LEASE AGREEMENT (CITRUS)

BETWEEN

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

AND

UNITED STATES SUGAR CORPORATION AND EACH OTHER LESSEE NAMED BELOW

This **LEASE AGREEMENT** (this "**LEASE**"), is entered into BETWEEN (herein called the "**Parties**" and each a "**Party**"): the SOUTH FLORIDA WATER MANAGEMENT DISTRICT, a public corporation of the State of Florida, with its principal office at 3301 Gun Club Road, West Palm Beach, Florida 33406, and whose mailing address is Post Office 24680, West Palm Beach Florida 33416-4680, as **LESSOR** ("**LESSOR**"); UNITED STATES SUGAR CORPORATION, a Delaware corporation (the "**Parent**"), and SOUTHERN GARDENS GROVES CORPORATION, a Florida corporation (the foregoing Parent and other Persons named as **LESSEE**, individually and collectively and jointly and severally, "**LESSEE**"), all with a mailing address of 111 Ponce DeLeon Avenue, Clewiston, Florida 33440.

WITNESSETH:

WHEREAS, the **LESSOR** is an agency of the State of Florida created by the Florida Legislature and given those powers and responsibilities enumerated in Chapter 373, Florida Statutes.

WHEREAS, the **LESSOR** is empowered to enter into contracts with public agencies, private corporations or other persons, pursuant to Section 373.083, Florida Statutes.

WHEREAS, the **LESSOR** is empowered to lease lands or interests in land, to which the **LESSOR** has acquired title, pursuant to Section 373.093, Florida Statutes.

WHEREAS, **LESSEE**, as seller, and **LESSOR**, as buyer, have entered into that certain Second Amended and Restated Agreement for Sale and Purchase dated as of August *___*, 2010 (the "Agreement for Sale and Purchase") for certain real property located in Hendry and Palm Beach Counties, Florida, as described therein (the "Purchased Premises"). Unless otherwise defined herein, all capitalized terms used in this **LEASE** shall have the meanings assigned to the same in the Agreement for Sale and Purchase.

WHEREAS, concurrently herewith and pursuant to the Agreement for Sale and Purchase, **LESSOR** has acquired the Purchased Premises, which includes, among other real property, the real property described in **Exhibit "A"** attached hereto (the "Premises").

WHEREAS, pursuant to the Agreement for Sale and Purchase, **LESSOR** has agreed to lease the Premises to **LESSEE** for the Permitted Uses (as defined in **Paragraph 2.B.**) subject to the terms and conditions set forth herein and **LESSEE** has represented to **LESSOR** that it is qualified in all respects to operate the Premises under the Permitted Uses.

WHEREAS, the Governing Board of **LESSOR**, at its 2010, meeting has authorized entering into this **LEASE** with **LESSEE**.

WHEREAS, the Board of Directors of Parent, at its August, 2010, meeting has duly authorized each **LESSEE** entering into this **LEASE** with **LESSOR**.

[*NOTE – IN THE EVENT THAT OPTION PROPERTY IS ACQUIRED BY THE DISTRICT PURSUANT TO THE OPTION, THESE RECITALS MAY BE REVISED TO REFLECT FINANCING STRUCTURE*]

NOW THEREFORE, in consideration of the duties, responsibilities, obligations and covenants herein contained to be kept and performed by the **LESSEE**, the **LESSOR** does hereby lease to the **LESSEE** the Premises in accordance with the following terms, conditions, covenants and provisions:

1. **Recitals:** The foregoing recitals are true and correct and are hereby incorporated herein by reference.

2. **Use of Premises:**

A. **LESSEE** and **LESSOR** acknowledge that (i) all citrus trees and groves are owned by **LESSOR** and **LESSEE** is, pursuant to this **LEASE**, entitled only to the fruit and (ii) none of the crops (e.g., citrus fruit) or crop products are owned by the **LESSOR. LESSEE** may utilize the Premises solely for the Permitted Uses in accordance with the terms, conditions, covenants and provisions of this **LEASE. LESSEE** will not use or permit any use or entry upon the Premises for any other purpose. **LESSEE's** use of the Premises for the Permitted Uses shall be in accordance with the Best Management Practices (as defined below) and consistent with the industry standards. The Premises, including the improvements located thereon are being leased in their "AS IS", "WHERE IS" and "WITH ALL FAULTS" condition. **LESSEE** has examined the Premises to its complete and total satisfaction and is familiar with the condition thereof, and accepts the same in their present condition. **LESSOR** has made no representations or warranties to **LESSEE** respecting the condition of the Premises. **LESSEE** has had an adequate opportunity to investigate the zoning of the Premises and is satisfied that it can use the Premises in the manner required by this paragraph. **LESSOR** makes no warranty or representation as to the use or potential use to which the Premises may be put.

B. For the purposes of this **LEASE,** the term "Permitted Uses" shall mean the following: (a) all agricultural operations on the Premises, (b) **LESSEE's** historical business of planting, cultivating, farming, growing, harvesting, storing, fertilizing, transporting and removing citrus and sugar cane to the extent permitted pursuant to a Conversion Plan (as defined in **Paragraph 4.F.** below); (c) all uses incidental or related to the uses described in clause (b) above, including, without limitation, (i) the planting, cultivating, farming, growing, harvesting, fertilizing, removing, using and selling of appropriate rotation crops and related nursery

operations, (ii) the operation of existing railroads adjacent to the Premises and (iii) preexisting residential uses; (d) rock mining as otherwise has been conducted by **LESSEE** solely for use on the Premises (and not for sale to any third party) in connection with its business operations; (e) tenant farming operations; (f) any other historical business operations of **LESSEE** related or ancillary to the agricultural business operations described in clause (b) above or other agreements or leases that are in existence as of the Commencement Date; and (g) any other uses not otherwise described herein for which **LESSEE** obtains **LESSOR's** prior written approval, which approval may be withheld in **LESSOR's** sole and absolute discretion.

C. During the Lease Term, **LESSEE** shall maintain its current level of security for the Premises.

D. Furthermore, **LESSEE** shall control and eradicate to the extent practicable, and shall prevent infestation of, Category I and Category II exotic/invasive pest plants and Class I & II prohibited aquatic plants as described on **Schedule "1"** and **Schedule "2"** attached hereto and made a part hereof ("Exotic Pest Plants"). The sale of any Exotic Pest Plants is strictly prohibited and shall be sufficient cause for immediate termination of this **LEASE. LESSEE** agrees that its use and occupancy of the Premises shall result in the land being managed and maintained in accordance with applicable Best Management Practices, provided, however, that in no event shall such Best Management Practices or the terms of this **LEASE** require **LESSEE** to remove Exotic Pest Plants from the Premises to the extent such removal is not consistent with past practices of **LESSEE** on the Premises.

E. **LESSEE** shall neither hunt, trap or capture any wildlife upon the Premises nor allow others to do so; provided, however, **LESSEE** through its principals, contractors and employees may control nuisance wildlife in compliance with all state laws.

F. Prescribed burning on the Premises may be done by **LESSEE** provided that each such prescribed burning shall: (a)(i) have been requested by **LESSEE** in writing, (ii) be approved by **LESSOR** in writing, and (iii) be managed by a state approved burn manager; or (b) be conducted without **LESSOR's** consent or notification, so long as such controlled burning is regulated under the Division of Forestry's burning program, including the programs for citrus tree burning and sugar cane burning (to the extent sugar cane is grown pursuant to a Conversion Plan), agricultural container burning, etc. **LESSEE** shall not otherwise knowingly or deliberately set or cause to be set any fire or fires on the Premises.

G. There shall be no fertilization of the Premises, except for fertilization that is in compliance with the applicable Best Management Practices. Additionally there shall be no alterations, improvements or modifications of rangelands, wetlands, swamps or pastures of the Premises (including but not limited to mowing, chopping, disking, plowing, ditching, or digging water holes), other than (i) as is common in the industry, consistent with **LESSEE**'s past practices and specifically allowed in the Best Management Practices, or (ii) is otherwise consented to in writing by **LESSOR**, which consent may be withheld in **LESSOR's** sole and absolute discretion. **LESSEE** shall not cut or remove any standing green or fallen timber from the Premises, other than removal of citrus trees for disease control or otherwise in the ordinary course of **LESSEE**'s business consistent with past practices. **LESSEE** shall not, for any purpose, drive nails, spikes or staples into or otherwise deface or mar any tree on the Premises.

H. The application of herbicides, pesticides, or agricultural chemicals with respect to the Premises, shall comply with the applicable Best Management Practices and shall be limited to those chemicals specified therein.

I. Intentionally Deleted.

J. **LESSEE** shall adhere to all management practices described in **Schedule "3"** attached hereto and made a part hereof with respect to the Premises ("Best Management Practices").

K. **LESSEE** shall not be obligated to continue any planting or cultivation of any citrus crops on the Premises during the Lease Term.

L. So long as **LESSEE** is not in Default under **Paragraphs 7(A)(1), (2) (solely with respect to the failure to pay real estate taxes as required in this LEASE), 3 or 4,** **LESSEE** shall have the right to collect and retain all rents derived from the Premises (inclusive of rents paid during the Lease Term under leases that were in effect prior to the Commencement Date); provided, however that: (i) any such rents collected by **LESSOR** during any period of Default shall be applied to any unpaid amounts due hereunder; (ii) **LESSOR** shall provide written notice to **LESSEE** revoking the license described in **Paragraph 2.M** below at the same time as it provides notice to the tenants directing such rents to be paid directly to **LESSOR**; and (iii) in the event that **LESSEE** has cured any such Default, **LESSEE** shall again have the right to receive such rents, whereupon **LESSOR** shall, by written notice to **LESSEE**, reinstate the license and direct such tenants to deliver their respective rent payments directly to **LESSEE**. **LESSOR** shall, on or before the Commencement Date and thereafter, from time to time, as reasonably requested by **LESSEE**, deliver to each tenant who has a right to occupy the Premises a letter, in form and substance reasonably acceptable to **LESSOR** and **LESSEE**, which directs such tenant to deliver their respective rent payments directly to **LESSEE** during the Lease Term.

M. In addition to the rights granted to **LESSEE** under this **LEASE**, including the provisions set forth in **Paragraph 2.L** above, during the Lease Term, **LESSOR** hereby grants to **LESSEE** a revocable license (which may only be revoked by **LESSOR** in the event of a Default as described in **Paragraph 2.L** above and shall be reinstated pursuant to the terms of such paragraph) granting to **LESSEE** all rights and interest of **LESSOR** under any leases or contracts that have been assigned to and assumed by **LESSOR** on the Closing Date (collectively, the "Related Contracts"), which shall be deemed to include the right to seek any recourse against the applicable third parties thereunder for failure to perform thereunder. As consideration for the foregoing license, **LESSEE** hereby agrees, during the Lease Term, to timely: (a) pay all sums directly to the appropriate parties under the Related Contracts and any New Agreements (as defined in Paragraph 33.P of this **LEASE**) that become payable and accrue thereunder during the Lease Term; and (b) perform the obligations of **LESSOR** under the Related Contracts and any New Agreements that arise and accrue during the Lease Term. If reasonably requested by **LESSEE**, **LESSOR** agrees to execute authorizations reasonably required to evidence and effectuate the foregoing. **LESSEE** hereby agrees to promptly give **LESSOR** copies of any default notices given or received by **LESSEE** in connection with the Related Contracts or New Agreements.

N. **LESSEE** shall not at any time during the Lease Term, directly or indirectly, hypothecate, mortgage or pledge any of the Premises or any of **LESSEE**'s right, title or interest under this **LEASE**.

3. **Lease Term:** The **LESSOR** hereby leases the Premises to the **LESSEE** for a lease term commencing [*_____*] (the "Commencement Date"), and terminating (unless earlier terminated pursuant to other provisions of this **LEASE**) at 11:59 p.m. on the next occurring July 1st that follows the seventh (7th) anniversary of the Commencement Date, to wit July 1, *_____* (the "Initial Term").

A. In the event that **LESSOR** has not exercised the Option under the Agreement for Sale and Purchase to acquire either the Initial Option Property or the Entire Option Property (as defined in the Agreement for Sale and Purchase) on or before the expiration of the Initial Term or if **LESSOR** has exercised the Option for the Initial Option Property or Entire Option Property prior to such expiration and thereafter not acquired the Initial Option Property or Entire Option Property for reasons other than an Option Default (as defined below), then the Initial Term shall be automatically extended, without the necessity of either Party providing any written notice to the other (unless earlier terminated pursuant to other provisions of this **LEASE**), for an additional three (3) years (the "First Renewal Term") so that the Lease Term (as defined below) for the Premises is extended to 11:59 p.m. on the next occurring July 1st that follows the tenth (10th) anniversary of the Commencement Date, which extension shall be on the same terms and conditions set forth herein. If **LESSOR** timely exercises the Option for the Initial Option Property or the Entire Option Property and **LESSOR's** acquisition of the applicable Option Property does not occur until after the expiration of the Initial Term, the Initial Term shall be deemed to be extended on the same terms and conditions hereunder, to the extent applicable, until the closing of such acquisition whereupon **subparagraph D** below shall govern. In the event that **LESSOR** has exercised the Option to acquire the applicable Option Property prior to the expiration of the Initial Term and thereafter not acquired the such Option Property due to Seller's default beyond all applicable notice and cure periods under the Agreement for Sale and Purchase or the Option Purchase Agreement (as defined in the Agreement for Sale and Purchase) and provided that Buyer is not then in default under either of such agreements beyond all applicable notice and cure periods (such default(s), an "Option Default"), then (x) the Initial Term will not be extended and (y) this **LEASE** will terminate without further notice or action by **LESSOR** on (a) the expiration of the Initial Term or (b) earlier, as to portions of the Premises as harvested, on a block-by-block basis, for **LESSEE's** harvest that occurs during the last harvest year of the Initial Term.

B. In the event that the **LESSOR** has not exercised the Option under the Agreement for Sale and Purchase to acquire the Initial Option Property or Entire Option Property on or before the tenth (10th) anniversary of the Commencement Date or if **LESSOR** has exercised the Option for the Initial Option Property or the Entire Option Property prior to such expiration and thereafter not acquired the Initial Option Property or Entire Option Property for reasons other than an Option Default, then the First Renewal Term shall be automatically extended, without the necessity of either Party providing any written notice to the other (unless earlier terminated pursuant to other provisions of this **LEASE**), for an additional ten (10) years (the "Second Renewal Term"), so that the Lease Term for the Premises is extended to 11:59 p.m. on the next occurring July 1st that follows twentieth (20th) anniversary of the Commencement

Date, which extension shall be on the same terms and conditions set forth herein. If **LESSOR** timely exercises the Option for the Initial Option Property or the Entire Option Property and the acquisition of the applicable Option Property does not occur until after the expiration of the First Renewal Term, the First Renewal Term shall be deemed to be extended on the same terms and conditions hereunder, to the extent applicable, until the closing of such acquisition whereupon **subparagraph D** below shall govern. In the event of an Option Default during the First Renewal Term, (x) the First Renewal Term will not be extended and (y) this **LEASE** will terminate without further notice or action by **LESSOR** (a) on the expiration of the First Renewal Term or (b) earlier, as to portions of the Premises as harvested, on a block-by-block basis, for **LESSEE's** harvest that occurs during the last harvest year of the First Renewal Term.

C. The Initial Term, First Renewal Term and Second Renewal Term, as applicable, are herein called the "Lease Term".

D. In the event that **LESSOR** acquires the Initial Option Property or the Entire Option Property, from and after the date of the closing of such acquisition, the Premises and applicable Option Property shall be governed by the terms of the New Lease (as defined in the Agreement for Sale and Purchase) in accordance with the provisions of the Agreement for Sale and Purchase. If the Initial Option Property or Entire Option Property is not acquired after Buyer has exercised the applicable Option due to Buyer's default under the Agreement for Sale and Purchase or the Option Purchase Agreement after expiration of applicable notice and cure periods, then this **LEASE** shall continue under the terms hereof as if the applicable Option were not exercised.

E. The termination date of this **LEASE** as to any portion(s) of the Premises is herein called the "Expiration Date" solely with respect to such portion of the Premises being terminated, and otherwise refers to the date of expiration or earlier termination of this **LEASE**.

F. Commencing at least two (2) years prior to the expiration of the Second Renewal Term, if any, and provided that a Default by **LESSEE** does not then exist and would not exist with the giving of notice, the lapse of time or both, **LESSOR** and **LESSEE** agree to negotiate in good-faith an extension of the Lease Term with respect to the Premises, if **LESSOR** and **LESSEE** mutually determine such an extension would be mutually beneficial to the Parties, taking into consideration factors such as, impact on the local economy, **LESSOR's** intended use of the Premises and its construction plans and timelines therefor. Each Party shall bear its own costs and expenses and the fees of its consultants, contractors and advisors incurred in connection with any such negotiations. Either Party may terminate and withdraw from any such negotiations at any time in its absolute and sole discretion by notice to the other Party.

4. **Right to Terminate:**

A. Except as otherwise provided in **Paragraph 7.** of this **LEASE**, if either Party fails to fulfill its material obligations under this **LEASE** in a timely and proper manner, the other Party shall have the right to terminate this **LEASE** or exercise other rights and remedies hereunder after giving written notice of default to the applicable Party and an opportunity to cure the same as provided in this **Subparagraph 4.A.** An applicable Party that fails to fulfill its material obligations under this **LEASE** in a timely and proper manner (except as otherwise

provided in **Paragraph 7.** of this **LEASE**) shall have forty-five (45) calendar days from receipt of notice from the other Party to remedy the deficiency. Notwithstanding the foregoing, if such deficiency cannot with due diligence be remedied by the applicable Party within such 45-day period, and if such Party diligently commences to remedy such deficiency within such 45-day period and thereafter prosecutes such remedy with reasonable diligence, the period of time to remedy such deficiency shall be extended to permit a cure period of one hundred and twenty (120) days in the aggregate so long as such Party prosecutes such remedy with reasonable diligence; provided, however that upon request of such Party, the other Party shall, from time to time, consent in writing to an extension of such 120 day period, which consent shall not be unreasonably withheld, so long as the applicable Party is diligently proceeding to cure such deficiency. Such curing Party's request for an extension of time to cure shall be accompanied by a reasonably detailed schedule for completing such cure. A Party shall not be deemed to be in default under the terms of this **LEASE** unless and until a Default (as defined in **Paragraph 7** below) has occurred.

B. At any time during the Lease Term, **LESSEE**, in its sole discretion, shall have the right to terminate this **LEASE** as to any portion of the Premises, or all of the Premises, by giving a written termination notice to **LESSOR** at least one (1) year prior to the actual date of termination therefor, which notice shall include a harvest schedule and map describing the dates and sequence for the conduct of the harvest on the terminated lands (such portions of the Premises as to which the Lease has been terminated shall be referred to herein as the "Released Premises"). Notwithstanding the foregoing, in the event that **LESSEE** terminates this **LEASE** as provided in this subparagraph, then this **LEASE** shall partially terminate for portions of the Premises as harvested, on a block-by-block basis or the following July 1st (i.e., **LESSEE**'s final harvest), whichever is earlier.

C. Intentionally Deleted

D. In the event of a termination of this **LEASE** by **LESSEE** with respect to a portion of the Premises pursuant to **subparagraph B,** (x) **LESSEE** shall be deemed to have a non-exclusive right of access, utility service and drainage (subject to reasonable relocation by **LESSOR**) until the Expiration Date over and across paved or unpaved roadways or pathways, utility/drainage lines and/or areas within the Released Premises as reasonably necessary for **LESSEE** to continue to have access to, utilities and drainage on the remaining portion of the Premises that is then still subject to the terms of this **LEASE** and (y) **LESSOR** shall be deemed to have a non-exclusive right of access, utility service and drainage (subject to reasonable relocation by **LESSEE**) until the Expiration Date over and across paved or unpaved roadways or pathways, utility/drainage lines and/or areas within the remaining Premises subject to this **LEASE** as reasonably necessary for **LESSOR** and its tenants, as applicable, to have access to, utilities and drainage on the Released Premises.

E. In the event that **LESSEE** terminates this **LEASE** in accordance with **subparagraph B** above, then, in such event, **LESSEE** agrees to reasonably cooperate with **LESSOR** and any successor tenants of the Released Premises, including with respect to planting, cultivation and harvesting, in order for such tenants to have access to the Released Premises over the Premises – if such access is the typical method of accessing the Released Premises (upon

terms and conditions provided in this **LEASE** for access by private parties) - and to reasonably coordinate such operations with **LESSEE**'s operations on the remaining portion of the Premises.

