrient management on grazing land is that animals do not produce nutrients. Animals consume, excrete, move, and retain nutrients. However, they are not the source of the nutrients. All of the nutrients excreted by grazing animals on Florida's ranches come from natural or human sources.

Natural nutrient sources generally include soil mineralization, atmospheric deposition, and nitrogen cycle processes. If the field is not fertilized and no supplemental feeds are given, the cattle will be totally dependent upon naturally occurring sources of nutrients. Fertilizer, supplemental feed, and irrigation water are the major sources of human-imported nutrients. The kind and amount of nutrients imported into a particular field will depend upon feed and pasture management. Nutrients imported into fields can be controlled to a great degree through management decisions.

Although grazing animals do not produce nutrients, they do affect nutrient distribution. Research indicates that grazing animals excrete nutrients in proportion to the amount of time they spend in an area. Research also shows that grazing cattle will spend their day doing three tasks: eating, sleeping, and loafing. When forage is available, cattle spend about eight hours each day on each of these tasks. However, if forage is limited, they may spend as much as ten hours per day grazing. Because cattle in Florida typically loaf and sleep in areas other than those in which they graze, they will transfer nutrients from the grazed area to the loafing and sleeping areas. If the sleeping or loafing area is in or near an environmentally sensitive area, the transfer of nutrients can cause or contribute to water quality problems.

There are four simple steps that can be taken to

improve nutrient management and minimize the potential for water quality problems:

- The best method to prevent nutrient contamination of ground or surface water is to reduce the amount of nutrients imported onto a ranch. Therefore, the reduction of feed brought onto the ranch can play a big part in managing nutrients. If supplemental feed is needed, it is best to use feed in areas away from wetlands and other watercourses. This will reduce the potential for manure or unused feed to be washed into surface waters.
- Reduce fertilizer applications in areas where grazing animals congregate. The soil in these areas often contains adequate nutrients for plant growth, so fertilizer applications are unnecessary.
- Avoid applying fertilizer within 50 feet of wetlands and streams. This will reduce the potential for nutrients to be transported offsite during heavy rainfall.
- In order to reduce the potential for nutrients to be transported offsite, do not apply fertilizer to pasture swales and v-ditches that have standing water.
- Ensure that the pH is in the proper range for nutrient uptake by the plants because the acid nature of much of Florida's soils prevents optimum forage growth and limits the effectiveness of the fertilizer.

Nutrient Budget

A nutrient budget should be developed that considers all nutrient sources (soil residual, crop residues, organic and inorganic fertilizer, and irrigation water) and compares them to the forage crop nutrient requirements. Use the Nutrient Budget Worksheet in Appendix 5 to determine whether additional plant nutrients are needed. In general, ranchers can use a combination of soil and tissue testing, and UF-IFAS recommendations, to guide fertilization decisions. The UF-IFAS fertilizer recommendations for forage crops can be found in Fact Sheet SL-129, *Standardized Fertilization Recommendations for Agronomic Crops*, which can be found online at <http://edis.ifas.ufl.edu/SS163>

Ranchers should consult SL-129 before applying supplemental nutrients. On established bahiagrass pastures, nitrogen should be applied based on the intensity of grazing. Other perennial grasses may need nitrogen in late winter and at other times

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throughout the year. Application rates should be based on UF-IFAS recommendations, with an emphasis on phosphorus (P) using three criteria: soil pH levels; available P content as determined by soil test results; and plant tissue testing results.

The nutrient analysis of non-farm organic fertilizer (e.g. municipal sewage sludge) can be obtained from the sludge hauler or waste treatment plant. The nutrient analysis of other organic materials, such as poultry litter and dairy wastes, may be obtained from labs.

Timing of Nutrient Application

To avoid nutrient losses through runoff, apply fertilizers during times when soils are not saturated. When irrigating, refer to the water budget provided by USDA-NRCS for your county to determine the times for the lowest potential for nutrient loss from rainfall. Timing of nutrient applications should coincide as closely as possible with periods of plant growth and nutrient uptake. Remember to maintain proper soil pH, to optimize utilization of applied nutrients and prevent toxic effects from other accumulated elements, such as copper. The pH recommendations are listed by crop in SL-129, and generally range from 5.5 to 6.5.

Preventing Nutrient Movement Offsite

Ranchers should practice erosion control to minimize soil loss and runoff that can carry dissolved and attached (particulate) nutrients to surface waters. Filter strips and other conservation buffers along streams are very effective in reducing the levels of suspended solids and some nutrients. Also, avoid spreading fertilizers in or near ditches and canals. Strategically locate fertilizer loading sites away from watercourses, where spills can contaminate the water.

