RESOLUTION NO. 2014-193

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, DECLARING TIMBER LOCATED ON A COUNTY OWNED PARCEL AS SURPLUS PROPERTY AND AUTHORIZING SALE OF THE TIMBER TO THE HIGHEST BIDDER PURSUANT THE PROVISIONS SET FORTH IN SECTION 125.35, FLORIDA STATUTES.

RECITALS

WHEREAS, sections 274.05 and 125.35 of the Florida Statutes (respectively) authorize the St. Johns County Board of Commissioners (Board) to classify certain property as surplus, and to sell certain property to the highest bidder whenever the Board determines that it is to the best interest of the County to do so; and

WHEREAS, in accordance with section 274.05 of the Florida Statutes, County Staff requests that the Board of County Commissioners (Board) classify timber located on the County-owned property known as "Basin 8 (Deep Creek) Regional Off-Site Mitigation Area Tatum Tract" as surplus property; and

WHEREAS, in accordance with section 125.35 of the Florida Statutes, County Staff further requests that the Board authorizes the sale of such timber to the highest bidder; and

WHEREAS, upon Board approval, a sealed bid will be advertised for sale of the timber and for performance of specified maintenance in accordance with applicable Florida Statutes and as required by the St. Johns River Water Management District (see the Memorandum of Agreement and Timber Cruise Report attached hereto as Exhibit "A", incorporated by reference and made a part hereof); and

WHEREAS, sale of the timber to the highest bidder and performance of the maintenance described above best serve the interests of the County.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of St. Johns County, Florida, as follows:

1. The above recitals are incorporated by reference into the body of this Resolution and such recitals are adopted as findings of fact.

2. In accordance with section 274.05, Florida Statutes, the Board hereby classifies the timber described herein as surplus property; and, in accordance with section 125.35, Florida Statutes, authorizes sale of the property to the highest bidder.

3. The County Administrator, or designee, is authorized to advertise a sealed bid for sale of the timber and for performance of all maintenance required by the St. Johns River Water Management District and applicable state law.

3. To the extent that there are administrative, scriveners or typographical errors that do not change the tone, tenor, or concept of this Resolution, then this Resolution may be revised without subsequent approval by the Board.

PASSED AND ADOPTED by the Board of County Commissioners of St. Johns County, Florida, this 15th day of July, 2014.

ATTEST: Cheryl Strickland, Clerk

By: Pam Halterman
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS
ST. JOHNS COUNTY, FLORIDA

By: _____
John H. Morris, Chair

RENDITION DATE 7/17/14

MEMORANDUM OF AGREEMENT BETWEEN
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND ST. JOHNS COUNTY
FOR ST. JOHNS COUNTY BASIN 8 REGIONAL OFFSITE MITIGATION AREA
(ROMA)

THIS MEMORANDUM OF AGREEMENT is entered into by the St. Johns River Water Management District (District) and St. Johns County (County) regarding the St. Johns County Basin 8 Regional Offsite Mitigation Area (ROMA).

WITNESSETH:

WHEREAS, Section 373.4135(1), Florida Statutes (F.S.), directs the District to participate in and encourage the establishment of public offsite regional mitigation;

WHEREAS, the County desires to establish a ROMA to serve as mitigation for future environmental resource permits (ERPs) issued by the District to the County for County projects;

WHEREAS, Section 373.4135(6), F.S., requires that certain ROMAs for which money is donated or paid as mitigation be established and operated pursuant to a Memorandum of Agreement (MOA);

WHEREAS, although Section 373.4135(6), F.S., does not require that this St. Johns County Basin 8 ROMA be established and operated under an MOA because no money will be donated or paid as mitigation, the parties have determined that an MOA would be mutually beneficial;

WHEREAS, Section 373.4135, F.S., provides that such MOA need not be adopted by rule;

NOW THEREFORE, for and in consideration of the foregoing, which are made a part of the MOA, the District and the County hereby agree to the following:

Section 1. The County will implement the St. Johns County Basin 8 ROMA as described in the following five documents: (1) The Floyd Preservation Plan- attached as Exhibit "A"; (2) "Wetland Mitigation Overall Site Plan for Masters Tract Regional Stormwater Treatment Facility" WM-1, WM-11, WM-12 and WM-13 received by the District on February 28, 2012, for permit 4-109-126294-1- attached as Exhibit B; (3) the approved construction plans for permits 4-109-126294-1- attached as Exhibit C; (4) The Tatum Tract Mitigation Plan View Map- attached as Exhibit D; and (5) this MOA. Each of the exhibits described in this section shall be incorporated into and made part of this MOA.

Section 2. In exchange for the County's implementation of the St. Johns County Basin 8 ROMA as described above, the County will be able to use 27.956 Total

Functional Gain Units (FGUs) from the ROMA as mitigation for ERPs issued by the District to the County for County projects in Basin 8.

Section 3. Responsibilities.

A. *Description of work.* The County will conduct the following activities to return the sites to a more natural state:

Floyd Tract

- Preservation of 55.87 acres of wetlands
- Preservation of 2.77 acres of uplands

Masters Tract

- Wetland Flow-way Creation (C-4 and C-4N) of 14.3 acres
- Wetland Forest Enhancement of 7.8 acres
- Forested Wetland Creation (Cells 1, 2 ,3A and 3B) of 38.1 acres
- Upland Buffer Enhancement of 21.0 acres
- Preservation of 4.0 acres of wetlands

Tatum Tract

- Preservation of 60.7 acres of wetlands
- Forested Wetland Enhancement of 13.4 acres
- Forested Upland Buffer Enhancement of 17.1 acres

The County will begin conducting these activities in 2014 and expects to complete construction in 2016.