F. **LESSOR**, in its sole discretion, and without payment or consideration of any kind to **LESSEE** whatsoever, shall have the right to terminate this **LEASE** for all or any portion of the Premises upon notice prior to any July 1st, whereupon this **LEASE** shall terminate as to such portion(s) of the Premises so noticed as they are harvested after such July 1st, subject to the requirement that all such harvesting shall be completed no later than June 30 of the following year, as of which day **LESSEE** shall have vacated the terminated Premises. **LESSEE** shall, upon receipt of such termination notice from **LESSOR**, prepare and deliver to **LESSOR** a harvest schedule and map describing the dates and sequence for the conduct of the harvest on the terminated lands. Notwithstanding the foregoing, if at any time during the Lease Term, **LESSOR** and **LESSEE** have mutually agreed to a plan specifying the acreage and location of any portion of the Premises to be converted to sugarcane planting and cultivation, the schedule for effecting such conversion, the Rent, termination rights and other applicable terms and conditions thereof (the "Conversion Plan"), the Parties shall be governed by the Conversion Plan in respect of the portion of the Premises converted to sugarcane planting and cultivation. Notwithstanding the foregoing, **LESSOR** may only terminate this **LEASE** with respect to the portion of the Premises having approximately twenty (20) acres described in **Exhibit 4.F** upon the earlier to occur of (w) **LESSEE** fails within thirty (30) days after **LESSOR's** written request to provide reasonable information about the expected duration of the experimental citrus project being conducted thereon as of the Commencement Date; (x) the next occurring July 1st that follows the tenth (10th) anniversary of the Commencement Date, (y) the completion, failure or abandonment of the citrus project or (z) one year after **LESSOR's** notice to **LESSEE** of the termination of this **LEASE** because such experiment is incompatible with construction of a Project on the portion of the Premises that is within the immediate vicinity of such 20-acre parcel.

G. In the event any portion of the Premises is transferred with a reservation of **LESSEE**'s leasehold rights as provided for in this **Paragraph 4, LESSOR** and **LESSEE** agree that they shall record a memorandum of this **LEASE** in the public records of the applicable Counties memorializing the leasehold reservations set forth in this **Paragraph 4** such that each applicable leasehold reservation is binding on such transferee, **LESSOR, LESSEE** and their respective successors and assigns.

5. **Rent**:

A. **LESSOR** and **LESSEE** acknowledge and agree that, during the Lease Term, no rent is due hereunder, unless **LESSEE** converts all or any portion of the Premises from citrus groves to sugarcane fields in accordance with the terms of a Conversion Plan, in which event from and after the date of such conversion **LESSEE** shall pay, in advance, to **LESSOR** a quarterly rental in the amount specified in the Conversion Plan representing twenty-five percent (25%) of the annual rental rate specified in the Conversion Plan (the "Rent") for the portion of the Premises so converted to sugarcane planting and cultivation.

B. In addition, **LESSEE** shall be responsible for payment of any and all Additional Rent (as defined in **Paragraph 5.D.** below) throughout the Lease Term as and when due under the terms of this **LEASE**.

C. All payments of Rent, as well as all other amounts due under this **LEASE** from **LESSEE** to **LESSOR** shall be made to **LESSOR** at the following address:

South Florida Water Management District
Attention:_____
Post Office Box 24680
3301 Gun Club Road
West Palm Beach, Florida 33406

RE: Contract #_____

D. This **LEASE** shall be totally and absolutely net to **LESSOR**. In addition to the Rent and Additional Rent stated above, **LESSEE** shall pay all charges for gas, water, sewer, waste removal, dumpster charges, janitorial services, electricity, telephone, and other utility services used by **LESSEE** in connection with the Premises during the Lease Term and any and all other costs, expenses, taxes or obligations of every kind related to the Premises and the use, operation, occupancy thereof during the Lease Term, including obligations arising under recorded or unrecorded documents encumbering or relating to the Premises, if any (to the extent such recorded or unrecorded documents exist on the day immediately preceding the Commencement Date). Without limiting the foregoing, if any charges, costs, expenses, taxes or other monetary obligations of **LESSEE** under this **LEASE** are not paid by **LESSEE** as and when due, after expiration of all applicable grace and notice periods, **LESSOR**, without limiting any of its other rights and remedies under this **LEASE**, shall have the right, but not the obligation, to pay any of the foregoing, and the amount of the expense or cost of any such obligations so paid by **LESSOR** shall thereupon become due to **LESSOR** from **LESSEE** within five (5) days following **LESSOR's** written demand, together with interest accruing on such amount at the highest rate allowed by law if not paid to **LESSOR** within such five (5) day period, as "Additional Rent".

E. If any Rent due from **LESSEE** to **LESSOR** hereunder is not received by **LESSOR** on or before the date due, then, in addition to all other rights and remedies available to **LESSOR** under this **LEASE**, **LESSOR** at **LESSOR's** sole option may either: (i) charge **LESSEE** a late fee equal to five percent (5%) of the installment of Rent not paid when due; or (ii) charge interest on the installment of Rent not paid when due at the highest rate allowed by law from the date due until the date received by **LESSOR** in immediately available funds.

F. Intentionally Deleted.

G. In the event **LESSOR** exercises the Option for the Initial Option Property or the Entire Option Property, then at the closing of the acquisition of the applicable Option Property, the Parties will execute the New Lease in accordance with the terms of the Agreement for Sale and Purchase and thereafter the Premises and the applicable Option Property will be governed by the terms of the New Lease.

6. **Real Estate Taxes:**

A. **LESSEE** understands and agrees that upon execution of this **LEASE**, the Premises shall be placed upon the tax rolls of the county in which the Premises is located without state government exempt status, but with any agricultural use exemption that **LESSEE** obtains, provided that **LESSEE** shall be solely responsible for obtaining and maintaining the agricultural exemption. **LESSOR** agrees that it will not take any affirmative action during the Lease Term which removes the agricultural use exemption. **LESSOR** may, in **LESSOR'S** sole and absolute discretion, record a Memorandum of **LEASE**, executed by the **LESSOR. LESSEE** shall pay all real property taxes, intangible property taxes and personal property taxes, as well as all assessments, including but not limited to pending, certified, confirmed and ratified special assessment liens, accrued or levied with respect to the Premises or this **LEASE** during the Lease Term. The amount of taxes or assessments will be determined by the county property appraiser. **LESSEE** acknowledges that it shall be liable for such real property taxes, personal property taxes and intangible taxes, and assessments as are applicable for the Premises and this **LEASE** during the period in which this **LEASE** is in effect.

B. **LESSEE** shall pay such taxes and assessments promptly upon receipt of an assessment notice from the taxing authority but no later than their due date, and shall furnish proof of such payment to the **LESSOR's** Division of Procurement and Contract Administration (see **Paragraph 5.B.** above) within 30 days of payment. Any penalties or late fees incurred for failure to pay said taxes and assessments shall be the responsibility of the **LESSEE**.

C. With respect to **LESSEE**'s obligation to pay real estate taxes under this **LEASE**, in the event the assessing authority permits any tax assessments to be paid in installments, **LESSEE** may exercise the option to pay the same in installments and shall pay all such installments that relate to the Lease Term as the same respectively become due and before they become delinquent, and provided that any such assessments which relate to a fiscal period for the taxing authority, part of which period is included in the Lease Term and a part of which is included in a period of time prior to or after the Lease Term, shall be allocated and prorated between **LESSOR** and **LESSEE** as of the Expiration Date of this **LEASE**. Taxes shall be prorated based on the tax for the year of the Expiration Date with due allowance made for exemptions and/or special classifications, if any. If the assessment for the year of the Expiration Date is not available, then taxes will be prorated on the prior year's tax. Any tax proration based on an estimate shall be subsequently readjusted at the request of either Party upon receipt of a tax bill. Upon the Expiration Date, **LESSEE** shall pay all real property taxes accrued with respect to the Premises in accordance with Section 196.295, Florida Statutes, if applicable. The provisions of this **subparagraph** shall survive the Expiration Date.

D. **LESSEE** shall have the right to contest the amount or validity of any real property taxes or any assessment liens ("Tax Claims"), by appropriate legal proceedings in good faith and with due diligence, provided that this shall not be deemed or construed in any way as relieving, modifying or extending **LESSEE**'s covenants to pay or its covenants to cause to be paid any such charges at the time and in the manner provided in this **LEASE** or operate to relieve **LESSEE** from its other obligations hereunder, and shall not cause the sale of the Premises, or any part thereof, to satisfy the same. **LESSOR** agrees to join in any such proceedings if the same is necessary or required by **LESSEE** to legally prosecute such contest of

the validity of such Tax Claims upon the reasonable request of **LESSEE**; provided, however, **LESSOR** will not be required to join in any such proceeding wherein the Tax Claims are imposed by **LESSEE**, provided **LESSOR** does not require its own joinder in connection with such Tax Claims. **LESSEE** shall be entitled to any refund of any Tax Claims and such charges and penalties or interest thereon which have been paid by **LESSEE**. In the event that **LESSEE** fails to pay any Tax Claims when due or fails to diligently prosecute any contest of the same, **LESSOR** may, upon thirty (30) days advance written notice to **LESSEE**, pay such charges together with any interest and penalties and the same shall be repayable by **LESSEE** to **LESSOR** pursuant to **Paragraph 5.C** above; provided that, should **LESSOR** reasonably determine that the giving of such notice would risk loss to the Premises, or portion thereof, then **LESSOR** shall give such written notice as is appropriate under the circumstances. Nothing herein shall be deemed to limit **LESSOR's** right to file any Tax Claims for any real property taxes or any assessment liens that are imposed for the period after the Expiration Date.

7. **Default; Remedies:**

A. Failure by the **LESSEE** to perform or abide by any material term, provision, covenant, agreement, undertaking or condition of this **LEASE** after the expiration of all applicable grace and notice periods, if any, set forth in this **LEASE**, including **Paragraph 4.A** above, shall constitute a material default (a "Default") of this **LEASE** for which the **LESSOR** may exercise all such rights and remedies as provided at law, in equity or under this **LEASE** (provided, however, that the foregoing materiality standard for the failure to perform or abide by a term, provision, covenant, agreement, undertaking or condition of this **LEASE** shall not apply to any such matter that is already qualified to a materiality standard). Without limiting the foregoing, notwithstanding the notice and cure rights under **Paragraph 4.A** above, the failure of **LESSEE** to comply with any of the following within the cure period, if any, specified for any such breach or failure, shall constitute an immediate Default by **LESSEE** under this **LEASE**:

(1) Failure of **LESSEE** to pay any installment of Rent hereunder when payment is due. Notwithstanding the foregoing, **LESSEE** shall have one (1) five day grace period following written notice of non-payment from **LESSOR** of one installment of Rent in any twelve (12) month period during the Term of this **LEASE**.

(2) Failure of **LESSEE** to pay any Additional Rent or other monetary obligation within five (5) days following **LESSOR's** written demand therefore.

(3) Failure of **LESSEE** to maintain all insurance coverages required hereunder in full force and effect at all times during the Term of this **LEASE**.

(4) Failure of the **LESSEE** to replenish the Security Deposit in accordance with **Paragraph 33.B.** of this **LEASE**.

B. Upon the occurrence of a Default under this **LEASE**, **LESSOR** shall have the right, with or without notice or demand, to exercise all such rights and remedies granted or available under this **LEASE**, the laws of the State of Florida, federal law and/or common law (including, without limitation, the right to terminate this **LEASE**) without limiting any of the other remedies that **LESSOR** may have under this **LEASE**.

C. Mediation: In the event a dispute arises which the Parties cannot resolve between themselves, the Parties shall have the option to submit to non-binding mediation. The mediator or mediators shall be impartial, shall be selected by the Parties, and the cost of the mediation shall be borne equally by the Parties. The mediation process shall be confidential to the extent permitted by law.

8. Notices: All notices to the **LESSEE** under this **LEASE** shall be in writing and sent by certified mail return receipt requested, any form of overnight mail delivery or hand delivery to:

If to **LESSEE**:
c/o United States Sugar Corporation
111 Ponce de Leon Avenue
Clewiston, Florida 33440
Attention: Malcolm S. (Bubba) Wade, Jr. and
Edward Almeida, Esq.
Fax (863) 902-2120

With a copy to:
Gunster, Yoakley & Stewart, P.A.
Attorneys At Law
Las Olas Centre
450 East Las Olas Boulevard, Suite 1400
Fort Lauderdale, FL 33301-4206
Attention: Daniel M. Mackler, Esq. and
Danielle DeVito Hurley, Esq.
Fax: (954) 523-1722

If to **LESSOR**:
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406
Attention: Executive Director and General Counsel
Telefax: (561) 681-6233

With a copy to:
Chairman of the Governing Board
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406
Attention: Executive Director
Telefax: (561) 681-6233

With a copy to:
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, M.S. 49
Tallahassee, FL 32399
Attention: Secretary
Telefax: 850-245-2021

All notices required by this **LEASE**, provided they are addressed as set forth above, shall be considered delivered: (i) on the date delivered if by hand delivery, (ii) on the date upon which

the return receipt is signed or delivery is refused or the notice is designated by the postal authorities as not deliverable, as the case may be, if mailed by certified mail return receipt requested and (iii) one day after such notice is deposited with any form of overnight mail service for next day delivery. Either Party may change its address by providing prior written notice to the other of any change of address.

9. **Relationship between Parties:** Nothing contained in this **LEASE** shall be construed to create the relationship of principal and agent, partnership, joint venture or any other relationship between the Parties hereto other than the relationship of **LESSOR** and **LESSEE**.

10. **Assignment and Subletting:**

A. The **LESSEE** shall not assign, delegate or otherwise transfer all or any part of its rights and obligations as set forth in this **LEASE** collectively ("Assignment") or sublease all or any portion of the Premises ("Sublease") without the prior written consent of the **LESSOR** in each instance, which consent may be withheld by **LESSOR** in **LESSOR's** sole and absolute discretion; provided, however, that notwithstanding the foregoing, **LESSOR's** consent to an Assignment shall not be unreasonably withheld so long as **LESSEE** complies with **subparagraph C.** below. Any Assignment made by **LESSEE** without the prior written consent of **LESSOR** shall be void and of no force or effect.

B. In the event **LESSOR** does permit an Assignment by **LESSEE**, then the assignee shall automatically be deemed to have assumed all duties, responsibilities and obligations of **LESSEE** under this **LEASE** from and after the effective date of the Assignment (including, without limitation, the funding of the Security Deposit Fund pursuant to **Paragraph 33.B.** below) and the **LESSEE** shall, upon such Assignment, be automatically released of its duties, responsibilities or obligations under this **LEASE** from and after the effective date of the Assignment; provided, however, that **LESSEE** shall not be released with respect any of the representation, warranties, duties, responsibilities, liabilities or obligations under this **LEASE** for matters or conditions arising, occurring or existing prior to the effective date of any Assignment. Any sale or other transfer of at least a fifty percent (50%) majority interest of the voting stock of **LESSEE** if **LESSEE** is a corporation (including by way of merger or consolidation), or any sale or other transfer of at least fifty percent (50%) of the general partnership interest in the event **LESSEE** is a general partnership or limited partnership, shall constitute an Assignment for purposes of this **LEASE**.

C. If **LESSEE** shall desire **LESSOR's** consent to any Assignment, **LESSEE** shall notify **LESSOR**, which notice shall include: (i) the name and address of the proposed assignee; (ii) the proposed effective date (which shall not be less than 45 nor more than 180 days after **LESSEE**'s notice); (iii) reasonable evidence that the proposed assignee has the financial ability to perform its obligations under this **LEASE**; and (iv) reasonable evidence that the proposed assignee is experienced in the operation of the Premises for agricultural operations, and such other information as **LESSOR** may reasonably require. In the event that **LESSOR** does not provide written notice of its approval or disapproval of a proposed Assignment within thirty (30) days after receipt of written request from **LESSEE**, then such Assignment shall be deemed to be approved by **LESSOR**.

D. Notwithstanding anything herein to the contrary, **LESSEE** shall have the right to assign its rights under this **LEASE** to an affiliate or subsidiary of **LESSEE** (i.e., an entity in which at least one of the entities comprising **LESSEE** owns more than a 50% voting interest or otherwise effectively controls the same) or to any Person(s) that acquires all or substantially all of the assets of **LESSEE** related to the citrus business and operations, without **LESSOR's** consent, provided, however, **LESSEE** agrees to give **LESSOR** a copy of the fully executed assignment and assumption of this **LEASE** evidencing such transfer and **LESSEE** shall not be released from its obligations hereunder.

E. Notwithstanding anything to the contrary contained in this **LEASE**, including this **Paragraph 10.**, **LESSEE** shall have the right to enter into licenses or Subleases for other parties to use all or portions of the Premises for agricultural crop production without **LESSOR's** consent to the extent the same are entered into in the ordinary course of **LESSEE**'s business consistent with past practices and such licensee or sublessee agrees to comply with Best Management Practices, all of which shall be subordinate to **LESSOR's** interest in the Premises.

F. Notwithstanding anything to the contrary contained in this **LEASE**, upon the Expiration Date, **LESSEE** shall assign to **LESSOR** all permits obtained by **LESSEE** in connection with the Premises to the extent such permits are assignable. To the extent that any licenses or permits that are required for the operation of the Permitted Uses have been assigned to **LESSOR** prior to or during the Lease Term, then **LESSOR** shall take such actions as are reasonably requested by **LESSEE** in order to maintain such licenses and permits in full force and effect during the Lease Term.

11. **Permits and Approvals:**

A. The **LESSEE** shall obtain all federal, state, local, and other governmental approvals and permits necessary for the occupancy, use, maintenance and operation of the Premises, as well as all necessary private authorizations and permits prior to the Commencement Date and shall maintain same throughout the Lease Term. Within five (5) days of demand by **LESSOR** to **LESSEE**, **LESSEE** shall provide and/or make available to **LESSOR** copies of all permits and authorizations that **LESSEE** is required to obtain pursuant to the provisions of this **LEASE**.

B. The **LESSEE** shall also obtain, and maintain throughout the term of this **LEASE**, any and all applicable **LESSOR (South Florida Water Management District)** permits, including but not limited to **LESSOR** Right of Way Permits and Consumptive Use Permits, as well as permits required by any of the Counties, if applicable. **LESSEE** acknowledges that there is no guarantee that **LESSEE** will receive any permits.

C. The **LESSEE** shall be responsible for compliance with all permit terms and conditions applicable to the Premises, including but not limited to those terms and conditions required by Environmental Resource Permits, Consumptive Use Permits, Surface Water Management Permits, Wetlands Resource Management Permits, Works of the District Permits, and Right of Way Permits issued by **LESSOR** with respect to the Premises. **LESSEE** further acknowledges that **LESSEE**'s responsibility for compliance with all permit terms and conditions applicable to the Premises, shall include, but not be limited to, operating and maintaining the

surface water management system and mitigation areas on the Premises in accordance with all permit requirements.

12. **Compliance with Laws, Rules, Regulations and Restrictions: LESSEE** shall comply with, and be the responsible entity for remedying all violations of, all applicable federal, state, local and **LESSOR** laws, ordinances, rules and regulations, permits, and private restrictions, applicable to the Premises and **LESSEE**'s operations conducted thereon and occupancy thereof, as well as **LESSEE**'s performance of this **LEASE**. **LESSOR** undertakes no duty to ensure such compliance. All rules and regulations under Chapter 373, Florida Statutes pertaining to the Premises remain in full force and effect.

13. **Indemnification:** For good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, the **LESSEE** shall defend, indemnify, save, and hold the **LESSOR** harmless from and against any and all claims, suits, judgments, loss, damage and liability incurred by **LESSOR**, including but not limited to reasonable attorney's fees and costs incurred by **LESSOR**, ("Loss") which arise(s) directly, indirectly or proximately as a result of **LESSEE**'s or its officers', employees', contractors' or agents' use or occupation of the Premises, its operations conducted on the Premises, or from the performance or non-performance of any term, condition, covenant, obligation or provision of this **LEASE** by **LESSEE**, even if such Loss is caused by negligence on the part of **LESSOR**, but not **LESSOR's** or its officers' or employees' gross negligence or willful misconduct. **LESSEE** acknowledges that it is solely responsible for compliance with the terms of this **LEASE**. **LESSOR** shall have the absolute right to choose its own legal counsel in connection with all matters indemnified for and defended against herein and to the extent that **LESSEE** is providing such defense, **LESSEE** shall have the right, to the fullest extent permitted by law, to assert any defenses that are available to **LESSOR** in such matter.

14. **LESSEE's Property at Risk:** All of **LESSEE**'s personal property, equipment and fixtures located upon the Premises shall be at the sole risk of **LESSEE** and **LESSOR** shall not be liable under any circumstances for any damage thereto or theft thereof. In addition, **LESSOR** shall not be liable or responsible for any damage or loss to property or injury or death to persons occurring on or adjacent to the Premises resulting from any cause, including but not limited to, defect in or lack of repairs to the improvements located on the Premises, unless the same is caused by **LESSOR's** gross negligence or willful misconduct.