Manure Management

Manure management for cow/calf operations is a concern due to the possible release of coliform bacteria, phosphorous, or nitrogen to ground and surface waters through seepage and runoff. Ground water may become contaminated by leaching of nitrate or dissolved phosphorus. Phosphorus and nitrogen (N) can be transported in runoff to surface waters in dissolved form, or they may be attached to sediment particles. Both N and P can contribute to the eutrophication of waterbodies.

Common-sense manure management involves simple techniques such as managing manure in concentrated areas, dragging pastures, and excluding cattle from waterbodies near critical discharge points adjacent to waters of the state. These BMPs are addressed later in this manual.

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FORAGE PRODUCTION

The sections below describe forage resources, pasture, and grazing management to aid in the overall management of forage production for cow/calf operations in Florida. A productive forage stand is imperative to the success of a cow/calf operation and the protection of water quality. Well-established and managed forage stands effectively reduce soil erosion, absorb nutrients, and provide essential nutrition for livestock.

Forage Resources

In Florida, selection of forage species depends primarily on three major factors: temperature, soil moisture, and soil fertility. The differences in climate, soils, and length of growing season affect not only the types of forage that can be grown, but also affect the overall management system as well. Florida's relatively mild climate, coupled with an average 50 inches of annual rainfall, allows most South Florida ranchers year-round grazing opportunities. However, in most years, some supplemental feed or forage is required statewide during the winter months or dry spring months.

Florida forages are selected primarily based on temperature, due to the wide-ranging climate. South Florida has a climate similar to subtropical regions, while North Florida has subtropical summers but temperate winters. Warm season perennial grasses are the basis for permanent pastures in Florida. Possible perennial grass choices include bahiagrasses and improved hybrid bermudagrasses for North Florida; bahiagrasses, improved hybrid bermudagrasses, and limpograsses for Central Florida; and bahiagrasses, stargrasses, improved hybrid bermudagrasses, limpograss, and rhodesgrass in South Florida.

The table below lists general guidelines for rotational stocking of selected forages:

Forage	Average Height (inches)	
	Begin Grazing	End Grazing
Bahiagrass	6	1-2
Bermudagrass	6	2-4
Bluestem	10-20	8-12
Clovers	6	3
Indiangrass	14	6-10
Limpograss	24	10
Maidencane	24	10

Pearl Millet	14	6
Rhodesgrass	18	8
Ryegrass, annual	6	3-4
Stargrass	12-18	6-8
Small Grains (oats, wheat, rye)	6	4
Switchgrass	18-22	8-12

Ranchers may also want to consider annual species as possible forage alternatives, depending on their objectives. Annual species provide grazing for temporary pastures. Certain annual grasses are used throughout the state in both cool and warm seasons. Rye, oats, wheat, and ryegrass can all be used for winter grazing, while pearl millet and sorghum X sudangrass hybrids can provide summer grazing. Additionally, annual species may be used as a transition crop when renovating pasture.

Florida also has considerable variability in soils. In North Florida, there are clay-loam soils that are quite productive and have good moisture-holding capacity. In peninsular Florida, there are the upland sandy ridges and adjacent flatwoods. In general, flatwoods soils have greater moisture-holding capacity and are more productive than the deep, well-drained sands characteristic of the ridge. Ranchers should identify the intended planting sites' soil characteristics and select forage species compatible with those characteristics.

For more information, see *Florida Forage Handbook* at <http://edis.ifas.ufl.edu/AG170> or the *Florida Crop/Pest Management Profile: Beef Cattle* at: <http://edis.ifas.ufl.edu/PI043>.

Pasture Management

Establishment of new forage is an expensive process that requires detailed planning. The planning process should consider resource concerns such as soil erosion, as well as the increase in management costs to maintain soil fertility and prevent impacts to water quality. A rancher can establish pasture on new ground, following a row crop, or by renovation and replanting of old pasture to new species. Switching from one forage type to a new one can require a renovation program using annual cultivated crops for one to two years before planting new forage. For more information on pasture establishment, see *Florida Cow/Calf Management: Forages* at: <http://edis.ifas.ufl.edu/AN118>.

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Once a pasture has been established, ranchers should manage soil fertility, weed control, insect control, and grazing schedules. Proper management will assist ranchers in maintaining a strong stand of forages regardless of the forage variety or grazing system. Pastures with poor forage stands are more susceptible to erosion, livestock damage, or weed invasion. A thick, healthy pasture is aesthetically pleasing, allows livestock to efficiently graze the forage, and enhances water quality.