B. *Timeline for obtaining any required ERP.* Some of the mitigation activities required an ERP, which the County obtained on March 16, 2012 (4-109-126294-1).

C. *Environmental success criteria.*

Floyd Tract:

(a) Preserve the entire property in perpetuity by conveying a conservation easement approved in writing by District staff.

(b) Perform annual inspection and exotic species removal/maintenance as needed. Invasive exotic species covers 1% or less in any one acre area.

Masters Tract:

(a) Preserve the entire property in perpetuity by conveying a conservation easement approved in writing by District staff.

(b) Perform annual inspection and exotic species removal/maintenance as needed. Invasive exotic species covers 1% or less in any one acre area.

(c) Perform the activities described in Exhibit B and ERP 4-109-126294-1.

(d) For the planted areas, plantings must meet the following success criteria within five years after initial planting:

i. At least 75 percent of the planted individuals in each stratum have survived throughout the monitoring period and are showing signs of normal growth, based upon standard growth parameters such as height and base diameter, or canopy circumference.

ii. At least 80 percent cover by appropriate wetland herbaceous species has been obtained.

iii. Hydrologic conditions generally conform to those specified for wetlands in Chapter 62-340, F.A.C..

iv. If successful establishment has not occurred as stated above within 5 years following initial planting, then within 30 days of the termination of the monitoring period, the County shall submit to the District a narrative describing the type and causes of failure and a complete set of plans for the redesign or replacement planting of the wetland mitigation area so that the success criteria will be achieved. If an ERP is required for the activity, then the County shall apply for a permit modification. Within 30 days of District approval and, if applicable, issuance of the permit modification, the permittee must implement the redesign and/or replacement planting. Following completion of such work, success criteria as stated above or modified by subsequent permit must again be achieved. In addition, the monitoring must be conducted.

v. In the event that 50 percent or greater mortality of planted wetland species in any stratum within the mitigation area occurs, the permittee must undertake a remediation program approved by District staff.

Tatum Tract:

(a) Preserve the entire property in perpetuity by conveying a conservation easement approved in writing by District staff.

(b) Perform annual inspection and exotic species removal/maintenance as needed. Invasive exotic species covers 1% or less in any one acre area.

(c) Perform the activities described in Exhibit D.

(d) Plant the following material at the Tatum Tract:

Planting Plan for Tatum Tract						
Tatum Tract Forested Wetland Enhancement (13.4-Acres)						
Type	Scientific Name	Common Name	% Plants	Feet on Center	Size	Number of Plants
Tree	*Acer rubrum*	Red maple	25	10	1 gal	401
	Nyssa sylvatica var. biflora	Swamp tupelo	25			401
	Taxodium distichum	Bald Cypress	50			803
Subtotal						1,605
Herb	*Osmunda cinnamomea*	Cinnamon fern	30	6	1 gal	1,926
	Osmunda regalis	Royal fern	30		1 gal	1,926
	Saururus cernuus	Lizards tail	40		2" Liner	2,568
Subtotal						6,421
Tatum Tract Forested Wetland Buffer Enhancement (17.1-Acres)						
Type	Scientific Name	Common Name	% Plants	Feet on Center	Size	Number of Plants
Tree	*Celtis laevigata*	Sugarberry	20	20	1 gal	410
	Ulmus americana	American elm	30			615
	Liquidambar styraciflua	Sweetgum	30			615
	Sabal palmetto	Cabbage palm	20			410
Subtotal						2,048

(e) For the planted areas, plantings must meet the following success criteria within five years after initial planting:

i. At least 75 percent of the planted individuals in each stratum have survived throughout the monitoring period and are showing signs of normal growth, based upon standard growth parameters such as height and base diameter, or canopy circumference.

ii. At least 80 percent cover by appropriate wetland or upland herbaceous species has been obtained.

iii. Hydrologic conditions generally conform to those specified for wetlands in Chapter 62-340, F.A.C..

iv. If successful establishment has not occurred as stated above within 5 years following initial planting, then within 30 days of the termination of the monitoring period, the County shall submit to the District a narrative describing the type and causes of failure and a complete set of plans for the redesign or replacement planting of the wetland mitigation area so that the success criteria will be achieved. If an ERP is required for the activity, then the County shall apply for a permit modification. Within 30 days of District approval and, if applicable, issuance of the permit modification, the permittee must implement the redesign and/or replacement planting. Following completion of such work, success criteria as stated above or modified by subsequent permit must again be achieved. In addition, the monitoring must be conducted.

v. In the event that 50 percent or greater mortality of planted wetland species in any stratum within the mitigation area occurs, the permittee must undertake a remediation program approved by District staff.

D. *Monitoring and long-term management requirements.* The County will monitor the planted areas for a total of 5 years following planting. In addition, the County shall furnish the District with two copies of an annual monitoring report on EN-55 for all wetland creation, restoration, and enhancement areas and upland enhancement areas for four growing seasons after establishment of this MOA unless otherwise notified by the District.

The County shall perform exotic species removal and maintenance activities and land management activities as described in this MOA.

The County will operate and maintain the site in a manner consistent with the Plans (Exhibits A, B and D), permits 4-109-126294-1, this MOA, and the conservation easement.