15. **Attorney's Fees:** In any litigation arising out of this Agreement, the prevailing Party shall be entitled to recover reasonable attorney's fees and costs from the other Party.

16. **Insurance:**

A. **Types of Insurance**. To the extent applicable and unless otherwise agreed to in writing by the **LESSOR**, including, without limitation, to the extent provided in **Schedule "4"**, **LESSEE** shall procure and maintain throughout the Lease Term at **LESSEE**'s sole cost and expense the following types of insurance with deductibles acceptable to **LESSOR** but in no event greater than $100,000 (unless otherwise agreed to herein and other than with respect to windstorm, which deductible shall not exceed 5% of the total insurable value):

(1) **Worker's Compensation Insurance.** If applicable, **LESSEE** shall provide workers' compensation subject to statutory limits and employers liability in the amount of ONE MILLION AND 00/100 DOLLARS ($1,000,000).

(2) **Liability Insurance.** (A) Comprehensive General Liability Insurance relating to the Premises and its improvements and appurtenances, which shall include, but not be limited to, Premises and Operations, Independent Contractors, Products and Completed Operations and Contractual Liability. Coverage shall be no more restrictive than the latest edition of the Commercial General Liability policies of the Insurance Services Office (ISO). This policy shall provide coverage for death, bodily injury, personal injury, and property damage that could arise directly, indirectly or proximately from the performance of this **LEASE**. The minimum limits of coverage shall be $1,000,000 per occurrence and $2,000,000 in the annual aggregate for Bodily Injury Liability and Property Damage Liability and (B) Umbrella liability insurance containing minimum limits of Fifty Million and No/100 Dollars ($50,000,000.00) for the Premises and shall follow form to the underlying General Liability. The limits of liability insurance shall in no way limit or diminish **LESSEE**'s liability under **Paragraph 13** hereof.

(3) Business Automobile Liability Insurance. Business Automobile Liability Insurance protecting **LESSEE** which shall have minimum limits of $5,000,000 per occurrence, Combined Single Limit for Bodily Injury Liability and Property Damage Liability. This shall be an "any-auto" type of policy including owned, hired, non-owned and employee non-ownership coverage.

(4) Casualty Insurance. Property insurance insuring against loss or damage customarily included under so called "all risk" or "special form" policies covering fire, lightning, vandalism, and malicious mischief, and including loss caused by any type of windstorm or hail (including Named Storms) on all Improvements and Personalty. To the extent commercially available, coverage must also include Certified Acts of Terrorism per the current Terrorism Risk Insurance Reauthorization Act of 2007 or any subsequent act, reauthorization or extension thereof. Said Property coverage on the Improvements shall (A) be in an amount equal to one hundred percent (100%) of the full replacement cost with a waiver of depreciation; and (B) contain an agreed amount endorsement with respect to the Property waiving all co-insurance provisions or to be written on a no co-insurance form.

(5) **Environmental Impairment Insurance.** Environmental Impairment Insurance with limits and in form and substance acceptable to **LESSOR**, in its sole and absolute discretion, with a maximum deductible of $250,000 and a policy term extending through the Expiration Date of this **LEASE**. Said policy must provide coverage for on-site clean-up and third-party claims for unknown pre-existing conditions & new conditions. Coverage must also include business interruption on an actual loss sustained basis and coverage for natural resource damage. Coverage must include above ground storage tanks and any other equipment with a risk of causing environmental impairment.. Acquisition of this insurance shall in no way limit or diminish **LESSEE**'s liability under **Paragraph 19** hereof.

B. **Proof of Insurance.** **LESSEE** shall provide **LESSOR** with current insurance certificates or proof of self-insurance (for Worker's Compensation Insurance)

evidencing all insurance required pursuant to this **LEASE** as proof of insurance prior to the Commencement Date and each year, upon renewal, thereafter. Upon request, **LESSEE** shall provide **LESSOR** with complete copies of the policies. All insurance required under this **LEASE** shall be written on a financially sound company acceptable to **LESSOR** with a rating of "A VIII" or better with AM Best or "A" or better with S&P and shall name **LESSOR** as loss payee and as additional insured as their interests may appear as applicable and shall contain a waiver of subrogation in favor of **LESSOR**.

C. **Notice of Insurance Cancellation.** **LESSEE** shall notify **LESSOR** at least fifteen (15) days prior to cancellation or modification of any insurance required by this **LEASE**. Insurance required under **Paragraphs 16.A. (1) (2), (3), (4), and (5)** above of this **LEASE** shall contain a provision that it may not be cancelled or modified until thirty (30) days after written notice to **LESSOR**. In the event **LESSEE** fails to obtain and keep any insurance required hereunder in full force and effect, **LESSOR** may at its option obtain such policies and **LESSEE** shall pay to **LESSOR** the premiums therefore, together with interest at the maximum rate allowed by law, upon demand as "Additional Rent". Without limiting the foregoing, **LESSEE**'s failure to obtain, pay for and keep any insurance required hereunder in full force and effect and unmodified (unless **LESSEE** has obtained **LESSOR's** prior written consent for any such modification) shall constitute an Event of Default under this **LEASE**.

D. **Subcontractor Insurance.** It shall be the responsibility of **LESSEE** to ensure that all subcontractors are adequately insured or covered under its policies.

E. **Business Interruption Insurance & Crop Insurance for Loss of Revenue/Yield.** To the extent applicable and unless otherwise agreed to in writing by the **LESSOR** (A) Business Interruption insurance (1) covering all risks required to be covered by the insurance provided for in subparagraph (A)(4) above and (2) on an actual loss sustained basis for the period of restoration in an amount equal to one hundred percent (100%) of the projected gross revenues from the operation of the Premises for a period of at least eighteen (18) months after the date of casualty and (3) containing an additional extended period of indemnity endorsement which provides that after the physical loss to the Property has been repaired, the continued loss of income will be insured until such income either returns to the same level it was at prior to the loss or twelve 12 months, whichever first occurs, and notwithstanding that the policy may expire prior to the end of such period. In no event shall the period of indemnification, including the extended period of indemnity, be less than thirty (30) months. The amount of such business income insurance shall be determined prior to the date hereof and at least once each year thereafter based on **LESSEE**'s reasonable estimate of the gross revenues from the Property for the succeeding twenty-four (24) month period; and (B) Crop Insurance providing revenue protection or coverage against yield losses Except in the case of a monetary Default under this Agreement or as otherwise set forth in this Agreement, however, in no event shall **LESSOR** have any claim to any business interruption insurance that **LESSEE** may procure (or proceeds thereof).

F. **Casualty.** Notwithstanding anything to the contrary in this **LEASE**, in the event of a casualty, **LESSEE** shall be obligated to restore the Premises.

(1) Notwithstanding the foregoing, in the event of a loss or damage to all or any portion of the Premises due to fire or other casualty that causes seventy-five percent (75%) or more of the Premises to be destroyed or damaged during the Lease Term, then **LESSEE** shall have the option to restore such loss or damage, by electing to do so in a written notice to **LESSOR** within thirty (30) days after such loss or damage.

(2) In the event that **LESSEE** elects to restore such loss or damage pursuant to **subparagraph 16.F.(1)** above, then **LESSEE** and **LESSOR** shall endorse any checks received so that the insurance proceeds can be paid into a bank account controlled by a mutually and reasonably acceptable third party escrow agent that will disburse the insurance proceeds to **LESSEE** from time to time as restoration progresses in order for **LESSEE** to timely pay all invoices related to same in accordance with the terms of a mutually and reasonably agreed upon escrow agreement, with any excess or surplus following completion of restoration to be paid to **LESSEE**. To the extent of any loss or damage to the Premises less than or equal to $500,000, **LESSOR's** consent shall not be required for the type, plans or manner of such restoration; provided, however, that prior to commencement of the restoration **LESSEE** shall provide **LESSOR** with a description of the restoration process, an evaluation of the proposed restoration that demonstrates that the same production capacity (if applicable) that was actually achieved prior to such loss or damage will be met after the restoration is complete. No later than forty–five (45) days after completion of the restoration, **LESSEE** shall notify **LESSOR** in writing of such completion and shall provide a certificate from the licensed engineer and/or architect that was engaged by **LESSEE** in connection with the restoration or, if none, a licensed engineer and/or architect that is reasonably acceptable to both parties, which certification (i) identifies the loss or damage to the Premises, (ii) identifies the nature and the amount of costs incurred by **LESSEE** in restoring the loss or damage, (iii) states that the restoration costs incurred were reasonable to perform the restoration in accordance with all applicable laws, and (iv) if applicable, states that the restoration work is substantially complete and that the restored facility is at least comparable in production capacity to that which was actually achieved immediately prior to the casualty loss or damage.

(3) In the event that **LESSEE** does not restore such loss or damage as provided above, then insurance proceeds for the property damage shall be paid by **LESSEE**'s insurer to **LESSOR** with all other recoveries being paid to **LESSEE**.

(4) Notwithstanding anything contained in this **LEASE** to the contrary, to the extent of any loss or damage to the Premises less than or equal to $500,000, **LESSEE** shall have the exclusive right to settle and adjust any claim with its insurance company, at its sole cost and expense, regarding the amount to be paid for any loss or damage under insurance as to which **LESSOR** is named as an additional insured and/or loss payee without **LESSOR's** participation or consent (except that **LESSOR** shall cooperate in executing any documents/assignments relating to such settlement or adjustment, upon **LESSEE**'s request); otherwise, to the extent of any loss or damage to the Premises greater than $500,000, **LESSOR** shall have the right (i) to participate with **LESSEE** in the adjustment, collection and compromise of any and all claims under all Property insurance policies and (ii) during any Event of Default, to execute and deliver on behalf of **LESSEE** all necessary proofs of loss, receipts, vouchers and releases required by the insurers. If **LESSEE** does not restore any loss or damage to the Premises as provided in **subparagraph 16.F.(1)** above, then **LESSOR** shall have the exclusive

right to settle and adjust any claims with the insurance company, at its sole cost and expense, for insurance proceeds for property damage under insurance as to which **LESSOR** is named as an additional insured and/or loss payee without **LESSEE**'s participation or consent (except that **LESSEE** shall cooperate in executing any documents/assignments relating to such settlement or adjustment, upon **LESSOR's** request). Except in the case of a monetary Default under this Agreement or as otherwise set forth in this Agreement, however, in no event shall **LESSOR** have any claims or rights with respect to any business interruption or business income insurance proceeds which are payable under any insurance maintained by **LESSEE**.

(5) In the event of a loss or damage to all or any portion of the Premises due to fire or other casualty during the Lease Term, no abatement of rent will occur.

17. Notice to **LESSOR** Concerning Specific Acts: The **LESSEE** agrees to immediately report any incidence of the following to the **LESSOR**:

A. Fire (other than controlled burning permitted pursuant to the terms of this **LEASE**)

B. Death or injury resulting in potential death or permanent disability.

C. Poaching and trespassing

D. Any hazard, condition or situation that is reasonably likely to (i) become a material liability to the **LESSOR**, or (ii) materially damage the Premises or improvements on the Premises of the **LESSOR**.

E. Any activity observed by **LESSEE** on the Premises that **LESSEE** should reasonably know is a violation of rules and regulations promulgated by the **LESSOR**, the Florida Fish and Wildlife Conservation Commission or any other State or local agency.

F. Any written notice of any violation of applicable Federal, State or local laws received by **LESSEE** from the applicable governmental authority.

G. Disposition of pollutants or contaminants per **Paragraph 18** hereof.

18. **Hazardous Materials and Pollutants:**

A. For purposes of this **LEASE**:

(1) "Pollutant" shall mean any hazardous or toxic substance, chemical, material, or waste of any kind, petroleum, petroleum product or by-product, contaminant or pollutant as defined or regulated by Environmental Laws.

(2) "Disposal" shall mean Pollution as defined in § 376.301(37) of the Florida Statutes Annotated (provided that for purposes of this **Paragraph 18.A(2)**, "pollutants" in § 376.301(37) shall mean Pollutants as defined in **Paragraph 18.A(1)** of this **LEASE**) and the release, storage, use, handling, discharge or disposal of Pollutants.

(3) "Environmental Laws" shall mean any applicable federal, state or local laws, statutes, ordinances, rules, regulations or other governmental restrictions.

B. During the Lease Term, **LESSOR** shall have the right to cause the Premises to be monitored in accordance with the Best Management Practices to be developed by mutual agreement by **LESSOR** and **LESSEE**.

C. Prior to the Commencement Date, **LESSOR** has performed Buyer's Environmental Assessment pursuant to the Agreement for Sale and Purchase and performed sampling in those areas of the Premises where **LESSOR** identified concerns regarding the likely presence of Pollutants. Pursuant to the Agreement for Sale and Purchase, **LESSOR** has agreed to perform certain responsibilities for the Remediation of the Pollutants Identified in the Buyer's Environmental Assessment. **LESSEE** and **LESSOR** have no responsibility or liability under the terms of this **LEASE** for the Remediation of the Disposal of Pollutants Identified in Buyer's Environmental Assessment and such Disposal of Pollutants that occurred prior to the Commencement Date.

D. **LESSEE** shall not cause or permit the Disposal of any Pollutants upon the Premises, or upon adjacent lands, during the Lease Term, which violates Environmental Laws. Any Disposal of a Pollutant, whether caused by **LESSEE** or any other third party, in violation of Environmental Laws shall be reported to **LESSOR** immediately upon the knowledge thereof by **LESSEE**.

E. Within ninety (90) days, or such longer time as is reasonably necessary, of delivery of notice from **LESSOR** to **LESSEE**, and except as otherwise provided in **subparagraph C.** above, **LESSEE** shall be solely responsible, at **LESSEE**'s sole cost and expense, for commencing and thereafter performing, or causing to be performed, any and all assessments, cleanup and monitoring (collectively, "Remediation") of all Pollutants disposed of or otherwise discovered on the Premises or emanating from the Premises to adjacent lands, in violation of Environmental Laws, as a result of use or occupation of the Premises or surrounding lands by **LESSEE**, its agents, licensees, invitees, subcontractors or employees during the Lease Term (provided, however, that the foregoing shall not in any way limit any liability, obligations or rights of **LESSEE** or **LESSOR**, to the extent independently arising under the Agreement for Sale and Purchase, as modified and amended). In the event Remediation is necessary as required in the previous sentence, then **LESSEE** shall furnish to **LESSOR** within a reasonable period of time written proof from the appropriate local, state and/or federal agency with jurisdiction over the Remediation that the Remediation has been satisfactorily completed in full compliance with all Environmental Laws.

F. **LESSEE** understands and acknowledges **LESSOR's** intended use of the Premises as an everglades restoration project (hereinafter referred to as "**LESSOR's** Intended Use") and that it is imperative that **LESSEE**'s use of chemicals be monitored in accordance with the Best Management Practices to prevent the release of chemicals in concentrations that may have adverse impacts which jeopardize **LESSOR's** Intended Use, including, but not limited to, adverse impacts to human health or fish and wildlife. Material non-compliance with the Best Management Practices by **LESSEE** its agents, licensees, invitees, subcontractors or employees

during the Lease Term, after expiration of applicable grace and notice periods, shall constitute a Default under this **LEASE**.

G. For good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, **LESSEE** shall indemnify; defend and hold harmless **LESSOR**, from and against any and all claims, suits, judgments, loss, damage, and liability which may be incurred by **LESSOR**, including but not limited to **LESSOR's** reasonable attorney's fees and costs, which arises directly, indirectly or proximately as a result of the Disposal of any Pollutants which violate Environmental Laws and are caused by **LESSEE**, its agents, licensees, invitees, subcontractors or employees with respect to the Premises during the Lease Term. This responsibility shall continue to be in effect for any Disposal of Pollutants in violation of Environmental Laws for which **LESSOR** provides written notice to **LESSEE** on or before the third anniversary of the Expiration Date.

H. While this Paragraph 18 establishes contractual liability for **LESSEE** regarding Disposal of Pollutants on the Premises as provided herein, it does not alter or diminish any statutory or common law liability of **LESSEE** for such Disposal of Pollutants, except to the extent provided in **subparagraph C** above.

I. The provisions of this **Paragraph 18** shall survive for three years after the Expiration Date.

19. **Discrimination:** The **LESSEE** shall ensure that no person shall, on the grounds of race, color, creed, national origin, handicap, or sex, be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination in any activity under this **LEASE**. The **LESSEE** shall take all measures necessary to effectuate these assurances.

20. **Publicity:** Prior to engaging in any discussions with the news media pertaining to this **LEASE**, the **LESSEE** shall notify the **LESSOR's** Office of Communications and obtain **LESSOR's** prior written consent, which may be given electronically. This includes news releases, media requests for interviews, feature articles, fact sheets, or similar promotional materials.

21. **Affidavit Regarding Ability to Enter into LEASE with State Agency:** The **LESSEE**, by its execution of this **LEASE**, acknowledges and attests that neither it, nor any of its suppliers, subcontractors, or consultants who shall perform work which is intended to benefit the **LESSOR** is a convicted vendor or, if the **LESSEE** or any affiliate of the **LESSEE** has been convicted of a public entity crime, a period longer than 36 months has passed since that person was placed on the convicted vendor list. The **LESSEE** further understands and accepts that this **LEASE** shall be either voidable by the **LESSOR**, in the event there is any misrepresentation or lack of compliance with the mandates of Section 287.133, F.S. The **LESSOR**, in the event of such termination, shall not incur any liability to the **LESSEE** for any work or materials furnished.

22. **Vacation of Premises:** Upon the expiration or termination of this **LEASE** as to any portion of the Premises, the **LESSEE** shall promptly vacate and surrender the Premises or applicable portion of the Premises to **LESSOR**. The **LESSEE** shall remove all personal

property of the **LESSEE** and shall restore such vacated portion of the Premises to its original condition existing as of the Commencement Date of this **LEASE**, subject to reasonable wear and tear, casualty not subject to restoration pursuant to **Paragraph 16.F** and property taken by condemnation pursuant to **Paragraph 36,** within a period not to exceed five (5) calendar days from the Expiration Date. Notwithstanding anything in this **LEASE** to the contrary, **LESSEE**, at its sole cost and expense, shall clean up and remove all abandoned personal property (including but not limited to mobile home trailers), refuse, garbage, junk, rubbish, solid waste, trash and debris from the portion of the Premises so vacated and shall deliver the portion of the Premises so vacated with cane stubble thereon to the extent provided in a Conversion Plan and to the extent the same exists from the then last harvest and, except as provided in a Conversion Plan, **LESSEE** is not obligated to replant any harvested crops or to disk any portion of the Premises after any harvest by **LESSEE**.

23. **Holding Over:** Any holding over without **LESSOR** consent shall constitute a Default by **LESSEE** and entitle **LESSOR** to reenter the Premises and collect monthly rent equal to 150% of the Rent at such time, together with the Additional Rent.

24. **Insolvency or Bankruptcy**: The appointment of a receiver to take possession of all or substantially all of the assets of **LESSEE**, or an assignment of **LESSEE** for the benefit of creditors, or any action taken or suffered by **LESSEE** under any insolvency, bankruptcy, reorganization or other debtor relief proceedings, whether now existing or hereafter amended or enacted, shall at **LESSOR's** option constitute a breach of this **LEASE** by **LESSEE**. Upon the happening of any such event or at any time thereafter, this **LEASE** shall terminate five (5) days after written notice of termination from **LESSOR** to **LESSEE**. In no event shall this **LEASE** be assigned or assignable by operation of law or by voluntary or involuntary bankruptcy proceedings or otherwise and in no event shall this **LEASE** or any rights or privileges hereunder be an asset of **LESSEE** under any bankruptcy, insolvency, reorganization or other debtor relief proceedings.

25. **Sale by LESSOR**: Notwithstanding anything contained in this **LEASE** to the contrary, in the event of a sale or conveyance by **LESSOR** of the Premises or any portion thereof or in the event of an assignment of this **LEASE** by **LESSOR**, any such assignment, sale or conveyance shall automatically operate to release **LESSOR** from any future liability upon any of the terms, provisions, covenants or conditions, express or implied, herein contained in favor of **LESSEE**, provided that the purchaser of the Premises or assignee of this **LEASE** executes a non-disturbance agreement in favor of **LESSEE** and agrees to be bound by the terms of this **LEASE** and in such event **LESSEE** agrees to look solely to the successor in interest of **LESSOR** in and to this **LEASE**. This **LEASE** shall not be affected by any such sale, and **LESSEE** agrees to attorn to the purchaser or assignee.