Grazing Land Management

Cattle have different nutritional requirements, depending upon the class of animal and general age of the herd. Nutritional considerations include the age and sex of the animal, desired weaning weight, production potential, and the stage of pregnancy. High-quality forage should be available at peak lactation and before breeding season. Production goals must be balanced alongside forage growth to achieve optimum nutrient value from the pasture. Nutritional value is also dependent on maintaining a variety of forages to increase the potential for year round grazing. The intensity and frequency of grazing affects the competition between plant species and affects the diversity of forage plants, forage quality, and the longevity of a forage stand. Desirable forage species can be replaced by weeds or shrubby plants because of poor grazing management, particularly in fenced exclusion areas. To counter these effects, a prescribed grazing system should be implemented to maintain the desired forages and enhance productivity.

An effective grazing-management system ensures that forage use does not exceed the production limitations of the forage. Prescribed grazing systems are used to accomplish this goal and may be used to control the forage, the animals, or both. Successful implementation of any grazing system requires periodic monitoring and adjustments of grazing periods to ensure that goals are met. Grazing systems range from *continuous grazing* to *rotational grazing*.

Continuous grazing is the unrestricted access to a pasture by livestock throughout a year or grazing season. Continuous grazing has advantages such as lower input costs and fewer management decisions. However, over time, improper continuous grazing can be a detriment to all forage resources (tame/improved or native) and can lead to natural resource concerns such as soil erosion, degraded water quality, loss of forage stands, and/or increased weed competition.

Rotational grazing systems are fundamental in managing forage production. Rotational grazing is the grazing of two or more subdivisions of pasture in sequence, followed by a rest period for recovery and re-growth. Rotational grazing has advantages such as improved pasture longevity, more timely utilization of forage, conservation of surplus forage, and increased stocking rates. One particularly useful type of rotational grazing is *flash-grazing*. A well-designed and properly managed flash-grazing system can be an effective tool for controlling woody and noxious plants, decreasing fuel buildups and facilitating nutrient uptake in exclusion areas along watercourse banks or around wetlands.

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PEST MANAGEMENT AND PHARMACEUTICALS

The sections below address more common issues associated with pesticides. It is important to note that pesticide application events should target designated pest species, follow the label recommendations, and use only the amount necessary to protect forage and livestock. Where feasible, pesticide application may be eliminated completely if adequate biological controls are available.

Integrated Pest Management

Integrated pest management (IPM) is a method of combining proper plant selection, correct cultural practices, the monitoring of pest and environmental conditions, the use of biological controls, and the judicious use of pesticides to manage pest problems. The goal of IPM is to eliminate or largely reduce the amount of pesticide use through beneficial parasites, predators, and pest-resistant plant varieties. Under Florida law (Chapter 482, F.S.), IPM is defined as the following: *...the selection, integration, and implementation of multiple pest control techniques based on predictable economic, ecological, and sociological consequences, making maximum use of naturally occurring pest controls, such as weather, disease agents, and parasitoids, using various biological, physical, chemical, and habitat modification methods of control, and using artificial controls only as required to keep particular pests from surpassing intolerable population levels predetermined from an accurate assessment of the pest damage potential and the ecological, sociological, and economic cost of other control measures.*

The basic steps of an IPM program are as follows:

- Identify key pests.
- Determine each pest's life cycle, and know which life stage to target (for an insect pest, whether it is an egg, larva/nymph, pupa, or adult).
- Use cultural, mechanical, or physical methods to prevent problems from occurring; reduce pest habitat; or promote biological control.
- Decide which pest management practice is appropriate, and carry out corrective actions. Direct the control where the pest lives or feeds. Use properly timed preventive chemical applications only when they are likely to control the target pest effectively, while minimizing the economic and environmental costs.
- Determine whether the corrective actions actually reduced or prevented pest populations, were

economical, and minimized risks. Record and use this information when making similar decisions in the future.

Pesticide Selection

Pesticides in cow/calf operations should be used only when necessary. Along with problems resulting from normal pesticide use, wastes can be produced from spills at mixing areas, in the field, or from the washing of application equipment.

Pesticide recommendations change frequently. Registrations may be canceled or added at any time. Recommended rates or products that were valid at the start of the growing season may change. Check with your local extension agent for the most recent recommendations, or access the UF-IFAS computer-based Electronic Data Information Source (EDIS) at: <http://edis.ifas.ufl.edu/>. Base pesticide selection on characteristics such as solubility, toxicity, degradation, and adsorption, considering site-specific characteristics such as soil, geology, depth to water table, proximity to surface water, topography, and climate, so that the potential for pollution of surface and ground water is minimized. Consider whether the proposed pesticide application will have an effect on any beneficial organism(s) that may be present. If so, consider using pesticides that have the least effect on beneficial organisms, as this may allow longer periods between treatments or eliminate the need for re-treatment.