E. *Project Assessment.* Mitigation value was assessed pursuant to the Uniform Mitigation Assessment Method (UMAM) in Chapter 62-345, Florida Administrative Code. The District has determined that the ROMA can provide 27.956 Total Functional Gain Units (FGUs). The final UMAM assessment is attached as Exhibit E. Because this assessment accounts for time lag and risk, all of the FGUs will be available once the County records the District-approved conservation easements. To track the use of FGUs, the County and District will maintain a list containing the project name, ERP number, FGUs used, and date used, until all FGUs have been used.

F. *Completion of the mitigation work.* The County is responsible for all work at the ROMA.

G. *Geographic area where the project may be used.* The FGUs from the ROMA may be used as mitigation for ERPs issued for County projects proposing impacts to herbaceous and forested freshwater wetlands in the District's Basin 8, which is where the ROMA is located.

H. *Cost accounting, annual review and adjustment.* Because the County will be using the ROMA only for County projects and will not be collecting funds from others to implement the ROMA, and because an MOA is not required for this type of ROMA, the District has determined that a procedure for full cost accounting is not needed in this case.

I. *Land Acquisition.* The County owns the property and does not need to acquire any lands for the ROMA.

J. *Preservation of the site.* The County will convey conservation easements to the District, as explained above.

K. *Funds.* Because the County will not collect moneys from others to implement the ROMA, the District has concluded that a procedure to track funds is not needed in this case.

L. *Termination.* If the District determines that the County is not in material compliance with the terms and conditions of this MOA, it shall provide the County with written notice of its material non-compliance and give the County ninety (90) calendar days, or another time period mutually agreed upon in writing, to correct the non-compliance. During the time period provided for correcting the non-compliance, the County may not use FGUs as mitigation for newly issued ERPs from the District.

If the County does not correct the material non-compliance within the stated timeframe, the District may terminate use of the remaining FGUs for future ERPs from the District.

If the District determines that the material non-compliance diminishes the value of FGUs already used from the ROMA, then the District shall provide the County with written notice of this determination. The District shall give the County ninety (90) calendar days, or another time period mutually agreed upon in writing, to correct the non-compliance or submit for District approval alternative mitigation for any permits that were not fully mitigated within the ROMA.

The County is obligated to manage the lands in accordance with the Plan, the conservation easement, and this MOA, regardless of whether FGUs have been used or terminated.

Section 4. Notices.

All notices required by this MOA shall be in writing and shall be sent by registered or certified mail, return receipt requested, as follows:

To the District: St. Johns River Water Management District
Jacksonville Service Center
7775 Baymeadows Way, Suite 102
Jacksonville, FL 32256
Attention: Christine Wentzel*

To the County: St. Johns County
St. Johns County Environmental Division
4040 Lewis Speedway
St. Augustine, FL 32084
Attention: Ryan Mauch*

Each party may unilaterally change the person to whom notices are sent by notifying the other party in writing.

Section 5. Effective Date and Term.

This MOA shall become effective upon the date the last party signs the agreement. This MOA shall remain in effect in perpetuity, unless both parties amend or terminate the MOA.

Section 6. Amendments.

This MOA, including its exhibits, may be amended in writing by the District and County.

Section 7. Severance Clause.

The invalidity of one or more of the phrases, sentences, clauses, or articles contained in the MOA shall not affect the validity of the remainder of this MOA, provided that the material purposes of this MOA can be determined and effectuated.

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IN WITNESS WHEREOF, the parties have caused this Memorandum of Agreement to be executed.

Approved as to Form and Legality
District Office of General Counsel

By: _____

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

By:_____
Printed Name:_____
Title:_____
Date:_____

Approved as to Form and Legality
St. Johns County Office of General Counsel

By: _____

ST. JOHNS COUNTY

By:_____
Printed Name:_____
Title:_____
Date:_____

King Forestry, Inc. – Forest Management – Real Estate Broker

PHONE: 904-759-2193 FAX: 904-339-9390
3574 CRESCENT POINT COURT, GREEN COVE SPRNGS, FL 32043
www.kingforestry.com

April 22, 2013

Tony Cubbedge
Land Resource Manager
Growth Management Department- Environmental Division
St. Johns County
4040 Lewis Speedway
St. Augustine, FL 32084

Mr. Cubbedge:

We have completed the timber cruise as requested. A copy of the cruise volumes is attached to this letter. As you can see from the report, there are 269.3 trees per acre present at this time. You have indicated you goal to be 75 to 150 trees per acre. The Basal Area found in the cruise data indicates a B.A. 0f 126.4 square feet. The cruise data indicates the time is right for a first thinning. However, reducing the stems per acre to less than 150 but more than 75 would make this stand very susceptible to "wind throw". I suggest thinning the stand now to approximately 190 stems per acre and a follow up thinning in five years to something less than 150 stems per acre. This will allow the remaining trees to build up stress wood near the base of the tree to withstand wind damage. At present, the stand is so densely populated, no stress wood is present due to the stocking rate. In other words, the trees are so densely planted, the wind cannot have an impact on the trees in the interior portion of the stand. By opening up the stand too quickly, the trees do not have an opportunity to build up the stress wood necessary to withstand wind damage.
Therefore, I suggest you consider a 5th row thinning along with removal of the suppressed, damaged and poor quality tress left in the four remaining rows. A target of 190 stems per acre left standing would be acceptable. In five years, remove enough timber to hit your target of 76 to150 trees per acre.