26. **Estoppel Confirmation:** **LESSEE** and **LESSOR** shall, within seven (7) days after written request of the other Party, execute an estoppel letter regarding the status of this **LEASE** which may be relied upon by any lender, mortgagee or purchaser of the Premises or the Crops and any assignee of either Party's interest in this **LEASE**. Such estoppel letter shall confirm the terms, conditions and provisions of this **LEASE**; that this **LEASE** is in full force and effect; that this **LEASE** is unmodified, or if modified, the provisions of any modifications; that neither **LESSOR** nor **LESSEE** is in default of any of the terms, conditions or provisions of

this **LEASE**; that **LESSEE** has no offsets, counterclaims or defenses to the payment of any Rent or Additional Rent; that **LESSEE** has no options to renew or purchase, and any other statements which **LESSOR** or **LESSEE** reasonably requests. In the event **LESSEE** or **LESSOR** fails to comply with any of the foregoing, such failure to comply shall automatically be deemed a confirmation by such Party that all items contained in the estoppel letter requested by the other Party are true and correct and any lender, mortgagee or purchaser of the Premises or the Crops, and any assignee of **LESSOR's** interest in this **LEASE** may rely on such confirmation.

27. **Capital Improvements and Alterations:**

A. **LESSEE** shall not make any alterations, additions or improvements, whether capital, internal or external, (collectively, "Alterations") in, on or to the Premises or any part thereof without the prior written consent of **LESSOR**, which consent may be withheld in **LESSOR's** sole and absolute discretion.

B. Any Alterations to the Premises, except for **LESSEE**'s movable furniture and equipment, shall immediately become **LESSOR's** property and, at the end of the Lease Term, shall remain on the Premises without compensation to **LESSEE**; provided, however, that any such movable furniture and equipment, otherwise belonging to **LESSEE**, but remaining on the Premises at the expiration or other termination of this **LEASE** shall also become the property of **LESSOR**.

C. In the event **LESSOR** consents to the making of any Alterations by **LESSEE**, the same shall be made by **LESSEE**, at **LESSEE**'s sole cost and expense, in accordance with the plans and specifications previously approved in writing by **LESSOR**. **LESSEE** shall comply with all applicable laws, including but not limited to Construction Lien Law of the State of Florida, ordinances, regulations, building codes, and obtain all required permits, inspections, and certificates as may be required by all governmental agencies having jurisdiction thereof.

28. **Liens:**

A. **LESSEE** shall keep the Premises free from any liens, including, but not limited to mechanic's liens, arising out of any work performed, materials furnished or obligations incurred by **LESSEE**.

B. The **LESSEE** herein shall not have any authority to incur liens for labor or material on the **LESSOR's** interest in the Premises and all persons contracting with the **LESSEE** for the destruction or removal of any building or for the erection, installation alteration, or repair of any building or other improvements on the Premises and all materialmen, contractors, mechanics and laborers, are hereby charged with notice that they must look to the **LESSEE** and to the **LESSEE**'s interest only in the Premises to secure the payment of any bill for work done or material furnished during the rental period created by this **LEASE**.

C. In the event that **LESSEE** shall not, within twenty (20) days following the imposition of any such lien, cause the same to be released of record by payment or posting of a property bond, **LESSOR** shall have, in addition to all other remedies provided herein and by law, the right, but not the obligation, to cause the same to be released by such means as it shall

deem proper, including payment of the claim giving rise to such lien. All such sums paid by **LESSOR**, including, but not limited to reasonable attorney's fees and expenses incurred by it in connection therewith, together with interest at the maximum rate allowed by law, shall be considered Additional Rent and shall be payable to **LESSOR** by **LESSEE** on demand.

D. **LESSOR** shall have the right at all times to record in the public records or post and keep posted on the Premises any notice permitted or required by law, or which **LESSOR** shall deem proper, for the protection of **LESSOR**, the Premises, the improvements located thereon and any other Party having an interest therein, from mechanic's and materialmen's liens, and **LESSEE** shall give to **LESSOR** at least thirty (30) days prior notice of commencement of any construction on the Premises.

E. Pursuant to Sections 713.01(21) and 713.10, the interest of **LESSOR** in the Premises and the improvements located thereon shall not be subject to liens for improvements made by **LESSEE** and such liability is expressly prohibited.

F. Notwithstanding anything to the contrary contained in this **LEASE**, **LESSEE** may from time to time, in its ordinary course of business, grant to certain lenders selected by **LESSEE** and its affiliates (the "Lenders") a lien on and security interest in all assets and personal property located on the Premises and owned by **LESSEE**, including, but not limited to, all crops (e.g., citrus and sugar cane), crop products, inventory, goods, machinery and equipment owned by **LESSEE** (but expressly excluding **LESSEE**'s right, title and interest in, to or under this **LEASE**) ("**LESSEE**'s Property") as collateral security for the repayment of any indebtedness to the Lenders and all amendments, modifications and renewals thereof (the "Indebtedness"). The Lenders may, in connection with any foreclosure or other similar action relating to the **LESSEE**'s Property, enter upon the Premises (or permit their representatives to do so on their behalf) in order to implement an action for default, foreclosure and/or any other remedy that Lenders may have against **LESSEE** and/or **LESSEE**'s Property under the terms and conditions of the Indebtedness without liability to **LESSOR**, to the extent any of **LESSEE**'s Property is located on the Premises. The Lender's rights with respect to access to the Premises and the crops thereon shall be strictly limited to the then current harvest season, subject to Lenders exercise of due care in connection with such access. **LESSOR** hereby agrees that any security interest, lien, claim or other similar right, including, without limitation, rights of levy or distraint for rent and **LESSOR's** statutory lien rights that **LESSOR** may have in or on **LESSEE**'s Property, whether arising by agreement or by law, are hereby subordinate to the liens and/or security interests in favor of the Lenders which secure the Indebtedness, whether currently existing or arising in the future. Nothing contained herein shall be construed to grant or permit a lien upon or security interest in any of **LESSOR's** assets or **LESSEE**'s right, title or interest in, to or under this **LEASE**. **LESSOR** agrees to accept timely performance on the part of any of the Lenders or their agents or representatives as though performed by **LESSEE** to cure any default or condition for termination (although the Lenders shall have no obligation to do so) to the extent such cure is completed within the applicable cure period **LESSEE** has to cure any such default under this **LEASE**. Subject to compliance with the terms and conditions of this **Paragraph 28.F.**, the foregoing subordination shall be automatic and self-effective without the necessity to execute any further documentation evidencing the same; however, without limiting the effectiveness of such subordination, **LESSOR** agrees to promptly execute any additional documents reasonably required by the Lenders to evidence **LESSOR's** subordination of its lien

rights described herein. Notwithstanding anything in this **LEASE** to the contrary, **LESSEE** hereby agrees that any Loss incurred by **LESSOR** due to bodily injury or property damage in connection with: (i) the Indebtedness; (ii) actions by any of the Lenders; (iii) any subordination by **LESSOR** set forth herein; or (iv) any other matters contained in this **Paragraph 28.F.**, all shall fall under the indemnification provisions in favor of **LESSOR** set forth in **Paragraph 13.** above.

29. Repair: **LESSEE** covenants and agrees that **LESSEE** shall maintain the Premises (which excludes the crops) in its original condition existing as of the Commencement Date of this **LEASE**, subject to reasonable wear and tear, casualty pursuant to **Paragraph 16.F** and condemnation pursuant to **Paragraph 36**. **LESSEE** shall, at **LESSEE**'s expense, maintain and preserve the Premises in the state of condition and repair as required in the immediately preceding sentence and make all necessary repairs to the Premises and all improvements, fixtures and equipment located thereon, if any, including but not limited to repairs to all interior, exterior, roof and structural portions of the Premises, all culverts, all pumps and pumping stations, all paved surfaces, windows, landscaping and all electrical, plumbing, HVAC and other machinery located on the Premises consistent with repair standard set forth in this paragraph. Subject to the other provisions of this **LEASE** that may provide to the contrary, including **Paragraph 16.F, Paragraph 35** and **Paragraph 36. LESSEE** shall be responsible for all such repairs and maintenance whether caused by acts of **LESSEE**, its agents, servants, employees, customers, guests, licensees or by acts of third parties, governmental regulations, acts of God, casualties, or any other reason.

30. Existing Interests in Premises: Pursuant to Section 373.099, Florida Statutes, **LESSOR** does not warrant or represent that it has title to the Premises. **LESSEE**'s occupancy of the Premises shall be subject to the rights of others existing as of the day immediately preceding the Commencement Date of this **LEASE** which are set forth in easements, restrictions, reservations, all matters of public record and all other encumbrances affecting the Premises as of the day immediately preceding the Commencement Date of this **LEASE**.

31. **LESSOR Inspection, Ingress and Egress:**

A. The right of entry is hereby reserved by the **LESSOR**, for itself and its officers, agents, employees, contractors, subcontractors, and assigns, to enter upon and travel through and across the Premises for the purposes of: inspections, maintenance, and for any lawful purpose including, but not limited to, inspecting the Premises to ensure the **LESSEE**'s performance of its obligations under this **LEASE**; sampling and monitoring the **LESSEE**'s use of chemicals and pesticides on the Premises; performing environmental remediation or performing any work or repairs, which the **LESSOR** may determine is necessary by reason of the **LESSEE**'s default under the terms of this **LEASE**; exhibiting the Premises for lease, sale or mortgage financing; conducting inspections, investigations, soil borings, surface and groundwater sampling, monitoring, and any other testing, sampling, or other investigation necessary to support the engineering design and/or any other analyses associated with the future use of the Premises. The **LESSEE** shall have no claim for damages of any character on account thereof against the **LESSOR** or any officer, agent, or assign thereof to the extent provided in this **LEASE**.

B. **LESSOR** agrees that from the Commencement Date through the Expiration Date, all officers, employees, contractors and agents of **LESSOR** shall have at all reasonable times upon reasonable advance notice to Edward Almeida, Esq., Vice President of Legal Affairs at (863) 902-2120 the right to enter upon the Premises for the purposes set forth in **subparagraph A** above; provided however that: (a) any contractors or agents of **LESSOR** shall first provide a certificate of insurance evidencing that such contractor or agent carries commercial general liability insurance in an amount not less than $1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage liability, which certificate shall name **LESSEE** as an additional insured thereunder; and (b) all such inspections, investigations and examinations by **LESSOR** or **LESSOR's** officers, employees and accredited agents shall be conducted in such a manner so as (i) not to cause any lien or claim of lien to exist against the Premises, (ii) not to unreasonably interfere with the operation of **LESSEE** or its business or its tenants and occupants; and (iii) at all times to comply with all of **LESSEE**'s or its tenants' safety standards and requirements.

C. **LESSOR** agrees to be responsible for: (x) any property damage that arises out of or is caused by **LESSOR** or its officers, employees, contractors and agents while such persons are acting within the proper scope of conducting inspections of, or accessing, the Premises, provided that with respect to any damaged sugarcane crop (that may exist pursuant to a Conversion Plan), **LESSEE**'s exclusive remedy shall be limited to compensation from **LESSOR** in the amount of $2,400 per acre of damaged sugarcane crop, subject to proration where the damage is less than a full acre, (y) to the extent found legally responsible, any property damage that arises out of or is caused by **LESSOR's** gross negligence or willful misconduct, or its officers, employees, contractors and agents, while acting outside the proper scope of conducting inspections of, or accessing, the Premises (e.g., negligence); and (z) to the extent found legally responsible, any personal injury arising from **LESSOR's** or its officers', employees', contractors' and agents' inspections of or access to the Premises (but the foregoing shall only be applicable to **LESSOR** only as to its gross negligence or willful misconduct). **LESSOR** shall promptly restore, if applicable, any property damage described above. For the purposes hereof, the term "to the extent found legally responsible" shall be deemed to mean "to the extent that **LESSOR** has the legal authority to agree to be responsible for the acts of its officers, employees, contractors and agents". **LESSEE** acknowledges that **LESSOR** has not made any representation or warranty to **LESSOR** as to, nor has **LESSOR** waived any right to claim that it does not have, legal authority to agree to the provisions of this **Paragraph 31.** The provisions of this **Paragraph 31** shall survive the Expiration Date or any termination of this Agreement for a period of one (1) year.

32. **Miscellaneous Provisions:**

A. **Invalidity of LEASE Provision:** Should any term or provision of this **LEASE** be held, to any extent, invalid or unenforceable, as against any person, entity or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this **LEASE**, to the extent that the **LEASE** shall remain operable, enforceable and in full force and effect to the extent permitted by law.

B. **Inconsistencies:** In the event any provisions of this **LEASE** shall conflict, or appear to conflict, the **LEASE**, including all exhibits, attachments and all documents specifically incorporated by reference, shall be interpreted as a whole to resolve any inconsistency.

C. **Governing Law and Venue:** The laws of the State of Florida shall govern all aspects of this **LEASE**. In the event it is necessary for either Party to initiate legal action regarding this **LEASE**, venue shall be in the Fifteenth Judicial Circuit for claims under state law and the Southern District of Florida for any claims which are justiciable in federal court.

D. **Amendment:** This **LEASE** may be amended only with the prior written approval of **LESSOR** and **LESSEE**.

E. **Waiver:** Failures or waivers to enforce any covenant, condition, or provision of this **LEASE** by the Parties, their successors and assigns shall not operate as a discharge of or invalidate such covenant, condition, or provision, or impair the enforcement rights of the Parties, their successors and assigns nor shall it be construed as a waiver or relinquishment for the future enforcement of any such covenant, condition or right but the same shall remain in full force and effect. Furthermore, the acceptance of Rent, any Additional Rent or a partial payment of same by **LESSOR** shall not constitute a waiver of any preceding breach by **LESSEE** of any provision of this **LEASE** nor a waiver of the right to receive full payment of Rent or Additional Rent.

F. **Final Agreement:** This **LEASE** states the entire understanding between the Parties with respect to the use and occupancy of the Premises after the Commencement Date and supersedes any written or oral representations, statements, negotiations, or agreements to the contrary. The **LESSEE** recognizes that any representations, statements or negotiations made by **LESSOR'S** staff do not suffice to legally bind the **LESSOR** in a contractual relationship unless they have been reduced to writing, authorized, and signed by an authorized representative of **LESSOR**. This **LEASE** shall bind the Parties, their assigns, and successors in interest.

G. **Time of the Essence:** Time is of the essence with respect to every term, condition and provision of this **LEASE**.

H. **Survival:** The provisions of **Paragraphs 13, 18, 22 and 23** shall survive the expiration or termination of this **LEASE**. In addition, any covenants, provisions or conditions set forth in this **LEASE** which by their terms bind **LESSEE**, **LESSOR** or both **LESSOR** and **LESSEE** after the expiration or termination of this **LEASE**, shall survive the expiration or termination of this **LEASE** for a period of two (2) years, except for the provisions of **Paragraph 18,** which shall survive as and to the extent provided therein.

I. Prohibition Against Recording: **LESSEE** shall not record this **LEASE** or any portion or any reference thereto without the prior written consent of **LESSOR**, which consent may be withheld by **LESSOR** in **LESSOR's** sole and absolute discretion. In the event **LESSEE** violates any of the foregoing, this **LEASE** shall terminate at **LESSOR's** option or

LESSOR may declare a Default hereunder and pursue any and all of its remedies provided in this **LEASE**.

J. **WAIVER OF JURY TRIAL. AS INDUCEMENT TO BOTH PARTIES AGREEING TO ENTER INTO THIS AGREEMENT, LESSOR AND LESSEE HEREBY WAIVE TRIAL BY JURY IN ANY ACTION OR PROCEEDING BROUGHT BY EITHER PARTY AGAINST THE OTHER PARTY PERTAINING TO ANY MATTER WHATSOEVER ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS LEASE. EACH OF THE PARTIES CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF THE OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HAVE BEEN INDUCED TO ENTER INTO THIS LEASE BY, AMONG OTHER THINGS, THE ACTUAL WAIVERS AND CERTIFICATIONS OF THIS SUBPARAGRAPH J.**

33. **Special Clauses:**

A. **Radon Gas:** Radon is a naturally occurring radioactive gas that, when it has accumulated in a building in sufficient quantities, may present health risks to persons who are exposed to it over time. Levels of radon that exceed federal and state guidelines have been found in buildings in Florida. Additional information regarding radon and radon testing may be obtained from your county public health unit.

B. **Security Deposit:**

(1) On the Commencement Date and until the **LESSEE** has assigned all of its interest under this **LEASE** pursuant to an Assignment permitted hereunder, the Security Deposit Fund and the Escrow Agreement (as defined below) shall refer to, respectively, the "General Escrow Fund" and the "General Escrow Agreement" (as such terms are defined in the Agreement for Sale and Purchase). Upon an Assignment permitted hereunder, **LESSEE** shall fund an escrow as a security deposit in the amount of NINE HUNDRED EIGHTY-THREE THOUSAND FIVE HUNDRED SEVENTY AND NO/100 DOLLARS ($983,570.00) to secure the performance of all of **LESSEE**'s obligations under this **LEASE** (the "Security Deposit Fund") which, at **LESSEE**'s option, shall be in the form of cash (a "Cash Escrow") held by an escrow agent mutually acceptable to **LESSEE** and **LESSOR** ("Escrow Agent") pursuant to an escrow agreement in form attached hereto as **Schedule "5"** ("Escrow Agreement"), or a Letter of Credit (as defined in **subparagraph 33.B.(2).** below). Upon the funding of such Security Deposit Fund by the assignee, **LESSOR** shall have no further rights or claims upon or with respect to the General Escrow Fund or General Escrow Agreement for matters related to the **LEASE**.

(2) Letter of Credit. In the event **LESSEE** elects to post a letter of credit pursuant to **subparagraph 33.B.(1).** above for the Security Deposit Fund ("Letter of Credit"), it shall: (a) be in the form of an irrevocable commercial letter of credit in form attached hereto as **Schedule "6"** with a term of at least twelve (12) months, (b) be issued by **LESSEE's** lender under **LESSEE's** revolving credit facility (subject to **LESSOR's** approval of such lender

at the time of Closing), naming Escrow Agent as beneficiary, pursuant to the Escrow Agreement; (c) provide for Draws (as defined and set forth below) by Escrow Agent; and (d) have an "evergreen" clause and be renewed automatically each year by the issuing bank, unless the bank gives written notice to the beneficiary at least thirty (30) days prior to the expiration date of the then existing Letter of Credit that the bank elects that it not be renewed. In the event the Letter of Credit is not timely renewed and **LESSEE** has not replaced the same within ten (10) business days prior to the expiration thereof, then Escrow Agent may draw upon the same and hold the proceeds pursuant to the terms of the Escrow Agreement. Each Letter of Credit shall be assignable or transferable to any **LESSOR** Credit Provider (in connection with any collateral assignment thereof) or any transferees, successors or assigns of **LESSOR** that becomes landlord under this **LEASE**. For the purposes of this **LEASE**, the term "Credit Provider" shall be deemed to mean **LESSOR's** lender/financing trustee/credit enhancer/underwriter.

(3) Draws Upon Cash Escrow and Letter of Credit. The Escrow Agreement shall provide that the Escrow Agent may only draw upon a Letter of Credit or Cash Escrow in favor of **LESSOR** (a "Draw") in the event: (a) an agreement has been executed by **LESSEE** and **LESSOR** agreeing upon the reason for, and amount of, the Draw; or (b) **LESSOR** delivers written notice to Escrow Agent of any monetary Default by **LESSEE** under the **LEASE**; or (c) all appeal periods have expired following a final order by a court of law rendering a monetary judgment against **LESSEE** in favor of **LESSOR**. Upon each such Draw request, Escrow Agent shall promptly release the Draw to **LESSOR**.

(4) Replenishing of Cash Escrow or Letter of Credit during the Term. **LESSEE** shall be required to replenish the Security Deposit Fund during the Lease Term in the event any Draws are made against the Security Deposit Fund in accordance with this **Paragraph 33.B.** within fifteen (15) days of such depletion. Any failure by **LESSEE** to replenish the Security Deposit Fund within fifteen (15) days of such depletion shall constitute a Default under this **LEASE**.

(5) Release of Cash Escrow and Letter of Credit Following Expiration Date. The Escrow Agreement for the Security Deposit Fund shall provide that Escrow Agent shall continue to hold the Security Deposit Fund until three (3) years after the later of (i) the final Expiration Date of this **LEASE** or (ii) the final expiration date of any other lease to which the Escrow Agreement is applicable (the "Scheduled Release Date"), provided that any claims must be made within the applicable survival period as provided under this **LEASE**, provided, however, that if there are any pending claims relating to any portion of such deposit on such Scheduled Release Date, then Escrow Agent shall continue to hold a portion of such deposit in accordance with the Escrow Agreement in the reasonably estimated amount necessary to satisfy such claim(s) until such claim(s) is resolved, and shall release the remaining amount of such deposit to **LESSEE**.