Pesticide Calibration

Waste reduction starts with applying the precise amount of pesticide to targeted pests. To do this, pesticide application equipment must be properly calibrated. Applying too low a rate may be ineffective and promote resistance. Applying too high a rate may harm the forage or the animals, in addition to costing more money for materials. Application rates must be in accordance with the label in order to prevent contamination to the environment. Controlling application rates and calibrating pesticide equipment reduces the potential for pollutant loading to ground and surface waters.

Calibrating should be done with clean water and take place away from wells, sinkholes, or waterbodies. Remember also to calibrate sprayers every time a nozzle is replaced, and to compensate periodically for wear in pumps, nozzles, and metering systems. Proper calibration of equipment will aid in making applications more efficient and save money

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on chemical and labor costs.

Application rates are related to the formulation of the pesticide and to the type of equipment used. Pesticides can be applied with hydraulic, tractor-mounted, pull-type, pick-up mounted, or self-propelled sprayers, or spot applied by backpack or hand-spraying. It is important to follow the manufacturer's recommendations to determine the correct application rate.

Pesticide Mixing and Application

If applying restricted-use pesticides, the applicator must be fully trained and licensed in accordance with Chapter 5E-9.024, Florida Administrative Code, or must hire someone who is appropriately certified. Applicators must read and follow all label directions and the directions on the Material Safety Data Sheets.

Avoid mixing pesticides and loading or rinsing sprayers immediately adjacent to wells or waterbodies, since spills in these areas can easily contaminate water supplies. If the ranch does not have a permanent or temporary mixing and loading facility, use nurse tanks and mix at random sites to prevent a buildup of contamination. If this is not possible, run a long hose (100-200 feet) away and preferably downhill from the supply well to the mix-and-load area and protect the soil from accidental spills. Install anti-siphon devices or ensure that there is an air gap between the hose and the tank when sprayers are filled.

Other pesticide application strategies include:

- Using erosion control practices that minimize soil loss and runoff, thereby reducing the movement of *adsorbed* pesticides to surface waters.
- Minimizing field applications of pesticides just prior to periods of anticipated heavy or sustained rainfall to prevent surface water contamination or accelerated leaching to ground water and ineffective control of target organisms.
- Using IPM practices, including cultural, mechanical, biological, and chemical methods.
- Evaluating the effects of the seasonal water budget on potential pesticide loss to surface or ground water and selecting an application method that reduces the potential for runoff or leaching.

Other Important Pesticide Information

There are many other important issues that involve pesticide use. For additional information, refer to *Best Management Practices for Agrichemicals and Farm Equipment Maintenance* which can be accessed online at: <http://www.floridaagwaterpolicy.com/BestManagementPractices.html>

Pharmaceuticals

The use and misuse of pharmaceuticals, such as antibiotics and hormones, can have a negative impact on water quality. A recent study found sulfathiazole in a high percentage of samples downstream of cattle and swine sites; however, these were concentrated animal operations and not pasture-based operations. This is an emerging issue of national importance as sampling has revealed detectable amounts of antibiotics, hormones, sterols and other substances in surface waters from various sources. Because of this, it is very important to use these products responsibly. Follow all state and federal regulations and properly dispose of spent needles, expired or unused pharmaceuticals, and pharmaceutical containers.

Proper disposal of spent needles, referred to as "sharps," is regulated by EPA. These regulations require that needles are disposed of in a biomedical container designed for collection of sharps. Spent needles should be collected in these containers to avoid accidental needle sticks of farm workers or animals. Local veterinary offices should be able to provide these containers. Many county solid waste departments will take the sharps containers and properly dispose of them for a small fee, and some counties provide this service for free. Contact the local solid waste office for more information. Operators should check with their county extension office in the event that local ordinances may apply.

The proper disposal of unused pharmaceuticals is necessary for environmental, livestock, and human health. Expired medications can often be returned to the supplier/manufacturer or some veterinary offices. Check with your local municipality to see if they will accept pharmaceuticals during household hazardous waste disposal events.

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RANCH WASTE MANAGEMENT

Ranch waste management includes the proper storage and disposal of products and by-products from cow/calf operations. These products generally include pesticide, petroleum, and other synthetic materials. Source control, including careful monitoring of all imported materials, helps to minimize pollutants in the waste stream. Waste management is very important because it reduces wastes, lowers the risk of an accidental discharge of pollutants, and saves money. This section is an introduction to managing a typical ranch waste stream.