I suggest clear cutting an area 20 to 30 feet wide along the west, north and east boundary of the parcel. A "woods road" exists on the south side of the tract. Therefore, no fire line is necessary. This will allow for the installation of a good, straight fire line along the property boundary. The fire line will need to be in place to conduct a controlled burn. Other benefits include: ease of maintenance of the fire line on an annual basis, property line identification, protection from wild fire encroachment and wildlife habitat improvement.

Several invasive species were noted during the field operation. Cogon Grass, Cesar Weed, Camphor tree, Chinese Tallow, Climbing Fern and Chinaberry were all noted to exist on the tract. I strongly suggest an application of the appropriate herbicide as soon as possible. I suggest completing the first thinning operation as weather conditions permit. The understory will need sufficient time to "green up" after the disturbance from harvesting in order for the herbicide to be effective. If the harvest can be completed this calendar year, then an application of the appropriate herbicide should be conducted in late spring to early summer of 2014. A controlled burn would then be in order during the 2014-2015 winter dormant season. Follow up inspection of the tract for possible retreatment with herbicide should be conducted on an annual basis. A controlled burning regime should be initiated with a target of a complete burn every third year.

Sincerely,

Charles R. King

Charles R. King R.F., C.F. ACF
FL. R.E. Broker #BK3154367

Certified Forester®

Exhibit D Tatum Tract

7.2.1.1 Vegetation Communities

Three communities were identified on-site and classified using the 1999 FDOT *Florida Land Use, Forms, Cover, and Classification System* (FLUCFCS): Coniferous Plantation (FLUCFCS Code4410), Stream and Lake Swamps (Bottomland) (FLUCFCS Code 6150), and Wetland Coniferous Forest (FLUCFCS Code 6200). The Coniferous Plantation community comprises approximately 17.5 acres and is found throughout the southwestern parcel. This community is dominated by 10- to 12-year-old slash pines that were planted on rows on elevated beds. Other native species that are common include sapling sweetgum, wax myrtle, beautyberry, beggar ticks (*Bidens alba*), trumpet vine (*Ampelopsis arborea*), sapling sweetgums, and blackberry (*Rubus* sp.). The Stream and Lake Swamps (Bottomland) community comprises 60.7 acres of the property and is in the northwest corner of the southwestern parcel and the entire northeast parcel. The portion of this community in the southwest parcel was formerly row crops but is now dominated by red maple, swamp tupelo, bald cypress, laurel oak, wax myrtle, buttonbush, sedges, lizards tail, and royal fern. The remainder of this community found in the northeast parcel is mature and very high quality. Large bald cypress, swamp tupelo, and red maple are very common in this parcel. The Coniferous Plantation community refers to historic wetland areas that are now dominated by planted pine throughout the southern parcel (Figure 7-8). The canopy of this community is dominated by slash pine, but red maple and other wetland tree species dominate the mid- and understory.

7.2.1.2 Exotic Species

Numerous exotic and invasive plant species are found in the southwestern parcel and dominate the understory in much of the pine plantation and transitional areas. Exotic species observed include Caesar weed (*Urena lobata*), climbing fern, air potato, camphor, and rain tree (*Cassia* sp.).

7.2.2 Proposed Mitigation Activities

The County will place a conservation easement on the entire Tatum property to protect it in perpetuity from development. In addition to this preservation, the County also proposes wetland and upland buffer vegetation enhancement in the southwestern parcel to increase the habitat quality (Figure 7-9).

7.2.3 Upland Buffer Enhancement

The wetland buffer found at this site was likely dominated by a mesic hammock community based on its proximity to the Deep Creek floodplain and a review of adjacent undeveloped properties. As a result, Jones Edmunds proposes that the densely planted slash pine dominating the upland buffer community have a 5th row thinning along with removal of the suppressed, damaged and poor quality tress left in the four remaining rows. A target of 190 trees per acre left standing would be acceptable for the first thinning and second thinning thereafter in five years, remove enough timber to hit a target of 76 to150 trees per acre to allow native hardwoods to recover. Supplemental planting of sweetgum, sugarberry, American elm, and cabbage palm is proposed to facilitate the enhancement process. We also propose an extensive and aggressive exotic species management program to remove the large populations of species.

7.2.3.1 Wetland Enhancement

Jones Edmunds proposes enhancing 13.4 acres of on-site wetlands in the southwest parcel by harvesting and removing all pine within the wetland in addition to removing invasive/exotic species combined with supplemental planting of wetland trees. During pine removal, care will be taken to avoid damaging hardwood trees. Supplemental planting of red maple, bald cypress, swamp tupelo, cinnamon fern, royal fern, and lizards tail is proposed in areas that lack hardwood trees or saplings. Trees and herbaceous species will be planted on 20- and 10-foot centers, respectively. For this planting plan we used a supplemental planting of approximately 40% of the wetland enhancement area to calculate the number of trees that would actually be planted throughout the entire wetland, depending upon which areas were lacking native trees. Exotic plant species will also be removed from the on-site wetlands of both parcels.