C. **Site Investigation: LESSEE** is responsible for examining the Premises and satisfying itself as to the general and local conditions, particularly water level conditions that are likely to impact **LESSEE**'s operation and those conditions bearing upon the availability of water, electric power, communication and road and access facilities. Failure on the part of **LESSEE** to acquaint itself with all available information pertaining to the Premises will not relieve **LESSEE** from the responsibility of furnishing the required facilities and services and for

compliance with the terms and conditions of this **LEASE**. **LESSOR** assumes no responsibility or obligation to provide any roads or other facilities of whatever nature or for any understanding or representation made by any of its officers or agents during or prior to final execution of this **LEASE** unless these provisions expressly provide for the furnishing of such facilities and such understanding or representation is specifically stated in this **LEASE**.

D. **Prohibited Activities: LESSEE** may perform maintenance of personal property, including but not limited to changing oil or fluids and servicing filters, on the Premises and store any fuel, or store or utilize any fuel tanks (whether empty or containing fuel or other hazardous substances), fuel trailers, hoses or any other fueling mechanisms on the Premises as reasonably necessary for normal business operations; provided, however, that any maintenance and fuel storage or handling on the Premises shall comply with Environmental Law and the applicable Best Management Practices and **LESSEE** shall remove all fuel trailers, hoses, tanks or other fueling mechanisms from the Premises that are owned by **LESSEE** prior to the expiration or termination of this **LEASE**.

E. **Water Levels: LESSEE** hereby waives any and all claims on the part of the **LESSEE**, which may arise or be incident to regulation of water levels associated with the Premises by the **LESSOR** and/or the U.S. Army Corps of Engineers, so long as such regulation is in accordance with the rules and regulations applicable thereto.

F. **Navigation: LESSEE** shall not do or cause to be done anything whereby the full and free use by the public of the water areas of and surrounding the Premises will suffer unreasonable interference. This condition does not apply to temporary dockage and/or mooring facilities that may be provided by **LESSEE** pursuant to and in accordance with the provisions of this **LEASE**.

G. **Compliance with Minimum Wage Law:** The **LESSEE** shall comply with the Fair Labor Standards Act, 29 USCS 201, et seq. The Act is the minimum wage law. Its requirement that the **LESSEE** pay "not less" than the rates so determined presupposes the possibility that the **LESSEE** may have to pay higher rates.

H. **Additional Requirements:**

(1) **LESSEE** shall not install or permit to be installed pit or vault latrines.

(2) **LESSEE** will allow the discharge of firearms on the Premises only as permitted by Florida law and consistent with the exercise of reasonable care and prudence, and **LESSEE** will not display or permit others to display firearms in a reckless manner.

(3) **LESSEE** shall not discharge nor permit others to discharge sewage effluent into the water areas of and surrounding the Premises provided, however, that **LESSOR** acknowledges and accepts the presence of currently existing septic systems on the Premises to the extent such systems are in compliance with applicable law.

(4) **LESSEE** shall not engage in any business activity on the Premises not expressly authorized in this **LEASE** unless otherwise authorized in writing by **LESSOR**.

(5) Except for the Permitted Uses (as to which no consent of **LESSOR** is required), **LESSEE**: shall not permit or suffer any nuisance on the Premises or the commission of waste thereon; shall not conduct mining operations or drill for oil or gas upon the Premises; shall not remove sand, gravel, or kindred substance from the ground; or shall not, in any manner, substantially change the contour or condition of the Premises unless prior approval is granted in writing by **LESSOR**, which approval may be withheld in **LESSOR's** sole discretion.

(6) **LESSEE** will use the Premises and all rights and privileges herein granted to the extent needed in carrying out the true intent and purpose of this **LEASE**.

(7) **LESSEE** shall cooperate with **LESSOR**, its employees, agents, and assigns in carrying out the intent and purposes of this **LEASE**.

I. **Safety:**

(1) It is the **LESSEE**'s sole duty to provide safe and healthful working conditions to its employees on and about the Premises. The **LESSOR** assumes no duty for supervision of the **LESSEE**.

(2) The **LESSEE** shall provide first aid services and medical care to its employees. The **LESSOR** assumes no duty with regard to the supervision of the **LESSEE**.

(3) The **LESSEE** shall develop and maintain an effective fire protection and prevention program and good housekeeping practices on the Premises throughout the Lease Term.

(4) The **LESSOR** may order that the **LESSEE** halt operations under this **LEASE** if a condition of immediate danger to the public and/or **LESSOR's** employees, equipment or property exists. This provision shall not shift responsibility or risk of loss for injuries or damage sustained from the **LESSEE** to the **LESSOR**, and the **LESSEE** shall remain solely responsible for compliance with all safety requirements and for the safety of all persons and property on the Premises.

(5) The **LESSEE** shall instruct employees required to handle or use toxic materials or other harmful substances regarding their safe handling and use, including instruction on the potential hazards, personal hygiene and required personal protective measures.

(6) The **LESSEE** shall comply with the standards and regulations set forth by the Occupational Safety and Health Administration (OSHA), the Florida Department of Labor and Employment Security and all other appropriate federal, state, local or District safety and health standards.

(7) The **LESSEE** shall take the necessary precautions to protect customers and other members of the public that may be on or near the Premises from harm due to the operations of the **LESSEE**.

J. **Advertising and Commercial Activity:** There shall be absolutely no advertising, either visual or audio, placed on or conducted on the Premises except for names and

logos appearing on **LESSEE**'S vehicles, gates or as otherwise may be existing on the date of this **LEASE**.

K. **Lead Based Paint Disclosure:** See Lead Based Paint Disclosure attached hereto and made a part hereof as **Schedule "7"**, if applicable.

L. **Inspection Rights:** The **LESSEE** shall maintain records and the **LESSOR** shall have inspection and audit rights as follows:

(1) **Maintenance of Records:** Subject to confidentiality agreements with third parties and the designation of certain records as "trade secret" documents under Florida law, **LESSEE** shall maintain all financial and non-financial records and reports related to the Premises or this **LEASE**, including but not limited to, records related to the application of pesticides and fertilizers. Such records shall be maintained and made available for inspection for a period of five (5) years from completing performance and receiving final payment under this **LEASE**.

(2) **Examination of Records:** Subject to confidentiality agreements with third parties and the designation of certain records as "trade secret" documents under Florida law, **LESSOR** or its designated agent shall have the right to examine in accordance with generally accepted governmental auditing standards all records related to the Premises or directly or indirectly related to this **LEASE**. Such examination may be made at any time during the Lease Term and through and including five (5) years from the date of final payment under this **LEASE** and upon reasonable notice, time and place.

(3) Records that pertain to the Premises or this **LEASE**: Notwithstanding the provisions of **subparagraph (1)** and **subparagraph (2)** above, in no event shall **LESSEE** be obligated to maintain or provide any financial or accounting information (e.g., pro-formas, tax returns, production reports, financial statements, appraisals, etc) or other information that pertains to **LESSEE**'s business operations or assets other than the Premises, provided that **LESSEE** agrees to maintain and, upon request, provide reports showing the acreage of citrus trees and the boxes of citrus harvested from such acreage, in order to facilitate land exchanges or dispositions related to surplus portions of the Premises by **LESSOR**, subject to the trade secret protocol established by **LESSEE**.

(4) With respect to any such information made available to **LESSOR** pursuant to this **subparagraph L.** that is proprietary or "Trade Secret" (as defined under Section 812.081, Florida Statutes), **LESSOR** shall follow the trade secret protocol established by **LESSOR** and **LESSEE**.

(5) Extended Availability of Records for Legal Disputes: In the event that the **LESSOR** should become involved in a legal dispute with a third party arising from performance under this **LEASE**, the **LESSEE** shall extend the period of maintenance for all records relating to the **LEASE** until the final disposition of the legal dispute, and all such records shall be made readily available to the **LESSOR**.

M. **Public Access:** The **LESSEE** shall allow public access to all **LEASE** related documents in accordance with the provisions of Chapter 119, Florida Statutes, subject to

all applicable exemptions and only as and to the extent Chapter 119 is actually applicable to **LESSEE** (it being agreed that this **subparagraph M.** is not an admission or agreement by **LESSEE** that Chapter 119 is applicable thereto). Should the **LESSEE** assert any exemptions 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 by upon the **LESSEE**.

N. **Cooperation:** From the Commencement Date hereof through the Expiration Date, **LESSEE** shall cooperate in good faith with **LESSOR's** Credit Providers to provide information related to the Premises (and not the **LESSEE**'s business or other assets) and necessary for the original issuance or refinancing of the Certificates of Participation, so long as such Credit Providers execute and deliver to **LESSEE** a confidentiality agreement reasonably acceptable to **LESSEE**. **LESSOR** shall be responsible for any and all actual, out-of-pocket costs and expenses incurred by **LESSEE** in providing the information pursuant to this subparagraph (e.g., copying fees, but not including attorneys' fees incurred by **LESSEE** in connection with such requests).

O. **Loss of Trees Due to Canker:**

(1) If the citrus trees on the Premises are destroyed by or infected with Canker or other diseases or parasites, or are destroyed by civil authorities in connection with programs to control the spread of Canker or other diseases or parasites, **LESSOR** shall be entitled to receive all tree replacement payments or awards from the federal, state or local authorities made for, or with respect to, the destroyed trees. **LESSOR** will decide, in its sole and absolute discretion, how such payments or awards will be used. **LESSOR** may assign this right or transfer the payments or awards received, if it so elects, to **LESSEE**; provided, however, that **LESSEE** shall use any funds received or awards made as the **LESSOR** directs. **LESSEE** will support and assist **LESSOR** in connection with any applications by **LESSOR** for such payments or awards. **LESSEE** shall retain all Casualty insurance proceeds from policies carried by **LESSEE** insuring against the loss of citrus trees as a result of canker or other diseases or parasites.

(2) **LESSEE** shall be entitled to payments or awards from the federal, state or local authorities made for, or with respect to, lost future production, reduced by any insurance that **LESSEE** may have for lost future production.

P. **Operations Contracts:** To the extent that **LESSEE** may, at any time, desire to enter into any contract, license, sublease or other agreement in connection with **LESSEE**'s operations which is not terminable without penalty upon thirty (30) days notice and is binding on the Premises or **LESSOR** after the Expiration Date, then **LESSEE** shall give a copy of such agreement to **LESSOR**. If **LESSOR** consents at its sole and absolute discretion to **LESSEE**'s execution of such contract, license, sublease or other agreement, then, to the extent that the term thereof extends beyond the Expiration Date, **LESSOR** shall be deemed to have agreed to assume the provisions of such contract, license, sublease or other agreement from and after the date thereof (each, a "New Agreement"). Even though the foregoing assumption shall be automatic and self-effective without the necessity to execute any further documentation evidencing the same, **LESSOR** agrees to promptly execute any additional documents reasonably required by **LESSEE** to evidence **LESSOR's** assumption of such contract, license, sublease or

other agreement described in this Paragraph. In the event that **LESSEE** submits a contract, license, sublease or other agreement to **LESSOR** for its approval pursuant to this Paragraph and, unless **LESSOR** advises **LESSEE** in writing within forty-five (45) days after receipt thereof that **LESSOR** has not approved such contract, license, sublease or other agreement, then the same shall be deemed to be approved thereby.

34. **Covenant of Quiet Enjoyment.** Provided that **LESSEE** faithfully performs all duties of **LESSEE** hereunder and complies with all term and conditions of this **LEASE**, **LESSEE** shall not be disturbed by **LESSOR** in its quiet enjoyment of the Premises, subject to the terms, conditions and provisions of this **LEASE**.

35. **Act of God.** In the event that the citrus trees or sugar cane crops, citrus crops or any other crops located on the Premises are damaged or destroyed due to any hailstorm, tornado, hurricane, flood, fire, or other act of god or any strike, civil disturbance or act of war or terrorism or due to citrus canker or other diseases or parasites, neither **LESSOR** nor **LESSEE** shall have any responsibility or obligation to repair or replace such citrus trees, sugar or citrus crops or to compensate each other or any other Party for the loss thereof.

36. **Condemnation:** Notwithstanding anything to the contrary contained in this **LEASE**, the following shall apply in the event of a taking, condemnation, or transfer in lieu thereof, of the whole or part of the Premises.

A. Total Taking. In the event the entire Premises is taken or condemned, or transferred or purchased in lieu thereof, by any governmental authority or other entity with the power of condemnation, this **LEASE** shall automatically terminate upon transfer of title. Rent payments shall then be apportioned to the date of such taking or transfer of title. Except for any separate award applicable solely to **LESSEE**'s business, **LESSEE** shall not be entitled to an apportionment of any award or payment applicable to the Premises, all of which shall be paid to **LESSOR**. Notwithstanding the foregoing, in the event that **LESSOR** is entitled to possession of the Premises after transfer of title, this **LEASE** shall continue during such extended possession pursuant to the terms hereof.

B. Partial Taking. In the event of a taking or condemnation of only a portion of the Premises or any other portion of the Premises is taken or condemned, or transferred or purchased in lieu thereof, by any governmental authority or other entity with the power of condemnation and such taking (i) in **LESSOR's** reasonable determination reduces the value of the Premises by fifty percent (50%) or more, (ii) in **LESSEE**'s reasonable determination, renders the Premises uneconomically feasible to operate or (iii) prevents, and would prevent after reasonable repair and reconstruction efforts by **LESSEE**, use of the Premises for its Permitted Uses under applicable law or regulations (including without limitation with respect to required access), then either **LESSOR** or **LESSEE** may terminate this **LEASE** effective upon the date of such taking or transfer of title. If neither **LESSOR** or **LESSEE** terminate this **LEASE** in such event, or in the event of a lesser taking or condemnation, then this **LEASE** shall continue with respect to all portions of the Premises or personalty not taken, condemned, sold, or transferred and, as applicable, the Rent due under this **LEASE** shall be equitably adjusted, if applicable, to account for the loss of the portion of the Premises taken. **LESSEE** shall not be entitled to an

apportionment of any award or payment applicable to the Premises, all of which shall be paid to **LESSOR**.

C. **Condemnation Awards; Damages.** The Parties hereto agree to cooperate in applying for and in prosecuting any claim for any taking regarding the Premises or any portion thereof and further agree that condemnation awards or damages shall be allocated as follows:

(1) **LESSOR** shall be entitled to the entire award for the condemned Premises or any portion thereof and **LESSEE** shall have no rights to an apportionment of such an award or payment, provided, that, if applicable, **LESSOR** shall make portions of the award available for restoration purposes.

(2) **LESSEE** shall be entitled to make any available separate claim and recover any award thereon for any damages to **LESSEE**'s business operations under any available legal remedy, including but not limited to a claim for business damages, that may be allowable under applicable law. **LESSOR** shall have no rights to an apportionment of such an award or payment.

D. **Non-Affected Premises.** Notwithstanding any other provision of this **Paragraph 36,** any compensation for a temporary taking shall be payable to **LESSEE** without participation by **LESSOR**, except to the proportionate extent such temporary taking extends beyond the end of the Lease Term, and there shall be no abatement of Rent as a result of any temporary taking affecting any of the Premises.

37. **Joint and Several Liability:** The entities constituting **LESSEE** shall be jointly and severally liable for all obligations of **LESSEE** under this **LEASE**. A failure or default by any of the entities constituting **LESSEE** shall be deemed a failure or default by all of such **LESSEE** entities. Without limiting the foregoing, **LESSEE** agrees that Parent may act as the representative of each other **LESSEE** and that **LESSOR** may deliver any notice to **LESSEE** to Parent on behalf of each **LESSEE** and rely on any notice given or other action or taken by Parent on behalf of **LESSEE**.

38. **Subordination and Nondisturbance:**

A. Subordination. Subject to the provisions of **subparagraph F.** below, this **LEASE** shall be subject and subordinate to any mortgage, deed of trust, trust indenture, assignment of leases or rents or both, or other instrument evidencing a security interest, which may now or hereafter affect any portion of the Premises, or be created as security for the repayment of any loan or any advance made pursuant to such an instrument or in connection with any sale-leaseback or other form of financing transaction and all renewals, extensions, supplements, consolidations, and other amendments, modifications, and replacements of any of the foregoing instruments ("Mortgage"), and to any ground lease or underlying lease of the Premises or any portion of the Premises whether presently or hereafter existing and all renewals, extensions, supplements, amendments, modifications, and replacements of any of such leases ("Superior Lease"). **LESSEE** shall, at the request of any successor-in-interest to **LESSOR** claiming by, through, or under any Mortgage or Superior Lease, attorn to such person or entity as described below. The foregoing provisions of this **subparagraph A.** shall be self-operative and

no further instrument of subordination shall be required to make the interest of any lessor under a Superior Lease (a "Superior Lessor") or any mortgagee, trustee or other holder of or beneficiary under a Mortgage (a "Mortgagee") superior to the interest of **LESSEE** hereunder; provided, however, **LESSEE** shall execute and deliver promptly any certificate or instrument, in recordable form, that **LESSOR**, any Superior Lessor or Mortgagee may reasonably request in confirmation of such subordination.

B. **Rights of Superior Lessor or Mortgagee.** Any Superior Lessor or Mortgagee may elect that this **LEASE** shall have priority over the Superior Lease or Mortgage that it holds and, upon notification to **LESSOR** by such Superior Lessor or Mortgagee, this **LEASE** shall be deemed to have priority over such Superior Lease or Mortgage, whether this **LEASE** is dated prior to or subsequent to the date of such Superior Lease or Mortgage.

C. **Attornment.** If at any time prior to the expiration of the term of this **LEASE**, any Superior Lease shall terminate or be terminated by reason of a default by **LESSOR** as tenant thereunder or any Mortgagee comes into possession of the Premises or the estate created by any Superior Lease by receiver or otherwise, **LESSEE** shall, at the election and upon the demand of any owner of the Premises, or of the Superior Lessor, or of any Mortgagee-in-possession of the Premises, attorn, from time to time, to any such owner, Superior Lessor or Mortgagee, or any person or entity acquiring the interest of **LESSOR** as a result of any such termination, or as a result of a foreclosure of the Mortgage or the granting of a deed in lieu of foreclosure, upon the then terms and conditions of this **LEASE**, for the remainder of the term. In addition, in no event shall any such owner, Superior Lessor or Mortgagee, or any person or entity acquiring the interest of **LESSOR** be bound by (i) any payment of Rent or Additional Rent for more than one (1) rental payment in advance, or (ii) any security deposit or the like not actually received by such successor, or (iii) any amendment or modification in this **LEASE** made without the consent of the applicable Superior Lessor or Mortgagee, or (iv) any construction obligation, free rent (other than as provided in this **LEASE**), or other **LESSOR** concession (other than as provided in this **LEASE**), payment obligation or monetary allowance (other than as provided in this **LEASE**), or (v) any set-off, counterclaim, or the like otherwise available against any prior landlord (including **LESSOR**), or (vi) any act or omission of any prior landlord (including **LESSOR**.

D. **Rights Accruing Automatically.** The provisions of this Paragraph shall inure to the benefit of any such successor-in-interest to **LESSOR**, shall apply and shall be self-operative upon any such demand, and no further instrument shall be required to give effect to such provisions. **LESSEE**, however, upon demand of any such successor-in-interest to **LESSOR**, shall execute, from time to time, instruments in confirmation of the foregoing provisions of this Paragraph, reasonably satisfactory to any such successor-in-interest to **LESSOR**, acknowledging such attornment and setting forth the terms and conditions of its tenancy.

E. **Limitation on Rights of Tenant.** As long as any Superior Lease or Mortgage shall exist, **LESSEE** shall not seek to terminate this **LEASE** by reason of any act or omission of **LESSOR** until **LESSEE** shall have given written notice of such act or omission to all Superior Lessors and Mortgagees at such addresses as shall have been furnished to **LESSEE** by such Superior Lessors and Mortgagees and, if any such Superior Lessor or Mortgagee, as the

case may be, shall have notified **LESSEE** within ten (10) business days following receipt of such notice of its intention to remedy such act or omission, until a reasonable period of time shall have elapsed following the giving of such notice (but not to exceed sixty (60) days), during which period such Superior Lessors and Mortgagees shall have the right, but not the obligation, to remedy such act or omission. The foregoing shall not, however, be deemed to impose upon **LESSOR** any obligations not otherwise expressly set forth in this **LEASE**.

F. **SNDA.** Notwithstanding anything to the contrary contained in this Paragraph, **LESSOR** shall obtain on the Commencement Date and thereafter shall maintain for the benefit of **LESSEE**, a Subordination, Non-Disturbance and Attornment Agreement ("SNDA") from each and every Mortgagee and Superior Lessor to which this **LEASE** shall be subordinate, such SNDA to be in a commercially reasonable form and content for any financing or refinancing relating to the Premises, including the original issuance or refinancing of the Certificates of Participation reasonably acceptable to **LESSEE** and the applicable Mortgagee and Superior Lessor. The subordination of this **LEASE** by **LESSEE** provided in **subparagraph A.** hereof is conditioned upon and subject to the execution and delivery of the SNDA described herein, which shall allow **LESSEE** to remain in possession of the Premises provided that a Default has not then occurred, subject to the terms and conditions of this **LEASE** and the SNDA as negotiated and agreed among **LESSEE**, the applicable Mortgagee and Superior Lessor.