Pesticide Waste

Reduce pesticide waste by minimizing the generation of wastewater from cleaning application equipment after use. Rinsing the sprayer is necessary only when changing from one pesticide to another, when moving to a new application site and the pesticide last used in the sprayer is not registered for the new site, or when cleaning the sprayer for storage. This practice will reduce the amount of rinsate.

Rinsate can be collected and used in accordance with the label during the next application. Rinsate should be sprayed on fields where the pesticide was originally applied, as long as the maximum application rate for that pesticide is not exceeded. Another option is to store the rinsate and use it to dilute the same pesticide for the next application. Do not dump rinsate on the ground or discharge it to surface waters or septic systems.

Pesticide spills should be cleaned up immediately following an incident. Barriers and absorbent materials are generally used to contain spills. Soil affected by a spill should be collected and stored in a special container, and reused at or below label rates during subsequent applications. Spill clean-up equipment and trained emergency responders should be readily available to handle spill incidents. The quick containment and clean-up of pesticide spills will minimize impacts to the environment and reduce liability should the land be sold.

Synthetic Products Waste

Most of the waste reduction principles described above can be applied when using other synthetic materials, which can include solvents, degreasers, lubricants, paints, and antifreeze. Unnecessary use of synthetic chemicals can result in pollution of the surrounding environment. These products should

never be directly poured onto concrete surfaces or soil. Select solvents and degreasers that are non-hazardous to the environment. Compressed air is often a viable alternative to using solvents for cleaning farm equipment.

Most solvents can be reused many times without losing their cleaning properties. If the operation has a shop, consider using a water-based (solvent) reuse system. Used petroleum-based products must be stored in properly marked containers to be recycled or disposed of properly. Properly recycle all waste oil and antifreeze, and let all empty paint cans air dry before disposal.

Keep an inventory of all solvents used and have the Material Safety Data Sheets available nearby should an emergency arise. Remember to **reduce, reuse, and recycle** all products, as appropriate. This is your best defense against accidentally generating a hazardous waste stream on your ranch.

Gasoline and Diesel Fuel Waste

Ranch waste management must also include the proper management of all petroleum products located onsite, to ensure that ground or surface water is not contaminated. These products typically include unleaded fuel, diesel, motor oil, and heating oil. Very small amounts of these compounds in drinking water may not produce noticeable tastes or smells, but can have serious human health effects. This is why it is important to properly store, contain, and dispense these products.

Proper design and management of fuel-dispensing areas is essential to prevent soil and water contamination. Fuel-dispensing tanks and pumps should be located as far as possible from surface water and drinking water wells. Petroleum storage tanks installed above ground are regulated by FDEP (Rule 62-762, F.A.C.), and must be on an impervious pad with secondary containment to contain accidental spills or leaks. These facilities should be roofed to keep out rainfall and reduce stormwater runoff. All structures over fuel tanks should be designed to meet local building and fire codes. Build the containment structure so that it is tall rather than wide, in order to reduce rainfall accumulation. Never discharge water from the containment area without first checking for and treating an oil sheen.

Underground petroleum storage tanks are also regulated by FDEP (Rule 62-761, F.A.C.), and must have leak-detection and monitoring devices, cor-

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rosion protection, and spill or over-fill prevention devices. These devices will limit the contamination of soil and ground water. Above or underground fuel storage tanks may be subject to a Spill Prevention Control and Countermeasure Plan or an alternative plan that specifies the measures that will be taken to mitigate spills.

Used motor oil and oil filters can be disposed of legally by recycling them. Local auto shops may take recycled oil and oil filters. Drain, puncture, and crush used oil filters and store them in a separate container. For large amounts of used oil, contact a permitted used-oil recycling facility.

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ASSOCIATED LAND ISSUES

Ranchers generally deal with a number of other land uses besides cattle production. In terms of environmental protection, it is important to understand how these land and management practices may affect water quality.

Fire Lines

Construction of fire lines is an essential practice for fire prevention, fire suppression and prescribed burning. However, improperly designed and constructed fire lines can result in excessive erosion and water quality degradation. Extra precautions are necessary when constructing fire lines near wetlands.

Fire lines should be plowed only where necessary. When possible, use existing barriers such as roads, watercourses, and other features, or alternatives to plowed lines, such as harrowing, grass strips, or wet lines. Wet lines are fire lines that are maintained and kept wet to prevent fire from spreading. Fire lines should not be plowed through sensitive areas such as wetlands, unless no other options exist and it can be done without adversely impacting the wetland. Always maintain a minimum plow depth during construction of the fire line. Raise the plow when crossing watercourses to prevent plowing through them. Design and construct fire lines so they do not function as drainage systems. This is particularly important for fire lines that might connect to isolated wetlands. A turnout is a useful feature to stabilize fire lines when erosion and sedimentation are likely. Whenever possible, orient fire lines along natural contours to prevent erosion and gully formation.