Tract: Basal Area Statistics, Total

By Product and Species

Total Sampled Area (acres): 30.5

#Points: 22

Product Group / Product / Species	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
Pine Chip-N-Saw -- 95% CI						
Chip-n-Saw		sq. ft.				
Slash Pine	1,217.55	1,511.14	1,804.72	141.16	19.4	43.8
Overall	1,217.55	1,511.14	1,804.72	141.16	19.4	43.8
Pine Pulpwood -- 95% CI						
Pulpwood		sq. ft.				
Loblolly Pine	-12.07	27.73	67.52	19.13	143.5	323.7
Slash Pine	1,612.69	1,968.64	2,324.58	171.14	18.1	40.8
Overall	1,650.35	1,996.36	2,342.38	166.36	17.3	39.1
Pine Sawtimber -- 95% CI						
Sawtimber		sq. ft.				
Loblolly Pine	-32.34	69.32	170.97	48.88	146.6	330.7
Slash Pine	123.13	263.41	403.69	67.44	53.3	120.1
Overall	171.57	332.73	493.89	77.49	48.4	109.2
Other Pine Pulpwood -- 95% CI						
Pulpwood		sq. ft.				
Other Pine	-14.97	13.86	42.70	13.86	208.0	469.0
Overall	-14.97	13.86	42.70	13.86	208.0	469.0
All Product Groups	3,401.6	3,854.1	4,306.6	217.6	11.7	26.5

Stand Number: 1
Stand ID: 0001

Area (acres): 30.5

#Points: 22

Product Group / Product / Species–Volume1/2 Tables	DBH *(Inches)*	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
Pine Sawtimber						
Sawtimber		#	*Tons*		*sq. ft.*	*Logs*10*
Loblolly Pine--RGO PTons-Logs/						
	4.0	5.2	0.4	0.0	0.5	20.0
	13.0	0.5	0.1	0.0	0.5	10.0
	14.0	1.3	1.2	0.0	1.4	28.3
QuadMnDBH/MnHt/Subtotals	7.7	7.0	1.7	0.0	2.3	20.8
Slash Pine--RGO PTons-Logs/						
	6.0	2.3	0.5	0.0	0.6	30.0
	11.0	1.4	0.7	0.0	0.9	25.0
	12.0	0.6	0.4	0.0	0.5	30.0
	13.0	5.4	3.8	0.0	5.0	25.0
	14.0	1.3	1.3	0.0	1.4	31.7
	15.0	0.4	0.3	0.0	0.5	20.0
QuadMnDBH/MnHt/Subtotals	11.8	11.3	7.0	0.0	8.6	26.9
Product Group Total	**10.4**	**18.3**	**8.7**	**0.0**	**10.9**	**24.6**
Other Pine Pulpwood						
Pulpwood		#	*Tons*		*sq. ft.*	*Sticks*
Other Pine--RGO PTons-Sticks/						
	9.0	1.0	0.5	0.0	0.5	10.0
QuadMnDBH/MnHt/Subtotals	9.0	1.0	0.5	0.0	0.5	10.0
Product Group Total	**9.0**	**1.0**	**0.5**	**0.0**	**0.5**	**10.0**
Stand Total		**269.3**	**102.1**		**126.4**	
Stand Means	**9.3**					

Stand Number: 1
Stand ID: 0001

Area (acres): 30.5

#Points: 22

Product Group / Product / Species--Volume1/2 Tables	DBH *(inches)*	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
Pine Chip-N-Saw						
Chip-n-Saw		#	*Tons*		*sq. ft.*	*Sticks*
Slash Pine--RGO PTons-Sticks/						
	8.0	6.5	1.8	0.0	2.3	7.2
	9.0	11.3	4.0	0.0	5.0	7.6
	10.0	40.8	20.5	0.0	22.3	8.9
	11.0	17.9	10.2	0.0	11.8	8.5
	12.0	10.4	8.3	0.0	8.2	10.0
QuadMnDBH/MnHt/Subtotals	10.2	87.0	44.8	0.0	49.5	8.7
Product Group Total	**10.2**	**87.0**	**44.8**	**0.0**	**49.5**	**8.7**
Pine Pulpwood						
Pulpwood		#	*Tons*		*sq. ft.*	*Sticks*
Loblolly Pine--RGO PTons-Sticks/						
	7.0	1.7	0.2	0.0	0.5	4.0
	20.0	0.2	0.5	0.0	0.5	11.0
QuadMnDBH/MnHt/Subtotals	9.3	1.9	0.7	0.0	0.9	4.8
Slash Pine--RGO PTons-Sticks/						
	6.0	25.5	2.7	0.0	5.0	4.2
	7.0	30.6	4.4	0.0	8.2	4.6
	8.0	30.0	7.0	0.0	10.5	6.1
	9.0	36.0	11.7	0.0	15.9	6.9
	10.0	20.8	9.3	0.0	11.4	7.9
	11.0	10.3	6.0	0.0	6.8	8.5
	12.0	5.2	3.7	0.0	4.1	8.9
	13.0	1.5	1.2	0.0	1.4	9.0
	14.0	0.9	1.0	0.0	0.9	11.0
	16.0	0.3	0.5	0.0	0.5	12.0
QuadMnDBH/MnHt/Subtotals	8.6	161.1	47.5	0.0	64.5	6.2
Product Group Total	**8.6**	**163.0**	**48.2**	**0.0**	**65.5**	**6.2**