39. **Right of First Refusal:**

A. Offer to Lease Premises. As to any proposed or solicited agricultural leases for all or any portion of the Premises which the **LESSOR** intends to accept or enter into (the "Proposed Lease") that would provide for commencement within one (1) year following the Expiration Date (the "ROFR Period"), so long as no Default then exists under this **LEASE**, the **LESSOR** shall deliver a copy of such Proposed Lease to the Parent and **LESSEE** shall have a right of first refusal ("ROFR") to lease the Premises from **LESSOR** on terms and conditions not less favorable to the **LESSOR** than those set forth in the Proposed Lease. The ROFR shall not apply to any proposed or solicited leases that are for uses other than agricultural uses.

B. Exercise of Right. If the **LESSEE** desires to lease the applicable portion of the Premises from **LESSOR** on the terms and conditions set forth in any Proposed Lease, **LESSEE** shall deliver a written notice of its election to the **LESSOR** within forty (40) Calendar Days of the date of receipt of the copy of the Proposed Lease by the Parent.

C. Termination of the Right of First Refusal. The ROFR shall expire, terminate and be of no further force and effect on the earliest of (i) the one year anniversary of the Expiration Date, (ii) the Expiration Date if the **LEASE** is terminated as a result of a Default by **LESSEE**, (iii) the date **LESSEE** fails to timely deliver its election as prescribed in **Paragraph 39.B** above or (iv) the date **LESSEE** fails to enter into a lease agreement consistent with the terms and conditions set forth in the Proposed Lease after electing to do so.

[REMAINDER OF PAGE INTENTIONALLY BLANK – SIGNATURE PAGE(S) FOLLOW]

The Parties or their duly authorized representatives hereby execute this **LEASE** on the date written below by each Party's signature.

LESSOR:

SOUTH FLORIDA WATER MANAGEMENT DISTRICT, BY ITS GOVERNING BOARD

Witness: _____

By: _____
Name: _____
As its: _____

Witness _____

Date of Execution _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 200_ by _____ of the South Florida Water Management District, a public corporation of the State of Florida, on behalf of the corporation, who is personally known to me.

_____
Notary Public

_____
Print

My Commission Expires: _____

LESSEE:

UNITED STATES SUGAR CORPORATION, a Delaware corporation

Witness: _____

By: _____
Name: _____
As its: _____

Witness _____

Date of Execution _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 200_ by _____, the _____ of United States Sugar

Corporation, a Delaware corporation, on behalf of the corporation who is personally known to me or has produced _____ as identification.

_____
Notary Public

_____
Print

My Commission Expires: _____

LESSEE:

SOUTHERN GARDENS GROVES CORPORATION, a Florida corporation

Witness: _____

Witness _____

By: _____
Name: _____
As its: _____
Date of Execution _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 200_ by _____, the _____ of Southern Gardens Groves Corporation, a Florida corporation, on behalf of the corporation who is personally known to me or has produced _____ as identification.

_____
Notary Public

_____
Print

My Commission Expires: _____

LIST OF SCHEDULES AND EXHIBITS

EXHIBIT "A"	Description of Premises
EXHIBIT "4.F"	Location of Experimental Citrus Project
SCHEDULE "1" (¶2.D)	Category I and Category II Exotic/Invasive Pest Plants
SCHEDULE "2" (¶2.D)	Class I and Class II Prohibited Aquatic Plants
SCHEDULE "3" (¶2.)	Best Management Practices
SCHEDULE "4" (¶16.A)	Insurance Provisions
SCHEDULE "5" (¶33.B.1)	Escrow Agreement
SCHEDULE "6" (¶33.B.2)	Form of Letter of Credit
SCHEDULE "7" (¶33.K)	Lead Based Paint Disclosure

EXHIBIT "A"

Description of Premises

(LEGAL DESCRIPTION TO BE ATTACHED AT CLOSING)

EXHIBIT "4.F"

Location of Experimental Citrus Project

LOCATION OF EXPERIMENTAL CITRUS PROJECT

EXHIBIT 4.F

SCHEDULE "1"

Category I and Category II Exotic/Invasive Pest Plants

SCHEDULE 1

EXOTIC/INVASIVE PLANTS

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

January 12, 2009

Prepared by

URS

URS Corporation
7800 Congress Avenue, Suite 200
Boca Raton, Florida 33487

Category I Invasive Plant Species List

Scientific Name	Common Name	Gov. List	Reg. Dist.
Abrus precatorius	rosary pea	N	C, S
Acacia auriculiformis	earleaf acacia		C, S
Albizia julibrissin	mimosa, silk tree		N, C
Albizia lebbeck	woman's tongue		C, S
Ardisia crenata (=*A. crenulata* misapplied)	coral ardisia		N, C, S
Ardisia elliptica (=*A. humilis* misapplied)	shoebutton ardisia	N	C, S
Asparagus aethiopicus (=*A. sprengeri*; *A. densiflorus* misapplied)	asparagus-fern		N, C, S
Bauhinia variegata	orchid tree		C, S
Bischofia javanica	bishopwood		C, S
Calophyllum antillanum (=*C. calaba* and *C. inophyllum* misapplied)	santa maria (names "mast wood", "Alexandrian laurel" used in cultivation)		S
Casuarina equisetifolia	Australian-pine, beach sheoak	P, N	N, C, S
Casuarina glauca	suckering Australian-pine, gray sheoak	P, N	C, S
Cinnamomum camphora	camphor tree		N, C, S
Colocasia esculenta	wild taro		N, C, S
Colubrina asiatica	lather leaf	N	S
Cupaniopsis anacardioides	carrotwood	N	C, S
Dioscorea alata	winged yam	N	N, C, S
Dioscorea bulbifera	air-potato	N	N, C, S
Eichhornia crassipes	water-hyacinth	P	N, C, S
Eugenia uniflora	Surinam cherry		C, S
Ficus microcarpa (*F. nitida* and *F. retusa* var. *nitida* misapplied)	laurel fig		C, S
Hydrilla verticillata	hydrilla	P, U	N, C, S
Hygrophila polysperma	green hygro	P, U	N, C, S
Hymenachne amplexicaulis	West Indian marsh grass		C, S
Imperata cylindrica (*I. brasiliensis* misapplied)	cogon grass	N, U	N, C, S
Ipomoea aquatica	waterspinach	P, U	C
Jasminum dichotomum	Gold Coast jasmine		C,S
Jasminum fluminense	Brazilian jasmine		C, S
Lantana camara	lantana, shrub verbena		N, C, S
Ligustrum lucidum	glossy privet		N, C

Ligustrum sinense	Chinese privet, hedge privet		N, C, S
Lonicera japonica	Japanese honeysuckle		N, C, S
Ludwigia peruviana	Peruvian primrosewillow		N, C, S
Lygodium japonicum	Japanese climbing fern	N	N, C, S
Lygodium microphyllum	Old World climbing fern	N	C, S
Macfadyena unguis-cati	cat's claw vine		N, C, S
Manilkara zapota	sapodilla		S
Melaleuca quinquenervia	melaleuca, paper bark	P, N, U	C, S
Mimosa pigra	catclaw mimosa	P, N, U	C, S
Nandina domestica	nandina, heavenly bamboo		N, C
Nephrolepis cordifolia	sword fern		N, C, S
Nephrolepis multiflora	Asian sword fern		C, S
Neyraudia reynaudiana	Burma reed, cane grass	N	S
Paederia cruddasiana	sewer vine, onion vine	N	S
Paederia foetida	skunk vine	N	N, C, S
Panicum repens	torpedo grass		N, C, S
Pennisetum purpureum	Napier grass		N, C, S
Pistia stratiotes	waterlettuce	P	N, C, S
Psidium cattleianum (=P. littorale)	strawberry guava		C, S
Psidium guajava	guava		C, S
Pueraria montana var. *lobata (=P. lobata)*	kudzu	N	N, C, S
Rhodomyrtus tomentosa	downy rose-myrtle	N	C, S
Rhynchelytrum repens (=Melinis repens)	Natal grass		N, C, S
Ruellia tweediana (= R. brittoniana , R. coerulea)	Mexican petunia		N, C, S
Sapium sebiferum (=Triadica sebifera)	popcorn tree, Chinese tallow tree	N	N, C, S
Scaevola taccada (=Scaevola sericea, S. frutescens)	scaevola, half-flower, beach naupaka	N	C, S
Schefflera actinophylla (=Brassaia actinophylla)	schefflera, Queensland umbrella tree		C, S
Schinus terebinthifolius	Brazilian pepper	P, N	N, C, S
Senna pendula var. *glabrata (=Cassia coluteoides)*	climbing cassia, Christmas cassia, Christmas senna		C, S
Solanum tampicense (=S. houstonii)	wetland nightshade, aquatic soda apple	N, U	C, S
Solanum viarum	tropical soda apple	N, U	N, C, S
Syngonium podophylium	arrowhead vine		N, C, S
Syzygium cumini	jambolan plum, Java plum		C, S
Tectaria incisa	incised halberd fern		S

Thespesia populnea	seaside mahoe		C, S
Tradescantia fluminensis	white-flowered wandering jew		N, C
Urochloa mutica (= *Brachiaria mutica*)	Para grass		C, S

Category II Invasive Plant Species List

Scientific Name	Common Name	Gov. List	Reg. Dist.
Adenanthera pavonina	red sandalwood		S
Agave sisalana	sisal hemp		C, S
Aleurites fordii (=Vernicia fordii)	tung oil tree		N, C
Alstonia macrophylla	devil tree		S
Alternanthera philoxeroides	alligator weed	P	N, C, S
Antigonon leptopus	coral vine		N, C, S
Aristolochia litioralis	calico flower		N, C, S
Asystasia gangetica	Ganges primrose		C, S
Begonia cucullata	wax begonia		N, C, S
Blechum pyramidatum	green shrimp plant, Browne's blechum		N, C, S
Broussonetia papyrifera	paper mulberry		N, C, S
Callisia fragrans	inch plant, spironema		C, S
Casuarina cunninghamiana	river sheoak, Australian-pine	P	C, S
Cecropia palmata	trumpet tree		S
Cestrum diurnum	day jessamine		C, S
Chamaedorea seifrizii	bamboo palm		S
Clematis terniflora	Japanese clematis		N, C
Cryptostegia madagascariensis	rubber vine		C, S
Cyperus involucratus (*C. alternifolius* misapplied)	umbrella plant		C, S
Cyperus prolifer	dwarf papyrus		C, S
Dalbergia sissoo	Indian rosewood, sissoo		C, S
Elaeagnus pungens	silverthorn, thorny olive		N, C
Epipremnum pinnatum cv. 'Aureum'	pothos		C, S
Ficus altissima	false banyan, council tree		S
Flacourtia indica	governor's plum		S
Hemarthria altissima	limpo grass		C, S
Hibiscus tiliaceus (=Talipariti tiliaceum)	mahoe, sea hibiscus		C, S
Ipomoea fistulosa (=I. carnea ssp. *fistulosa)*	shrub morning-glory	P	C, S
Jasminum sambac	Arabian jasmine		S
Kalanchoe pinnata	life plant		C, S
Koelreuteria elegans ssp. *formosana (=K. formosana; K. paniculata* misapplied)	flamegold tree		C, S
Leucaena leucocephala	lead tree	N	N, C, S
Limnophila sessiliflora	Asian marshweed	P, U	N, C, S

Livistona chinensis	Chinese fan palm		C, S
Melia azedarach	Chinaberry		N, C, S
Melinis minutiflora	Molassesgrass		C,S
Merremia tuberosa	wood-rose		S
Murraya paniculata	orange-jessamine		S
Myriophyllum spicatum	Eurasian water-milfoil	P	N, C, S
Nymphoides cristata	snowflake		C, S
Panicum maximum	Guinea grass		N, C, S
Passiflora biflora	two-flowered passion vine		S
Pennisetum setaceum	green fountain grass		S
Phoenix reclinata	Senegal date palm		C, S
Phyllostachys aurea	golden bamboo		N, C
Pittosporum pentandrum	Philippine pittosporum, Taiwanese cheesewood		S
Pteris vittata	Chinese brake fern		N, C, S
Ptychosperma elegans	solitaire palm		S
Rhoeo spathacea (see *Tradescantia spathacea*)			
Ricinus communis	castor bean		N, C, S
Rotala rotundifolia	roundleaf toothcup, dwarf Rotala		S
Sansevieria hyacinthoides	bowstring hemp		C, S
Scleria lacustris	Wright's nutrush		C, S
Sesbania punicea	purple sesban, rattlebox		N, C, S
Solanum diphyllum	two-leaf nightshade		N, C, S
Solanum jamaicense	Jamaica nightshade		C
Solanum torvum	susumber, turkey berry	N, U	N, C, S
Sphagneticola trilobata (=Wedelia trilobata)	wedelia		N, C, S
Stachytarpheta cayennensis (=S. urticifolia)	nettle-leaf porterweed		S
Syagrus romanzoffiana (=Arecastrum romanzoffianum)	queen palm		C, S
Syzygium jambos	rose-apple		C, S
Terminalia catappa	tropical-almond		C, S
Terminalia muelleri	Australian-almond		C, S
Tradescantia spathacea (=Rhoeo spathacea, Rhoeo discolor)	oyster plant		S
Tribulus cistoides	puncture vine, burr-nut		N, C, S
Urena lobata	Caesar's weed		N, C, S
Vitex trifolia	simple-leaf chaste tree		C, S
Washingtonia robusta	Washington fan palm		C, S
Wedelia (see *Sphagneticola* above)			

Wisteria sinensis	Chinese wisteria		N, C
Xanthosoma segittifolium	malanga, elephant ear		N, C, S

SCHEDULE "2"

Class I and Class II Prohibited Aquatic Plants

SCHEDULE 2

PROHIBITED AQUATIC PLANTS

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

January 12, 2009

Prepared by

URS Corporation
7800 Congress Avenue, Suite 200
Boca Raton, Florida 33487

CLASS I PROHIBITED AQUATIC PLANTS

Alternanthera philoxeroides - alligatorweed, green lead plant
Casuarina spp. - Australian Pine
Crassula helmsii - swamp stone crop
Eichhornia spp. - waterhyacinth
Hydrilla verticillata - hydrilla, Florida elodea,
Ipomoea aquatica - water spinach
Ipomoea fistulosa
Lagarosiphon spp. - African elodea
Limnocharis flava - Sawah flowing rush
Lythrum salicari - purple loosestrife
Melaleuca quinquenervia - melaleuca
Mimosa pigra - giant sensitive plant, cat's claw
Monochoria hastata
Monochoria vaginalis
Myriophyllum spicatum - Eurasian watermilfoil
Nechamandra alternifolia
Oryza rufipogon - wild red rice
Pontederia rotundifolia - tropical pickerelweed
Salvinia spp. (excluding S. minima)
Schinus terebinthifolius -Brazilian pepper
Sparganium erectum - exotic burreed
Stratiotes aloides - water-aloe, soldier plant
Trapa spp. - water chestnut
Vossia cuspidata - hippo grass

CLASS II PROHIBITED AQUATIC PLANTS

Hygrophila polysperma - hygro
Limnophila sessiliflora - ambulia
Pistia stratiotes - water lettuce

SCHEDULE "3"

Best Management Practices

A) Prior to Lessor's acquisition of the Initial Option Property or the Entire Option Property pursuant to the applicable Option, the term "Best Management Practices" as used in this Lease shall be deemed to mean the best management practices set forth in the permits issued by Lessor (in its governmental capacity with respect to the Premises), in accordance with Rules 40E-61 or 63, as applicable, of the Florida Administrative Code, or any successor or replacement rule thereof, provided, however, that nothing herein shall be deemed to prohibit or affect Lessee's ability to challenge the same.

B) After Lessor's acquisition of the Initial Option Property or Entire Option Property pursuant to the applicable Option, the term "Best Management Practices" as used in this Lease shall be deemed to mean the best management practices set forth in Schedule 3.3 attached hereto entitled "Best Management Practices Plan Citrus".

SCHEDULE 3.3

[Best Management Practices Plan Citrus]

Schedule 3.3: REPLACE THE FIRST PARAGRAPH ON PAGE 1 WITH THE FOLLOWING:

The South Florida Water Management District ("District") and the United States Sugar Corporation, SBG Farms, Inc., and Southern Gardens Grove Corporation (collectively "USSC") have entered into a Second Amended and Restated Agreement for Sale and Purchase, dated August 12, 2010, ("Second Amendment") pursuant to which the District will acquire approximately 26,791 acres of farmland owned by USSC with an option to buy approximately 46,022 acres ("Initial Option") and/or an option to buy approximately 153,209 acres (which includes the Initial Option lands, unless the Initial Option has already been exercised) ("Entire Option"). The District will lease land (referred to in this Schedule as "farming units" or "purchased lands") to USSC pursuant to the terms of the Second Amendment.

This Environmental Best Management Practices (BMP) Plan has been prepared for the citrus production portions of the acquired properties. Portions of the citrus acreage are subleased each year for the cultivation of vegetables. These acres that are used for growing vegetables or other crops should follow the BMP for vegetable farming which is included as part of the USSC BMP Plan for Sugar Cane Production. This **Schedule 3.3** (including the requirements with respect to growing vegetables or other crops) applies to such leased land as provided on the first page of Schedule 3.

SCHEDULE 3.3

DRAFT REPORT
BEST MANAGEMENT PRACTICES PLAN
CITRUS

UNITED STATES SUGAR CORPORATION
HENDRY COUNTY, FLORIDA

Prepared for

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

May 8, 2009

Prepared by

URS Corporation
7800 Congress Avenue, Suite 200
Boca Raton, Florida 33487

URS

May 8, 2009

Mr. Robert Taylor
Lead Environmental Engineering Specialist
Land Management and Land Acquisition Division
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Subject: **Environmental Best Management Practices Plan-Citrus**
United States Sugar Corporation
Hendry County
State of Florida
Job # 38617-027

Dear Mr. Taylor,

URS Corporation (URS) is pleased to present this Environmental Best Management Practices (BMP) Plan for the United States Sugar Corporation (USSC) citrus properties in Hendry County, Florida.

It is URS' understanding that as the property owner, the South Florida Water Management District (District) desires to have in place a set of general environmental BMPs for the citrus operations that are designed to maintain/protect water quality in accordance with the State's water quality standards, maintain the soil and water quality at the site which will not prohibit the District from using property as a water attenuation reservoir in the near future, and that will concurrently allow for continued economically-viable agricultural production on the site. This BMP plan is designed to meet these expectations by providing guidance to the USSC property on environmental preventative measures to be proactively implemented.

Respectfully Submitted,

URS Corporation

Edward A. Leding, P.G.
Project Manager

Timothy B. DeBord
Vice President
URS Jacksonville

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1.0 OVERVIEW

1.1 INTRODUCTION

The South Florida Water Management District (District) has acquired approximately 72,500 acres of the United States Sugar Corporation (USSC) properties in Palm Beach, Hendry, Glades and Gilchrist Counties, Florida for future restoration purposes such as water storage reservoirs and wetlands. **Figure 1** illustrates the location of USSC citrus properties. Of the 72,500 acres, an estimated 32,000 acres are used for the cultivation of citrus. Currently 21,500 acres are being actively cultivated for citrus. **Figure 2** illustrates the tracts that are utilized for the cultivation of citrus. This Environmental Best Management Practices (BMP) Plan has been prepared for the citrus production portions of the acquired properties. Portions of the citrus acreage are subleased each year for the cultivation of vegetables. These acres that are used for growing vegetables or other crops should follow the BMP for vegetable farming which is included as part of the U.S. Sugar BMP Plan for Sugar Cane Production. This BMP Plan shall be implemented by future tenants of the District that engage in citrus production on portions of the acquired properties.

During the interim period (from acquisition to construction/land conversion), the District intends to utilize the property for continued agricultural operations primarily for the cultivation of citrus. In general, this BMP requirements document is not regulatory or enforcement based; however, failure of a tenant to implement the BMP Plan will constitute a breach of the tenant's lease with the District. BMPs are production systems and management strategies scientifically shown to minimize adverse water quality and other environmental impacts of citrus production. BMPs can be defined as those operational procedures designed to achieve greatest agronomic efficiency in food and fiber production, while limiting the off-site effects of agricultural operations and maintaining an economically viable farming operation. All BMPs must protect the environment and be economically viable.

There are several sources of research that have been used to develop BMPs for citrus production in Florida. Primary sources include the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), University of Florida/Institute of Food and Agricultural Sciences (IFAS), Environmental Protection Agency (EPA), Florida Department of Environmental Protection (FDEP), and Florida Department of Agriculture and Consumer Services (FDACS). This document cites pertinent documentation from these sources that may guide the implementation, evaluation, verification and validation of each BMP.