Construction of Access Roads

Access roads are a potential source of long-term erosion and sedimentation because of the bare soil associated with the road surface and the need for periodic maintenance. Carefully plan the location and desired drainage features prior to road construction, using soil survey maps, topographic maps, and aerial photographs. Place emphasis on minimizing stream and wetland crossings, and avoid construction during wet conditions. Also, focus on balancing cuts and fills to maximize use of local material and enhance roadbed stability.

To reduce road costs and disturbed surface area, minimize the road width consistent with the anticipated use. For fill road construction, keep

shoulders at a gentle slope to minimize erosion and accelerate re-vegetation. Stabilize road banks and critical road segments by using mulch, seed, or other methods to keep the road from washing away and to keep sediment out of streams. Avoid directing ditch flow or road runoff into streams, lakes, or other watercourses to prevent soil erosion and turbidity problems.

Some roads will cross ditches, streams, and other watercourses. These roads will require special consideration and proper planning to prevent culverts from washing out, over-drainage of the site, flooding, or other undesirable effects. The local USDA-NRCS office can assist in the proper design and construction to eliminate or minimize undesirable effects.

Culvert crossings, rock crossings, or *turnouts* can be used to enhance long-term stability, reduce maintenance and associated costs, and protect water quality. For example, turnouts, vegetation, or ditch plugs can reduce the volume and velocity of flow. Where practical, all road drainage practices that divert ditch flow or road surface runoff should direct the flow onto vegetated areas where it can be dispersed adequately. Water turnouts can be installed periodically to divert flow away from the road, and onto an adjacent vegetated area for treatment. These areas should be adequate in size and have sufficient ground cover to assimilate runoff. Also, install culverts on roads where there is a need to direct ditch flow from one side to the other, underneath the road surface. Base the size of the culvert on the road ditch size and size of the watershed above the culvert. (*Note: Activities in wetlands or streams may require a permit, so check with the county, water management district, and USDA-NRCS before proceeding*). Alternatively, a low-water crossing using filter fabric, rock, or concrete to stabilize the road base may be an alternative to installing cross-drain culverts.

Proper maintenance of access roads is very important. All drainage structures should be checked and maintained periodically, especially following excessive rain events. If signs of sediment or turbid discharges are present, take immediate corrective actions as necessary. Ditches and culverts should be kept free of major obstructions, and ditches should be allowed to re-vegetate as much as possible. Also, stabilize critical segments of roads with seeding or mulching to minimize erosion and sediment movement.

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Elevated access roads should not be located within 25 feet of wetlands. Avoid directing ditch flow or road runoff into streams, lakes or other watercourses due to possible erosion and turbidity problems.

Silviculture

Many Florida ranchers have diversified their operations by growing trees as a complementary agricultural land use. Ranchers engaged in forest management should follow the most recent version of the *Silviculture Best Management Practices* manual, which can be obtained online at: <http://www.floridaagwaterpolicy.com>.

Intermittent Row Cropping

Intermittent row crops, such as watermelons, are periodically grown to renovate pastures or supplement income. To reduce the potential for water quality impacts, select pastures with adequate existing drainage features and minimize alterations of the drainage system. Remember to account for the row crop activities in your nutrient management practices. All permits or exemption determination

letters must be acquired prior to constructing new ditches or altering existing ditches and/or drainage features, so consult with the proper authorities before proceeding. Ranchers engaged in growing seasonal row crops should follow the most recent version of the *Water Quality/Quantity Best Management Practices for Florida Vegetable and Agronomic Crops*, which can be obtained online at: <http://www.floridaagwaterpolicy.com>.

Seasonal Sod Production

Much of the agricultural land in Florida is managed for cattle grazing. Sod production on bahiagrass pasture is generally recognized as a low-intensity agricultural use. When properly managed, this use provides vegetative cover and soil and water benefits. Some ranchers include the harvest of bahiagrass as part of their pasture renovation program. Ranchers engaged in seasonal sod production should follow the most recent version of the *Water Quality/Quantity Best Management Practices for Florida Sod*, which can be obtained online at: <http://www.floridaagwaterpolicy.com>.

Advanced-Level BMP Needs Assessment

*You must complete the Advanced-Level BMP
Needs Assessment on the next page to determine which
Advanced-Level BMPs are applicable to your operation.*

Note: Some of these BMPs may require financial assistance.