Stand Number: 1
Stand ID: 0001

Area (acres): 30.5

#Points: 22

Product Group **Product** Species--Volume1/2 Tables	DBH *(Inches)*	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
Pine Sawtimber						
Sawtimber		#	*Tons*		*sq. ft.*	*Logs*10*
Loblolly Pine--RGO PTons-Logs/						
	4.0	158.9	12.0	0.0	13.9	20.0
	13.0	15.0	4.4	0.0	13.9	10.0
	14.0	38.9	35.6	0.0	41.6	28.3
QuadMnDBH/MnHt/Subtotals	7.7	212.8	52.1	0.0	69.3	20.8
Slash Pine--RGO PTons-Logs/						
	6.0	70.6	13.9	0.0	13.9	30.0
	11.0	42.0	21.4	0.0	27.7	25.0
	12.0	17.7	12.7	0.0	13.9	30.0
	13.0	165.4	116.2	0.0	152.5	25.0
	14.0	38.9	39.7	0.0	41.6	31.7
	15.0	11.3	8.4	0.0	13.9	20.0
QuadMnDBH/MnHt/Subtotals	11.8	345.9	212.3	0.0	263.4	26.9
Product Group Total	**10.4**	**558.7**	**264.4**	**0.0**	**332.7**	**24.6**
Other Pine Pulpwood						
Pulpwood		#	*Tons*		*sq. ft.*	*Sticks*
Other Pine--RGO PTons-Sticks/						
	9.0	31.4	14.4	0.0	13.9	10.0
QuadMnDBH/MnHt/Subtotals	9.0	31.4	14.4	0.0	13.9	10.0
Product Group Total	**9.0**	**31.4**	**14.4**	**0.0**	**13.9**	**10.0**
Stand Total		**8,214.2**	**3,115.2**		**3,854.1**	
Stand Means	**9.3**					

Stand Number: 1
Stand ID: 0001

Area (acres): 30.5

#Points: 22

Product Group / Product / Species–Volume1/2 Tables	DBH *(inches)*	# Trees	Volume 1	Volume 2	Basal Area	Mean Merch. Height
Pine Chip-N-Saw						
Chip-n-Saw		#	*Tons*		*sq. ft.*	*Sticks*
Slash Pine--RGO PTons-Sticks/						
	8.0	198.6	53.8	0.0	69.3	7.2
	9.0	345.2	122.6	0.0	152.5	7.6
	10.0	1,245.5	625.8	0.0	679.3	8.9
	11.0	546.2	312.4	0.0	360.5	8.5
	12.0	317.7	252.5	0.0	249.5	10.0
QuadMnDBH/MnHt/Subtotals	10.2	2,653.2	1,367.0	0.0	1,511.1	8.7
Product Group Total	**10.2**	**2,653.2**	**1,367.0**	**0.0**	**1,511.1**	**8.7**
Pine Pulpwood						
Pulpwood		#	*Tons*		*sq. ft.*	*Sticks*
Loblolly Pine--RGO PTons-Sticks/						
	7.0	51.9	6.7	0.0	13.9	4.0
	20.0	6.4	15.1	0.0	13.9	11.0
QuadMnDBH/MnHt/Subtotals	9.3	58.2	21.8	0.0	27.7	4.8
Slash Pine--RGO PTons-Sticks/						
	6.0	776.7	81.4	0.0	152.5	4.2
	7.0	933.7	134.1	0.0	249.5	4.6
	8.0	913.5	212.5	0.0	318.9	6.1
	9.0	1,098.3	355.7	0.0	485.2	6.9
	10.0	635.5	284.6	0.0	346.6	7.9
	11.0	315.1	181.7	0.0	208.0	8.5
	12.0	158.9	112.6	0.0	124.8	8.9
	13.0	45.1	37.8	0.0	41.6	9.0
	14.0	25.9	30.5	0.0	27.7	11.0
	16.0	9.9	16.6	0.0	13.9	12.0
QuadMnDBH/MnHt/Subtotals	8.6	4,912.6	1,447.6	0.0	1,968.6	6.2
Product Group Total	**8.6**	**4,970.9**	**1,469.4**	**0.0**	**1,996.4**	**6.2**

Stand: Summary

By Diameter

Stand Number: 1

Stand ID: 0001

Area (acres): 30.5

#Points: 22

DBH	Basal Area Per Acre	# Trees Per Acre	Volume 2 Per Acre	Total Basal Area	Total # Trees	Total Volume 2
inches	*sq. ft.*	#		*sq. ft.*	#	
4	0.5	5.2	0.0	13.9	158.9	0.0
6	5.5	27.8	0.0	166.4	847.3	0.0
7	8.6	32.3	0.0	263.4	985.6	0.0
8	12.7	36.5	0.0	388.2	1,112.1	0.0
9	21.4	48.4	0.0	651.6	1,474.9	0.0
10	33.6	61.7	0.0	1,025.9	1,881.0	0.0
11	19.5	29.6	0.0	596.1	903.3	0.0
12	12.7	16.2	0.0	388.2	494.2	0.0
13	6.8	7.4	0.0	208.0	225.6	0.0
14	3.6	3.4	0.0	110.9	103.7	0.0
15	0.5	0.4	0.0	13.9	11.3	0.0
16	0.5	0.3	0.0	13.9	9.9	0.0
20	0.5	0.2	0.0	13.9	6.4	0.0
ALL 9.0	126.4	269.3	0.0	3,854.1	8,214.2	0.0