The proposed acquisition areas have been cultivated in citrus for approximately 30 to 35 years. The citrus growing areas are divided into four main parcels referred to as Alcoma, Devils Garden, Dunwody and Southern Gardens citrus groves. Each of these main parcels has an office, at least one maintenance shed and chemical storage room, and re-fueling area. Several diesel powered pump stations were identified throughout the properties. Citrus canker wash stations were observed at each of the entrances to the tracts. Personnel indicated that a copper containing solution was utilized in the spray. Agrochemical application was conducted using mobile equipment and chemical storage is onsite. Disposal of chemical containers is conducted offsite. Subject property personnel indicated there have been no central burn pits for removed trees and that trees were burned in many small areas across the site. An agricultural air strip is located on two of the parcels.

1.2 ENVIRONMENTAL SITE ASSESSMENT (ESA)

Phase I and Phase II Environmental Site Assessment (ESA) activities were conducted on the property in August and September 2008 by Professional Services Incorporated (PSI). Identified areas of potential point source concerns associated with the citrus operations are:

- Chemical Storage and/or Maintenance Areas
- Equipment Staging Areas
- Mix and Load Areas
- Fuel Storage / Re-fueling Areas
- Diesel Powered Pump Stations
- Canker Wash Stations
- Airplane Landing Strips

Section 2.0 provides descriptions of a variety of environmental BMPs to be considered as part of the citrus operations. Although all BMPs are important with the need for diligent on-going implementation, particular attention needs to be addressed to the following:

- Pump Stations
- Chemical Storage Areas
- Copper Based Nutrients

Given below is a summary of the observations made during the Phase I ESA, as well as the results of the Phase II ESA at the above referenced areas/issues and URS' recommendations to address the issues.

- Diesel powered pump stations with aboveground storage tanks (ASTs) used to store diesel fuel were observed on the properties. The pump stations are used to control to water in the groves. Soil staining and/or petroleum impacted soils were identified at most of the pump stations. **URS recommends implementing preventative measures for petroleum spills and diesel AST leaks. This should include repairing any leaks and use of absorbent material when leaks and/or spills occur. URS also recommends routine site inspections when the pumps are in operation to verify the pump stations are being properly maintained and in compliance.**

- Chemical and equipment storage areas were observed on the properties. Areas of petroleum and agrochemical stained soil and stressed vegetation were observed at the chemical and equipment storage areas. **URS recommends improving housekeeping at the storage areas. This should include proper handling and storage of agrochemicals and use of absorbent pads and materials at the equipment storage areas. URS also recommends monthly site inspections to verify the storage areas are being properly maintained.**

- During the Phase I ESA, PSI identified copper based nutrients from the USSC pesticide application records. Due to these copper based nutrients, PSI analyzed for copper in the citrus grove areas during the Phase II ESA. PSI divided the citrus cultivation area into 40-acre grids and

sampled approximately 50% of these 40-acre grids that were historically and currently cultivated with citrus. An eight point composite sample was collected from each grid with each aliquot representing approximately 5-acres. Additionally, discrete soil samples were collected throughout the citrus groves in each of the 5-acre grids. All aliquots were collected from a depth of 0 to 6-inches bls using a stainless steel sample barrel. The Phase II ESA sampling did not identify areas of elevated copper in the citrus groves above the Service provisional Snail Kite threshold level of 85 milligrams per kilogram (mg/kg). URS personnel reviewed the current rates of application and amounts of copper based nutrients applied on the USSC property. Utilizing this information, a mass balance equation was developed in order to evaluate if additional acreage would be impacted by copper based on the current application activities. URS has determined that no acreage would be affected by elevated levels of copper above the Service provisional 85 mg/kg. **Therefore the current agrochemical application regiment in the citrus groves is acceptable. URS recommends sampling select areas within the citrus groves every other year in order to monitor the copper concentrations in the soil. In the event that USSC plans to increase the applications rate of copper based agrochemical, URS recommends that USSC discuss the application increase with the District.**

1.3 OBJECTIVE

Given below are sets of guidelines proposed for the day-to-day citrus farming operations:

- Continued economically-viable citrus grove operations on the properties that is agreeable for implementation by the lessee/tenant during the interim use,
- Maintain/protect water quality in accordance with the State's water quality standards, prevent exceedances of applicable State soil and groundwater Cleanup Target Levels (CTLs) as set forth in Table 1 and 2 of 62-777, F.A.C., and implement such measures as necessary to maintain existing levels of pollutants and not interfere with Lessor's intent to use the premises as a future water resource project,
- Comply with State regulations that are applicable to the citrus grove operations that result in conditions that will maintain the soil and water quality at the site which will not prohibit the District from using the property as a water attenuation project area at the end of the interim use period.
- Comply with permits/consent agreements issued by the District approving the site specific BMP plan for Water Management, Nutrient Management and Fertilizing, and Erosion/Sediment Control and the Discharge Monitoring Plan for nutrients (phosphorus and nitrogen).

A list of agrochemicals currently used was provided to the District. The chemical usage list is included in *Section 6.0 Acceptable Agrochemicals and No Application Periods*. In the event that changes are made to the agrochemical list, a revised list should be provided to the District and should consist of a detailed specific agrochemical and pesticide product list, to include the quantity used, rates of application, and an evaluation of crop areas for effectiveness of the pesticides.

The U.S. Fish and Wildlife Service (Service) document titled "Derivation of No Application Periods for Interim Use Pesticides" defines the no application period as *the period of time prior to the conversion of the agricultural land to conservation purposes (i.e. flooding to create wetlands) during which a*

particular pesticide hazardous to fish and/or wildlife should not be applied, in order to allow adequate time for breakdown of pesticide residues before use of the land by the Service trust resources. This period of time was defined as five times the median half-life, representing 97% degradation. A copy of this document is included in **Appendix A.**

1.4 BMP CHECKLIST

A BMP Checklist has been developed for the citrus grove farming on the property owned by the District. The BMP Checklist is provided as a guide for site inspections, observations and verifications as part of the BMP. This checklist identifies areas, issues, and items requiring inspection and verification. The purpose of the BMP Checklist is to insure consistency for each site visit and for other sites with similar agricultural operations. A copy of the checklist is included in **Appendix B.**

The following table provides a quick-glance reference specific to nutrient (phosphorus and nitrogen) load reduction BMPs. As provided in Schedule 3.1, a separate District-approved BMP Plan is required for each land use or crop for nutrient load reduction. BMP Plans shall be implemented across the entire farm acreage (drainage area) with individual BMPs consistently implemented during the water year across each land use (crop) area. The BMP Plans shall include BMPS from each of the following categories: water management, nutrient control practices, and particulate matter and sediment controls. Nutrient control practices at a minimum shall include spill prevention, soil testing, and fertilizer application control. The Table below provides an array of nutrient load reduction BMPs available for selection by operators. However, operators may propose other BMPs, to meet the minimum required BMP equivalent points, for review and approval by the District.

Further discussion of each BMP and key points to assist with advance preparation of BMP site verification and BMP optimization efforts are provided in the following Sections.

Nutrient Load Reduction Best Management Practices
BMP Description and Equivalent Points Reference Table

BMP	PTS	DESCRIPTION
NUTRIENT CONTROL PRACTICES		MINIMIZES THE MOVEMENT OF NUTRIENTS OFF-SITE BY ENSURING RECOMMENDED APPLICATION RATES AND CONTROLLED PLACEMENT OF APPLICATION
Nutrient Application Control	2 ½	Uniform and controlled boundary application of nutrients with a minimum 4' setback from canals with no overlapping application for each application method (e.g. banding at the root zone or side-dressing, pneumatic controlled-edge application such as AIRMAX); fertilization through low volume irrigation system applied at root zone (fertigation); controlled placement by fertilization under plastic near root.
Nutrient Spill Prevention	2 ½	Formal spill prevention protocols (storage, handling, transfer, and education/instruction).
Manage Successive Vegetable Planting to Minimize P	2 ½	Avoid successive planting of vegetables or other crops having high P needs to avoid P build up in soils. Includes successive planting with no successive P application.

Recommended Nutrient Application based on Plant Tissue Analysis	2 ½ 5	Avoid excess application of P by determining plant nutrient requirements for adjustments during next growing season (crop specific). Pastures with Bahiagrass – Plant tissue analysis along with soil test is required to make nutrient application recommendation. Citrus– Additional points allowed for citrus because it provides information on current season P requirements.
Recommended Nutrient Application based on Soil Testing	5	Avoid excess nutrient application by determining P requirements of soil and follow standard recommendations for application rates (crop specific).
Split Nutrient Application	5	More efficient plant uptake of P by applying small portions of total recommended P at various times during the growing season. Not to exceed total recommendation based on soil test.
Slow Release P Fertilizer	5	Avoid flushing excess P from soil by using specially treated fertilizer that releases P to the plant over time.
Reduce P Fertilization	5	Reduce the P application rate by at least 30% below standard recommendations based on soil tests and development of site –specific (optimized) recommendations or application methods. Provide basis for reduction credit.
No Nutrients Imported Via Direct Land Application	20	No Application of P, in any form, to the soil for amendments or plant nutrients. (Native and Semi-improved Range can claim this BMP and still apply fertilizer at maintenance, or less than optimum production levels, as a grass supplement every 6-8 years.)
No Nutrients Imported Indirectly Through Cattle Feed	15	No P import to the basin through cattle feed (note: only native range can use mineral supplements or molasses and still meet this BMP)
Nutrient Management Plan	5 - 25	Managing the amount, source, placement, form, and timing of the application of nutrients on lands with cattle operations. See Rule 40E-63.402 (2)

BMP	PTS	DESCRIPTION
WATER MANAGEMENT PRACTICES		MINIMIZES THE QUANTITY OF OFF-SITE DISCHARGES WHICH CARRY NUTRIENTS DOWNSTREAM
½ Inch Detained 1 Inch Detained	5 10	Delayed discharge (based on measuring daily rain events using a rain gage).
Improvements to Water Management System Infrastructure to Further Increase Water Quality Treatment by Delayed or Minimized Discharge	5	Recirculation of water inside farm boundaries to improve WQ prior to off-site discharge, includes: fallow field flood water with no direct discharge (instead allow to "drain" via evapotranspiration, seepage, use as irrigation water); or Increasing water detention using properly constructed canal berms.
Low Volume Irrigation	5	Use of low volume irrigation methods, e.g. drip irrigation, microjet irrigation.
Approved and Operational Surface Water Reservoir (Fully Certified)*	20	Properly permitted, constructed and maintained storage system meeting specified Environmental Resource Permit (ERP) Basis of Review criteria (version in effect at the time of permitting or in effect at the time of permit modification for modified systems).
Temporary Holding Pond	15	Temporary agricultural activities (as described in Chapter 40E-400, FAC.) with a properly constructed and permitted temporary holding pond.
Overland Sheet Flow Over Entire Property	15	No drainage improvements made to property so that property drains through overland sheet flow, or drainage improvements such as ditches have been removed to restore overland sheet flow drainage to the property.
No Point Discharge of Surface Water	15	Voluntarily disabling of drainage or implementation of other permanent means to prevent point discharge.
Tailwater Recovery System	10	A planned irrigation system in which facilities have been installed and the system is operated to collect, store, and transport irrigation tailwater and/or rainfall runoff that would have been discharged offsite without the system.
Precision Irrigation Scheduling	10	Combination of soil-moisture measuring equipment, specialized irrigation decision tools (e.g. computer software), and/or remote sensing tools to ascertain real-time crop needs to maximize irrigation system performance and to develop precise irrigation scheduling (time, location and amount).

**Surface water reservoir certification refers to a construction completion certification by a Florida licensed Professional Engineer as required in Chapter 40E-4, F.A.C., using Form 0881A for projects permitted after October 3, 1995, and Form 0881B for projects permitted prior to October 3, 1995, or the current certification requirements of Chapter 40E-4, F.A.C. (except where not required by existing permits).

BMP	PTS	DESCRIPTION
PARTICULATE MATTER AND SEDIMENT CONTROLS		MINIMIZES THE MOVEMENT OF P, IN PARTICULATE MATTER AND SEDIMENTS, OFF-SITE BY CONTROLLING THE AMOUNT OF ERODED SOIL AND PLANT MATTER IN DISCHARGE
Any 2 Any 4 Any 6 Any 8	2 ½ 5 10 15	• erosion control by leveling fields • reduce soil erosion using grassed swales and field ditch connections to laterals • minimize sediment transport with slow velocity in main canal near discharge structure • minimize sediment transport into canals by constructing ditch bank berms • minimize sediment build-up through a canal cleaning program • reduce sediments transported offsite by using field ditch drainage sumps • minimize sediment transport with slow field ditch drainage near pumps/structure • reduce sediments transported offsite by maintaining a sediment sump/trap upstream of drainage structure • reduce sediment transport through the use of grassed waterways • reduce sediment transport through the use of filter strips or riparian buffers adjacent to waterways. No P is applied to these areas. • reduce sediments transported offsite by raising culvert bottoms above all ditch bottoms to minimize sediment transport • reduce sediments transported offsite by stabilizing soil through infrastructure improvements at canal/ditch intersections (e.g. flexible plastic pipe, polymer treatment) • maintain sustainable forage growth on pasture to reduce soil erosion/range seedings • reduce soil erosion with constructed ditch bank stabilization • reduce soil erosion with cover crops (not fertilized) • maintain vegetative cover in upland areas to reduce soil erosion • reduce soil erosion with vegetation on ditch banks • minimize P from plants by aquatic weed control (P source) at main discharge locations • reduce debris and aquatic plants (P source) leaving the site by using barriers at discharge locations

BMP	PTS	DESCRIPTION
PARTICULATE MATTER AND SEDIMENT CONTROLS FOR PASTURE MANAGEMENT		MINIMIZES NUTRIENTS IN DISCHARGES THROUGH ON SITE OPERATION AND MANAGEMENT PRACTICES
	2 ½	• restricted placement of stored feed and feeders to reduce "hot spots" near drainage ditches
	2 ½	• restricted placement of cowpens to reduce "hot spots" near drainage ditches
	2 ½	• restricted placement of water to reduce "hot spots" near drainage ditches
	2 ½	• provide shade structures to prevent cattle in waterways
	5	• low cattle density (1 head/2 acres, nonirrigated pasture)
	10	• restrict cattle from waterways through fencing of canals in a manner that protects water quality

2.0 WATER RESOURCE MANAGEMENT

The drainage systems that have been developed in the USSC property to make productive agricultural and urban land have increased drainage frequency, discharge volumes, and the velocity of water discharged from structures within the watershed compared with the natural condition. An existing permit, issued by the District, for the USSC property drainage systems is currently in place. Excess rainfall from high intensity thunderstorms, tropical storms, and hurricanes must be drained to protect agricultural and urban areas from flooding. Under natural conditions, water from these areas would be cleaned by traveling downstream via tributaries before reaching coastal water bodies. Implementation of the practices and policies in this Section will improve water quality and maintain natural variability and the aquatic ecosystems in the USSC citrus production property.

Wherever feasible, citrus growers will implement surface water management strategies consistent with the surface water management or ERP permits. These surface water management strategies should also consider benefits from improved ditch maintenance and water table management. It is important to conduct site-specific evaluations to evaluate if additional measures can be provided on-site and to plan long-term water management strategies that will minimize off-site discharges.

2. 1 WATER TABLE MANAGEMENT

The water table can be managed more efficiently by having sufficient hydraulic capacity in the ditch/canal system, using water control structures on culverts, laser land leveling where appropriate, constructing and maintaining a properly designed drainage system, and actively monitoring the water table. Based on the Phase II ESA, the existing system is satisfactory and is consistent with the District's goals and objectives.

Effective water management of flatwoods soils requires monitoring the water table depth with enough precision to minimize pumping for irrigation and drainage. Knowledge of the water table depth is essential to ensure that adequate drainage can be provided. Since a significant portion of the tree water requirements can come from upward flux from the water table, water table monitoring is an essential tool in irrigation management. Water table manipulation, and associated supplemental irrigation reductions, can also assist in salinity management by reducing the use of low quality groundwater.

2. 2 SCHEDULING IRRIGATION AND DRAINAGE

The main management objective is to minimize the overdrainage of the property by the active control of the site water table. Irrigation mostly affects the movement of water-soluble chemicals while drainage mostly affects the movement of chemicals absorbed to soil particles. Irrigation at the properties principally consists of microjet irrigation. The microjet system on the property is effectively operating and is acceptable by the District. Site verification will include discussion and BMP-related records review with operation managers to understand property water management approach and visual observation of structures and tools used to assist with water management decisions.

Operation managers should use real-time weather monitoring to proactively manage or limit drainage and/or irrigation events. Effective water management is achieved through water control structures such as designed culvert sizes and openings or culverts with flashboard risers. Control elevations will be established to initiate and stop draining or pumping. If feasible, the operation manager will partition the

property into hydrologic blocks to allow for internal water management as opposed to one location at a downstream point. Water level indicators (e.g., floats, staff gages) will be used to provide a visual indicator of actual water table levels for use in optimizing water management (drainage and irrigation) practices. Where reservoirs do not exist, daily operation and maintenance of off site discharge structures must be properly recorded on field logs ensuring that established control elevations are met. Field log data shall include recording the water table elevations during pump start-up and shut-down times, and pump rpms as applicable.

Soil moisture measurements should be recorded to determine optimum times for irrigation and irrigation limits. The properties are currently utilizing the Agrolink system that uses soil monitoring probes to measure the soil moisture at various depths down to 36-inches below land surface.

2. 3 MODERATE DISCHARGE RATE

Adjust the rate of discharge proportionate to the rate of lateral movement of water through soils. Slowing the discharge rate will lessen the turbulence, reduce sediment movement, reduce erosion, and moderate the impacts on the receiving water body.

2. 4 WATER FURROW MAINTENANCE

Maintain a consistent bottom slope on water furrows between beds to achieve uniform drainage. Avoid rutting and sloughing of water furrow areas. Laser or RTK-GPS guided systems on water furrow maintenance equipment can be very effective in producing uniform slopes in water furrows. Where possible, maintain vegetation management programs that minimize soil movement in the event of heavy rains by keeping a grass or vegetation cover on the soil surface in between tree rows. For additional information refer to the Erosion Control and Sediment Management Section in this document.

2. 5 MONITOR SOIL MOISTURE

The Agrolink system for soil moisture measurements is used in conjunction with water table observation wells and staff gauges in the canals for irrigation and drainage management to avoid excess soil moisture depletion and minimize water volume requirements during irrigation cycles. This system of soil monitoring is appropriate and acceptable by the District.

2. 6 DRAINAGE MANAGEMENT PLAN

Implement and maintain a written drainage management plan that provides specific responses to various types and levels of rainfall. The goal of the plan is a reduction in volume of off-site discharge while maintaining a healthy rooting environment for citrus trees thus maximizing fruit production. The plan will include target water table levels and pump or drainage structure operating procedures that will be used for typical and extreme rainfall events. Consideration should be given to the use of existing canals and ditches for temporary water storage.

2. 7 DRAINAGE RATE AND VOLUME

Drainage rates and the volume of water released or discharged following intense rainfall events should provide an adequately drained root zone while minimizing off-site impacts. The system operating the drainage rates and volumes will be in compliance with existing drainage permits.

When the water table approaches the target level, off-site discharges should be moderated. Depending on the grove design, irrigation method (e. g. microirrigation and seepage irrigation), and soil characteristics, this may require adjusting pump speed and the discharge structure or pulse drainage. Pulse drainage involves discharging for short periods of time and then allowing for recharge in the ditches. If adequate drainage in one portion of a grove results in water tables that are below target levels in another area, ditch cleaning, drain-age system redesign, or auxiliary pumps may be needed to achieve more uniform drainage.

2. 8 DISCHARGE STRUCTURES

Structures and/or pumps that regulate off-site water discharge should be adequately designed, constructed, and maintained so that target water table levels within the grove can be achieved.

If safety or operational concerns prevent structures from being adjusted to regulate discharges during storm drainage events, they should be rehabilitated or replaced. (e.g. modifying riser-board structures to allow easier water level control). For additional information see your local NRCS and District representative.

2. 9 DETENTION, TAILWATER RECOVERY, AND SURFACE WATER USES

Where possible, on-site detention should be utilized to reduce both the rate and volume of off-site discharges.

Detention areas allow all or a portion of the drainage water to be temporarily stored on-site. The excess water can be stored for tailwater recovery or released later at low flow rates. The size, type, and location of proposed tailwater recovery ponds are variables considered when determining the need for an Environmental Resource Permit. Growers should contact their local District office and land manager for guidance on the issue. Most of the citrus groves in the USSC properties have permitted stormwater impoundments.

If a tailwater recovery program is proposed, the planning, construction, evaluation of costs, and permitting will need to be discussed and reviewed by the District.