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ADVANCED-LEVEL BMP NEEDS ASSESSMENT

This tool is to be used in addition to identifying the applicable Level I BMPs for your operation. After answering the questions below, ranchers may be required to address problem areas that require more protection. Your response will determine whether it is necessary to implement additional BMPs (Level II and/or Level III BMPs), and may indicate the need to develop a Conservation Plan for your operation. Based on your score and other onsite risk factors, you may not need to implement the Level II BMPs immediately. The BMP Checklist in Appendix 11 allows ranchers to indicate when they will implement practices.

Scheduling Options for Advanced-Level BMPs: If the Level I BMPs address the resource issues identified by the Needs Assessment, the related Advanced-Level BMPs may not need to be implemented. Therefore, for those Advanced-Level BMPs that you have determined may not be needed because the level one BMPs may adequately address the problem, you may schedule implementation to occur one year after the implementation date for the associated Level I BMPs. If, at the time the Advanced-Level BMPs are scheduled, the Level I BMPs have adequately addressed the resource issue(s) and you decide not to implement the Advanced-Level BMPs, you must notify FDACS which Advanced-Level BMPs are no longer applicable. However, where it is clear that the severity of the problem warrants it, implement the Advanced-Level BMPs as soon as practicable.

Scoring

- Circle the number next to each statement that applies to your operation. Add the numbers within each lettered subsection and place that number in the space labeled "Score." Add the scores together and place that number in the space labeled "Total Score." Divide the total score by the number of sections to get your average score for the section and place that number in the space labeled "Average Score."
- For the Level II BMP assessment questions, if your average score in a section is 2 or greater, implement the corresponding Level II BMPs.
- If your average score is greater than 4 in two or more sections, seek technical assistance to develop a *Resource Management System-Level Conservation Plan** for the entire ranch.
- If your average score for the section on Grade-Stabilization Structures (Level III) is 3 or greater, seek technical assistance to develop a *Conservation*

*Plan** specific to grade stabilization, regardless of your scores in the Level II Needs Assessment.

* *Note: A Conservation Plan must contain all BMPs in this manual that are applicable to your operation. Depending upon which BMPs are required, it may be in your best economic interest to develop a Resource Management System-Level Conservation Plan for your ranch in order to be eligible for government cost-share, even if your scores do not dictate that you must have a Conservation Plan.*

Level II Needs Assessment

Comprehensive Prescribed Grazing

A. Describe your operation's stocking rates:

- 0 Stocking rates are at or below the forage availability levels or Conservation Plan recommendations.
- 1 Stocking rates are above forage availability or Conservation Plan levels only during the growing season and forage is adequate.
- 4 Stocking rates are above forage availability or Conservation Plan recommended levels for the entire year and forage is short.

Score: _____

B. Describe your operation's grazing system:

- 0 Rotational or prescribed grazing is practiced on 100% of pastures.
- 1 Rotational or prescribed grazing is practiced on 50% of pastures.
- 1 Continuous grazing is practiced and forage is maintained at appropriate heights.
- 2 Continuous grazing is practiced and forage is below minimum heights only during the dry season.
- 4 Continuous grazing is practiced and forage is constantly short.
- 5 Continuous grazing is practiced and several areas in the pasture are denuded of vegetation.

Score: _____

Total Score: _____
(Score A + Score B)

Average Score: _____
(Total Divided by 2)

If your Average Score is 2 or greater, implement the Level II BMPs located in Section 3.2 on page 34.

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Check Dams and Sediment Traps

- A. Under average hydrologic conditions, have you observed a sand bar at the confluence of your drainage ditches/canals, or at a downstream lake or stream?

0 Never

- 1 There is a small sandbar(s) that I can see at really low water.
2 There is a small sandbar(s) that I can usually see.
4 There is a large sandbar(s) that causes some flow diversion.
5 There is a sandbar(s) that I have to clean out regularly.

Score: _____

- B. Have you observed turbid water from high-intensity areas following a storm event?

0 Never

- 1 Only following very large storms (more than 2 inches of rain)
3 Usually some turbidity following minor storms (more than 1 inch of rain)
4 Usually some turbidity (plume of sediment) every time it rains
5 Water is always turbid, even when it does not rain.

Score: _____

Total Score: _____

(Score A + Score B)

Average Score: _____

(Total Divided by 2)

If your Average Score is 2 or greater, implement the Level II BMPs located in Sections 4.3 or 4.4 on page 36.

Livestock Use Exclusion

- A. Is there soil erosion or denuded areas, due to livestock access, along watercourses that are within 500 feet of waters of the state?