Tract: Volume1 Statistics, Total

By Product and Species

Total Sampled Area (acres): 30.5

#Points: 22

Product Group / Product / Species	Lower Limit	Mean	Upper Limit	Standard Error	CI %error	C.V.
Pine Chip-N-Saw -- 95% CI						
Chip-n-Saw		*Tons*				
Slash Pine	1,048.95	1,367.00	1,685.06	152.92	23.3	52.5
Overall	1,048.95	1,367.00	1,685.06	152.92	23.3	52.5
Pine Pulpwood -- 95% CI						
Pulpwood		*Tons*				
Loblolly Pine	-11.96	21.81	55.58	16.24	154.8	349.2
Slash Pine	1,156.88	1,447.57	1,738.25	139.76	20.1	45.3
Overall	1,188.49	1,469.38	1,750.26	135.05	19.1	43.1
Pine Sawtimber -- 95% CI						
Sawtimber		*Tons*				
Loblolly Pine	-28.04	52.07	132.19	38.52	153.8	346.9
Slash Pine	100.61	212.35	324.08	53.72	52.6	118.7
Overall	137.04	264.42	391.81	61.25	48.2	108.6
Other Pine Pulpwood -- 95% CI						
Pulpwood		*Tons*				
Other Pine	-15.51	14.36	44.23	14.36	208.0	469.0
Overall	-15.51	14.36	44.23	14.36	208.0	469.0
All Product Groups	2,642.7	3,115.2	3,587.6	227.2	15.2	34.2

StandNumber: 1 **StandID: 0001**

Species	Mean DB
Loblolly Pine	10.97
Slash Pine	9.12
Other Pine	9.00
Mean Stand DBH	**9.15**

Tract: # of Trees and Volume, Per Acre

By Product Group

Total Sampled Area (acres): 30.5

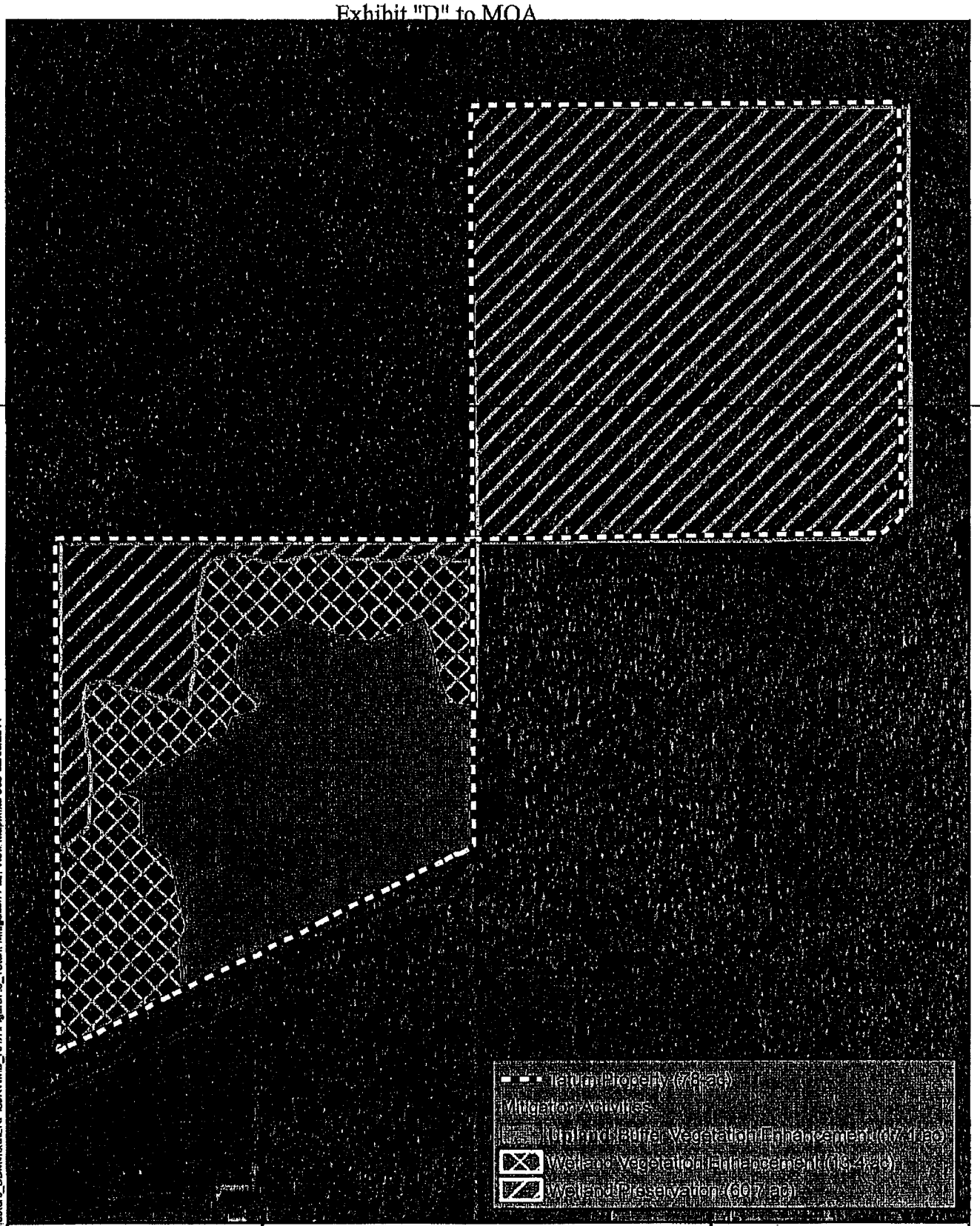
Product Group	# Trees	Volume 1
Pine Chip-N-Saw	87.0	44.8 *Tons*
Pine Pulpwood	163.0	48.2 *Tons*
Pine Sawtimber	18.3	8.7 *Tons*
Other Pine Pulpwood	1.0	0.5 *Tons*
Grand Total	**269.3**	**102.1** ***Tons***

Tract: # of Trees and Volume, Total
By Product Group

Total Sampled Area (acres): 30.5

Product Group	# Trees	Volume 1
Pine Chip-N-Saw	2,653.2	1,367.0 *Tons*
Pine Pulpwood	4,970.9	1,469.4 *Tons*
Pine Sawtimber	558.7	264.4 *Tons*
Other Pine Pulpwood	31.4	14.4 *Tons*
Grand Total	**8,214.2**	**3,115.2** ***Tons***

Exhibit "D" to MOA



Q:\19270_st_johns_co\048_Masters_BDA\mxd\ERP\SJRWMD_RAI\1\Figure7.9_Tatum Mitigation Plan View Map.mxd BJB 02/08/2011

JONES EDMUNDS

Figure 7.9 Revised

Tatum Tract Mitigation Plan View Map

Masters Tract ERP

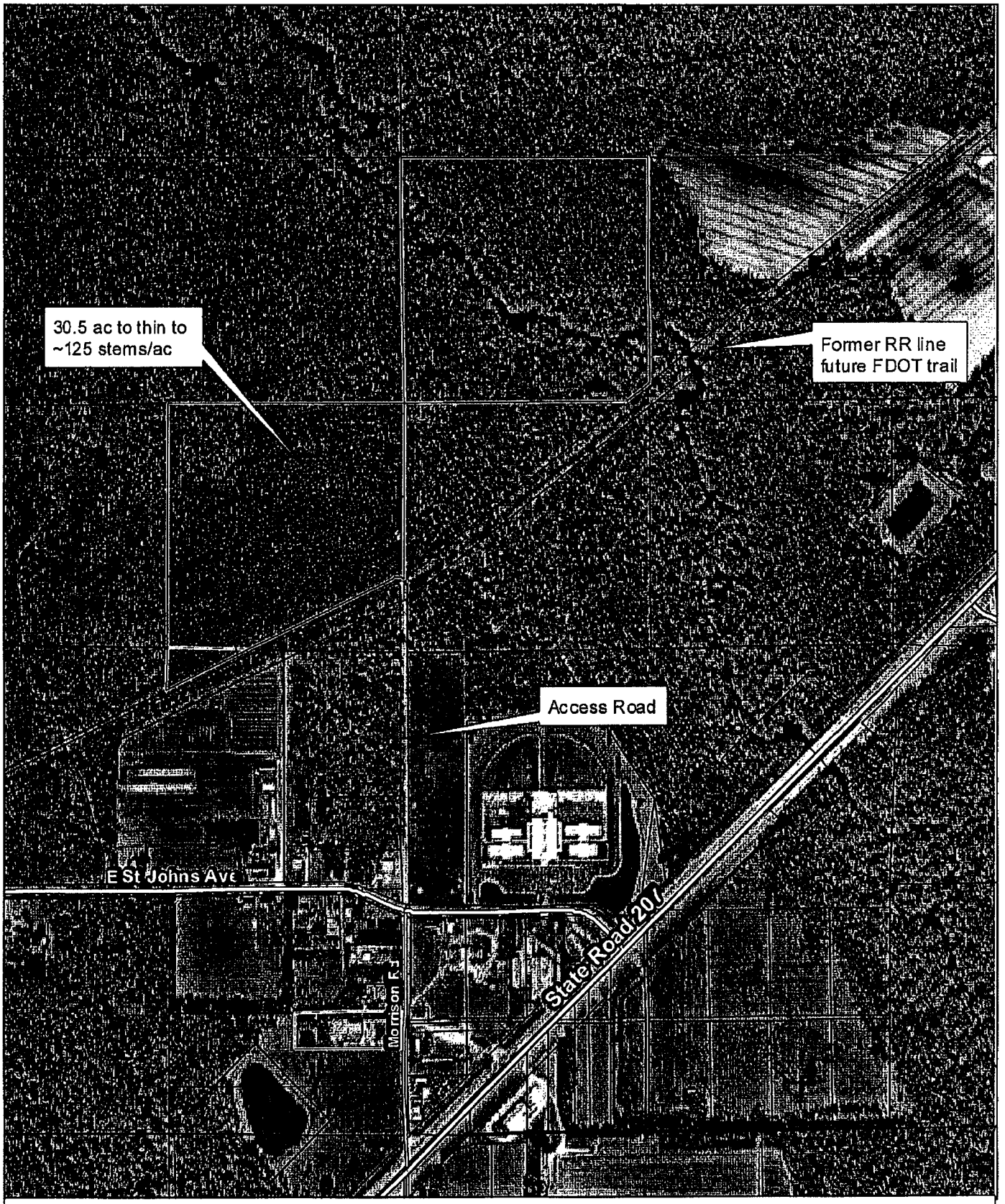
0 200 400

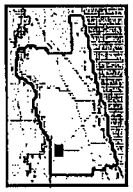
Feet

1:4,800

N

For Informational Purposes Only





St. Johns County
Environmental Division
(904) 209-0792
Date: 041712

Tatum Thinning

0 245 490 980 1,470 1,960 Feet

2010 Aerial Imagery

DISCLAIMER.
This map is for reference use only. Data provided are derived from multiple sources with varying levels of accuracy.

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