0 There is no soil erosion resulting from denuded areas along the banks of these areas.

- 1 Less than 10% of the banks have erosion resulting from denuded areas.
3 10% to 20% of the banks have erosion or denuded areas.
4 More than 20% of the banks have erosion resulting from denuded areas.

- 5 Almost all banks have erosion resulting from denuded areas.

Score: _____

- B. Describe the condition of the perennial stream or watercourse banks that livestock have access to:

0 Livestock do not have access to them.

- 1 Banks have a constant vegetative cover year round.
2 There are a few areas on banks denuded of vegetation for less than 30 days with no rill erosion.
3 There are a few areas on banks that are constantly denuded of vegetation with some rill erosion.
5 The majority of banks are constantly denuded of vegetation and substantial rill erosion is present.

Score: _____

Total Score: _____

(Score A + Score B)

Average Score: _____

(Total Divided by 2)

If your Average Score is 2 or greater, implement the Level II BMPs located in Section 7.3 on page 44.

High-intensity Area Design Retrofits

- A. Describe the location of cowpens and their proximity to perennial streams or watercourses:

0 Cowpens are greater than 200 feet from perennial streams or watercourses and appropriate measures are taken to control runoff.

1 Cowpens are located within 200 feet of perennial streams or watercourses and appropriate measures are taken to control runoff.

5 Cowpens are located within 200 feet of perennial streams or watercourses and minimal or no measures are taken to control runoff.

Score: _____

- B. If you periodically keep cattle in concentrated, denuded areas within 500 feet of perennial streams or watercourses, do you:

0 Prevent all runoff from the area from reaching perennial streams or watercourses

1 Route all runoff through filter strips or equivalent treatment areas before it reaches perennial streams or watercourses

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- 2 Route 75% of runoff through filter strips or equivalent treatment areas before it reaches perennial streams or watercourses
- 3 Route 50% of runoff through filter strips or equivalent treatment areas before it reaches perennial streams or watercourses
- 4 Route 25% of runoff through filter strips or equivalent treatment areas before it reaches perennial streams or watercourses
- 5 Allow uncontrolled runoff from the concentrated area directly to perennial streams or watercourses

Score: _____

Total Score: _____

(Score A + Score B)

Average Score: _____

(Total Divided by 2)

If your Average Score is 2 or greater, implement the Level II BMPs located in Section 8.2 on page 45.

Reminder: If your average score is greater than 4 in two or more sections (Level II BMPs), seek technical assistance to develop a Resource Management System-Level Conservation Plan for the entire ranch.

Level III Needs Assessment

Grade Stabilization Structures

- A. Is there soil erosion around culverts or other water control structures in canals or ditches?
 - 0 There is no erosion around any water control structures.
 - 1 Less than 10% of culverts have visible erosion around them.
 - 2 20% to 30% of culverts have visible erosion around them.
 - 4 30% to 50% of culverts have visible erosion around them.
 - 5 More than 50% of culverts have visible erosion around them.

Score: _____
- B. Under normal wet-season weather conditions, have you ever had a road or culvert "blow out" due to high water levels?

- 0 Never
- 1 Once every 5 years
- 2 Once every 3 years
- 4 About once every year
- 5 A few culverts each year

Score: _____

- C. Have you observed turbid water leaving your property following a storm event?
 - 0 Never
 - 1 Only following very large storms (more than 2 inches of rain)
 - 3 Usually some turbidity following minor storms (less than 1 inch of rain)
 - 4 Usually some turbidity (plume of sediment) every time it rains
 - 5 Water is always turbid, even when it does not rain

Score: _____

- D. Under average weather conditions, have you observed a sand bar at the confluence of your drainage ditches/canals, or at a downstream lake or stream?
 - 0 Never
 - 1 There is a small sandbar(s) that I can see at really low water
 - 3 There is a small sandbar(s) that I can usually see
 - 4 There is a large sandbar(s) that causes some flow diversion
 - 5 There is a sandbar(s) that I have to clean out regularly

Score: _____

Total Score: _____

(Scores A+B+C+D)

Average Score: _____

(Total Divided by 4)

Reminder: If your Average Score for the Level III Needs Assessment (Grade Stabilization Structures) is 3 or greater, seek technical assistance to develop a Conservation Plan for this practice (Grade Stabilization Structure, NRCS Code 410), regardless of your scores in the other sections. The plan must contain the BMPs listed in section 4.5 of this manual.

EXHIBIT C

Best Management Practices

Note: All BMPs that follow are Level I, Level II and Level III BMPs.

Reminder: You must complete the Advanced-Level BMP Needs Assessment on page 24 to determine which Advanced-Level BMPs are applicable to your operation.