The properties are all in compliance with Section 2.1 through 2.9 with the exception of Section 2.6 -- Drainage Management Plan. It is URS' understanding that USSC is in the process of developing a written Drainage Management Plan for the citrus properties.

3.0 EROSION CONTROL AND SEDIMENT MANAGEMENT

Sediments or suspended solids are recognized forms of water pollution and often result in the loss of ditch or canal capacity. Unlike many chemical pollutants, sediment is a natural component of water bodies and the resources they support. Excessive amounts of suspended solids or sediments are often a product of erosion from unstabilized or disturbed land areas. These solids originate from four primary sources:

- Soil-particles eroded into ditches
- Soil-particles eroded from ditches
- Plant material washed into the ditches
- Plant and biological material growing within the ditches and canals.

Excessive sediments deposited on stream bottoms and suspended in the water column can harm fish spawning and impair fish food sources, reduce habitat complexity, potentially harm public water supply sources, and reduce water clarity.

In addition to potential downstream water quality impacts, the build-up of silts and sediments in the grove/farm-level, secondary, and primary drainage canals reduces ditch and canal cross-section. This reduction in cross-sectional area results in higher water velocities, as compared to an unfilled ditch or canal. This higher water velocity (compared to unfilled ditches/canals) may induce greater amounts of erosion of fine and coarse particles from ditch and canal banks. The presence of shoals and sandbars are good indicators of soil losses. Field erosion also results in site degradation resulting in increased costs for ditch-cleaning and reshaping of beds and furrows. In order to minimize effects of sediment transport in surface water, efforts should focus on keeping soils in the fields and along canal and ditch banks.

Minimizing downstream transport of sediments from groves and canal/ditch banks requires an integrated approach of managing erosion at the grove-level, the secondary canal system level and primary canal system level. It should be noted that maximum sediment losses from groves are expected during construction of new groves or renovation of older ones. Losses from mature, well managed groves will be much lower. The following Sections describe BMPs that are applicable for water conveyances within citrus groves. The selection and implementation of particular BMPs must be based upon site-specific circumstances and management styles.

3.1 RISER-BOARD WATER CONTROL STRUCTURES

Water discharge structures are used to control water table levels and surface water levels in drainage ditches within flatwoods citrus groves. The type of structure selected can significantly influence the quality of water discharges. With riser-board control structures, water is forced to flow over the top of the boards. This flow path creates a low current area towards the bottom of the structure, which facilitates the deposition of sediments and their accompanying nutrients or pesticides, essentially removing them from the discharges. Conversely, screw-gates structures do not create this dead-current zone. Since they open from the bottom, sediments and their accompanying load are swept out along with the discharge water.

3.2 SEDIMENT SETTLING BASINS

Create and maintain localized settling basins (sumps) throughout the groves to trap sediments prior to water discharge points from the grove where practical. Successful sediment traps require site-specific designs, with the following requirements:

- Determine runoff volume and intensity.
- Determine transport and settling rates for sediments of concern.
- Size traps to allow adequate residence time for natural settling to occur - include considerations for allowable storage (fill-up) of trapped sediments.
- Make provisions for materials removed from the ditches so that it does not create a situation that contributes to nutrient loads discharged off site.
- Maintenance access to settling basin area should be provided.
- When sediments are removed, materials need to be placed in a manner that prevents material from sloughing back into the waterway.
- Sediment excavation and removal should be conducted during low stage conditions or during the dry season. This will reduce the likelihood of increasing turbidity and suspended solid loads.

Settling basins or settling ponds are a quick and simple way to remove sediments out of runoff water. Settling basins simply slow down the water, allowing sediments to settle out of the water before the water returns to the receiving water body.

NOTE: Existing detention impoundments may function as sediment settling basins.

Currently, the Devils Garden, Southern Gardens, and Dunwody citrus groves each have a series of sediment settling basins. At these properties, each block in the groves contains a ditch that flows to lateral canals and then to a specific retention pond, depending upon the location on the property. The retention ponds then operate as a series of sumps that allow for the sediment to settle to the bottom of the retention ponds. After adequate residence time occurs, the water from the retention ponds flows to a discharge pond where it is discharged off the property. The Southern Gardens and Dunwody groves each have one discharge pond while the Devils Garden grove contains three discharge ponds. The Alcoma Citrus does not contain retention ponds but rather a canal system that allows for adequate residence time for natural settling prior to being discharged from the property.

3.3 DITCH CONSTRUCTION

Construct ditches and canals with side-slopes consistent with soil types.

3.4 STABILIZE BARE SOILS

Stabilize bare soils and canal or ditch banks by encouraging coverage by noninvasive vegetation. Vegetation types selected should be adapted to grove conditions and should provide maximum stabilization by roots and foliage. Vegetative buffer strips can also serve to reduce the erosion of soil particles. Whenever practical, plant or encourage establishment of native species.

3.5 DITCH BANK CONTOURS

Contour ditch bank top edges or berms to divert water away from the drainage ditch.

This practice will minimize overland flow of storm-water directly down the banks.

3.6 DITCH BANK VEGETATION MAINTENANCE

Broadleaf weed control using herbicides or maintenance mowing of slopes and ditch banks increases grass cover and decreases the proliferation of shade-producing shrubs and weeds, thus reducing erosion from wind and rainfall.

Points to Consider:

- Mechanical mowing does not uproot vegetation and expose soil.
- The use of herbicides shall be conducted with caution and precision to avoid creating areas of bare soil.
- Selective herbicides should be used in order to maintain desired vegetation (e.g. remove broad-leaf vegetation while maintaining grasses).

3.7 PROTECT DITCH BANKS

Protect canal and ditch banks from erosion in areas subject to high water velocities.

In areas where water is constricted (usually at discharge points) or at ditch intersections where velocities are high, rip-rap, concrete, headwalls, or other materials that buffer turbulence should be used to protect ditch banks and reduce sediment transport.

3.8 VEGETATIVE STABILIZATION (WATER FURROWS)

Plant non-invasive vegetation and/or maintain desirable vegetation within all water furrows to prevent/minimize erosion and trap sediments that may result from stormwater runoff or irrigation drainage.

3.9 AQUATIC PLANT MANAGEMENT

When removing vegetation from ditch bottoms, avoid disrupting side slopes.

If a backhoe without a vented bucket is used to remove aquatic plants from grove ditches, special precautions must be taken to prevent washouts. Once a bucketful of vegetation is picked up, the bucket should be raised to allow most of the water to drain out over the deeper part of the ditch. The boom should be swung far enough over the ditch bank so that when the vegetation is dumped, remaining water will flow away from the ditch.

Note that chemical control of mature aquatic vegetation may result in large amounts of labile particulate phosphorus levels from farms. Timing and selection of methods for aquatic vegetation control shall prevent generation of particulate phosphorus due to inappropriate aquatic vegetation control methods and disposal. Glyphosate based herbicide Rodeo may be spot applied on the aquatic vegetation, followed by removal of the dead vegetation. Excessive amounts of Rodeo application are not allowed.

3.10 DITCH MAINTENANCE CLEANING AND DREDGING

Develop and implement a systematic management plan for removing sediments from canals and farm ditches on a regular basis.

Maintenance dredging of existing ditches, canals, and intake and discharge structures shall include the following:

- Spoil material should be removed and deposited on an area that will prevent the movement of the water and excavated spoil material into wetlands or other surface waters.
- Do not remove any more material than is necessary to restore the original design specifications or configurations.
- No significant impacts should occur to previously undisturbed natural areas.
- Erosion and sedimentation control devices (e.g., turbidity screens) should be used to prevent bank erosion, scouring, and to prevent turbidity from discharging into adjacent waters during maintenance dredging.

Removal of excess sediment to the originally designed and constructed cross-sectional area generally increases the canal cross-sectional area and reduces water velocities (compared to same water volume in filled-in systems), thus reducing the potential for bank scouring. Caution should be considered as ditch maintenance, cleaning and dredging beyond the originally designed and constructed cross-sectional area may result in upstream and/or downstream adverse water resource impacts. Routine maintenance of the canals are, in general, conducted on a yearly basis.

If not part of standard ditch/canal maintenance, prior to conducting non-routine maintenance, in order to reduce the potential for misunderstandings with regulatory agencies and adjacent property owners, growers are highly encouraged to initially schedule a site visit with a local District representative to discuss and review the non-routine ditch maintenance activities.

3.11 HERICIDE APPLICATIONS (WATER FURROWS)

Restrict the area of tree-row applied herbicides to within the canopy dripline of the citrus trees.

The restricted herbicide band width will maximize the width of grassed water furrow slopes. Grassed water furrows serve as filters, preventing sediment movement from the fields into the drainage systems.

For young plantings, minimize the width of tree-row applied herbicides and establish vegetation in the water furrows. Smaller band widths will reduce the quantity of herbicides applied, thereby reducing material costs while minimizing potential of soil erosion into the drainage systems. As the trees increase in canopy width, the herbicide band width can be increased to match canopy size.

3.12 MIDDLES MANAGEMENT (HERBICIDE)

Suppress undesirable vegetation on bed tops and in water furrows.

3.13 GROVE DEVELOPMENT/RENOVATION

Upon completion of the soil bedding process within citrus groves, all bare soil areas (except tree rows) should be planted with grass or other vegetation species to minimize soil movement from rain and/or wind.

Bare soil surface, during windy conditions, can provide sufficient soil to blast the bark of young trees and allow movement of soil into water furrows and other drainage systems.

3.14 WATER FURROW DRAIN PIPES

Use PVC drain pipe or flexible pipe to connect all water furrows or field ditches to lateral ditches. Extend the pipe on the downstream side away from the ditch bank to prevent bank scouring.

3.15 WATER FURROW MAINTENANCE

Use water furrow drain pipes with managed vegetation in furrows to reduce surface water transfer velocity from the furrows to the drainage ditches and canals.

3.16 CONSTRUCTION AND TEMPORARY EROSION CONTROL MEASURES

In the event that large-scale, non-routine construction is required, then special measures and/or temporary erosion control measures will be taken during construction and renovation of groves, when culverts and control structures are replaced or repaired, and when there is a major disruption of established vegetation such as during irrigation system installation or when buried water lines are repaired.

Erosion control measures are used to minimize sediment transport and protect the quality of water bodies that receive runoff from disturbed areas. The most common temporary erosion control tools include straw or hay bale barriers, silt screens, and silt fences; however, more permanent control can be obtained through the use of specialized blankets and mats, gabions, and other systems used for soil stabilization.

The cost of erosion control options are highly variable and agricultural producers are encouraged to consider economics and site-specific conditions when selecting the most appropriate erosion control system for a particular action. When selecting an erosion and sediment control method, it is recommended that a NRCS representative, engineer, and/or a District Ag-Team member be consulted. This current erosion control on the property is appropriate and acceptable by the District.

4.0 PEST MANAGEMENT

Over the last 20 years, great strides have been made in the development of crop protection (CP) products that are more target specific, less harmful to the environment and safer to those who handle and apply these products. The development and implementation of responsible farm management practices that promote the proper handling of these products also has contributed significantly to reducing the risk of environmental problems and protecting water resources, pesticide handlers and agricultural workers.

4.1 INTEGRATED PEST MANAGEMENT (IPM)

Adopt an Integrated Pest Management (IPM) program. IPM is an integrated system using a combination of mechanical, cultural, biological, and chemical approaches to best meet the goals of the program. This approach provides better and more economical management of most pests.

IPM is a philosophy of managing pests that aims to reduce farm expenses, conserve energy, and protect the environment. IPM is a broad, interdisciplinary approach using a variety of methods to systematically manage pests which adversely affect people and agriculture. IPM does not, as many believe, mean that no CP products are used. Rather, it means that CP products are only one weapon against pests and they should be used judiciously, and only when necessary.

The goals of an IPM program are:

1. Improved control of pests, through a broad spectrum of practices that work together to keep pest populations below economically significant thresholds.
2. More efficient CP product management through less frequent and more selective use of CP products.
3. More economical crop protection from reduced chemical costs and more efficient protection.
4. Reduction of potential hazards to farmers, workers, consumers, and the environment through reduced CP product exposure.

IPM accomplishes these goals using resistant plant varieties, cultural practices, parasites and predators, other biological controls such as *Bacillus thuringiensis* (BT), and other methods including chemical CP products as appropriate.

The basic steps for an IPM program are:

1. Identify key pests and beneficial organisms and the factors affecting their populations.
2. Select preventative cultural practices to minimize pests and enhance biological controls. These practices may include soil preparation, resistant rootstocks/scions, modified irrigation methods, cover crops, augmenting beneficials, etc.
3. Use trained "scouts" to monitor pest populations to determine if or when a control tactic might be needed.
4. Predict economic losses and risks so that the cost of various treatments can be compared to the potential losses to be incurred.
5. Decide the best course and carry out corrective actions.

6. Continue to monitor pest populations to evaluate results and the effectiveness of corrective actions. Use this information when making similar decisions in the future.

USSC currently has an IPM program in place and the policy has been implemented.

4.2 LABEL IS THE LAW

Read and understand the CP product label. The label is the law. Pay special attention to the "Environmental Hazards" section of the label. This applies to all sections following.

4.3 PRODUCT SELECTION

Select target-specific active ingredients that consider natural systems in epidemiological cycles and modes of action (i.e. insect growth regulators, botanicals, and biologicals).

Agricultural use of CP products should be part of an overall pest management strategy, which includes biological controls, cultural controls, pest monitoring and other applicable practices, referred to altogether as Integrated Pest Management or IPM. When a CP product is needed, its selection should be based on effectiveness, toxicity to non-target species, cost, and site characteristics, as well as its solubility and persistence.

While the focus of the IPM program is for field populations of mites, insects, nematodes, disease pathogens and weeds, CP products also are prescribed for post-harvest maintenance of fruit quality. Some of these situations require pre-harvest applications as part of the overall management strategy. Due consideration needs to be given to these treatments in the overall crop BMPs.

4.4 MINIMIZE SPRAY DRIFT

Reduce the potential for drift through appropriate selection of nozzles, spray pressure, and application methods or techniques for the formulation applied and equipment used. Always follow the label.

- Use nozzles that produce as large of a droplet size as possible while yielding adequate plant coverage and pest control.
- Leave a buffer zone according to the crop protection label between the treated field and any sensitive areas.
- Drift control agents can be tank-mixed with herbicides to reduce spray drift.

4.5 APPLICATION TIMING

Time CP product applications in relation to current soil moisture, anticipated weather conditions, and irrigation schedule to achieve greatest efficiency.

For weather information:

Florida Automated Weather Network: http://fawn.ifas.ufl.edu/

National Oceanic and Atmospheric Administration: www.NOAA.gov

National Oceanic and Atmospheric Administration: http://weather.noaa.gov/

The Weather Channel: www.weather.com

4.6 PRECISION APPLICATION OF CP PRODUCTS

Use precision applications of reduced amounts of material to smaller trees in order to minimize application of CP products to non-target areas and result in more efficient utilization of applied materials. The method of CP product application, such as ground or aerial spraying, wicking, granules, etc., is important since the degree of drift and volatilization can vary considerably.

Some "intelligent" spraying systems are equipped with three-dimensional range sensors that can map the image of a tree up to 100 ft away on either side of the sprayer. These sensors feed the size, height, and location of the tree into an on-board computer that then turns on spray nozzles inches before the sprayer reaches the tree and turns them off inches past the tree. The nozzles are controlled by electric solenoid valves, which are set up in zones so that only the foliage detected by the scanner is sprayed.

It is important that "intelligent" systems be properly maintained and operated and that equipment operators are trained in their use. Proper operation of "intelligent" systems is essential for efficient use of CP products.

Equipment without intelligent systems should have nozzle arrangements to avoid overspray based on tree height. This is sometimes referred to as "nozzling-down" to conserve spray materials and ensure application to target areas.

Other systems have been developed that utilize sonar for detecting foliage. These systems utilize ultrasonic impulses to detect the presence or absence of trees and plants. Sensors are installed on each side of the sprayer that may be aimed in any desired direction to cover optimal zones. The number of sensors can vary depending on the diversity of tree sizes within the grove.

Regardless of application system, proper training of applicators and maintenance of spray systems are essential to good management.

4.7 MAINTENANCE AND CALIBRATION

Proper calibration and maintenance of CP product application equipment are essential for the proper application of agricultural chemicals. Equipment without "intelligent" systems should be manually nozzled down or otherwise adjusted when necessary to ensure proper application rates.

Calibration is the process of measuring and adjusting equipment performance. Application equipment that must be calibrated includes granule-applying devices; hand, backpack, boom, air-blast and other sprayers; soil fumigation devices; and injection equipment used for chemigation work. Calibration is not difficult. Calibration requires some arithmetic. Consult IFAS publication SM-53 or other publications for details and examples of calibration calculations.

CP product application equipment can deliver the correct amount of CP product to the target site only if it is working correctly. Before you start to calibrate any equipment, first make sure that all components are clean and in good working order.

To accurately calibrate any device, you must be familiar with the machinery. Follow the manufacturer's directions carefully – they usually explain how to adjust the equipment. Pay particular attention to the parts (such as nozzles and hopper openings) that regulate how much CP product is released. If these parts are clogged, not enough product will be released. If they are worn, too much product will be released.

Keep application equipment properly calibrated and in good repair. Correct measurement will keep you in compliance with the label, reduce risks to applicators, farm workers, and the environment, and save you money. Calibrate using clean water and do not calibrate equipment near wells, sinkholes, or surface water bodies. Measure CP products and diltuents accurately to avoid improper dosing, preparation of excess or insufficient mixture, or preparing a tank-load of mixture at the wrong strength.

Proper application of CP products will help reduce farm costs. Improper application can result in wasted chemicals, marginal pest control, excessive carry-over or crop damage. As a result, inaccurate application is usually very expensive.

4.8 RECORD KEEPING

The Florida pesticide law requires certified applicators to keep records of all restricted use pesticides (RUP). The federal Worker Protection Standard (WPS) requires employers to post information for employees of all pesticides applied. Maintain accurate CP product records to meet legal responsibilities and to document production methods.

CP product record-keeping requires you to have current knowledge concerning the application of CP product materials within your area of influence. In addition, Florida law requires that you record the following items to comply with the RUP record-keeping requirement:

- Brand or product name
- EPA registration number
- Total amount applied
- Location of application site
- Size of area treated
- Crop / variety / target site
- Month / day / year of application
- Name and license number of applicator (If applicator is not licensed, record his/her name and the supervisor's name and license number.)
- Method of application
- Name of person authorizing the application, if the licensed applicator does not own or lease the property

Florida regulations require that information on RUPs be recorded within two working days of the application and be maintained for two years from the application date (Chapter 487.2051 Florida Statutes). The Worker Protection Standard (WPS) requires information on all CP products to be recorded and posted when a CP product is about to be applied or has recently been applied. WPS requires that records be made available for 30 days after an expired Restricted Entry Interval (REI).Required records must be made available upon request to FDACS representatives, USDA authorized representatives, and licensed health care professionals.

4.9 PROTECT WATER SOURCES DURING MIXING

Protect your water source by keeping the water pipe or hose well above the level of the CP product mixture. This prevents contamination of the hose and keeps CP products from back-siphoning into the water source. If you are pumping water directly from the source into a tank, use a check valve, anti-siphoning device or backflow preventer to prevent back-siphoning if the pump fails.

4.10 SPILL MANAGEMENT

Potential for movement of spilled CP products in water is reduced if the spill is controlled, contained, and cleaned up quickly. Establish a plan for action.

Clean up spills as soon as possible. The sooner you can contain, absorb, and dispose of a spill, the less chance there is that it will cause harm. Always use the appropriate PPE as indicated on the MSDS and the label. In addition, consider the following four steps:

- CONTROL actively spilling or leaking materials by setting the container upright, plugging leak(s), or shutting the valve.
- CONTAIN the spilled material using barriers and absorbent material.
- COLLECT spilled material, absorbents, and leaking containers and place them in a secure and properly labeled container.
- Store the CONTAINERS of spilled material until they can be applied as a CP product or appropriately disposed.

Small liquid spills may be cleaned up by using an absorbent such as cat litter, diluting with soil, and then applying the absorbent to the crop as a CP product in accordance with the label instructions.

Farmers, farm managers, and landowners must comply with all applicable federal, state, and local regulations regarding spill response training for employees, spill-reporting requirements, spill containment, and cleanup. Keep spill cleanup equipment readily available when handling CP products or their containers.

If a spill involves a CP product covered by certain state (Chapter 376.30702 Florida Statutes and Chapter 62-150 Florida Administrative Code) and federal laws (Public Law 965 10 and Public Law 925000 - CERCLA), you may need to report any accidental release if the spill quantity exceeds the "reportable quantity" of the active ingredient specified

4.11 PERMANENT MIX-LOAD SITES

USSC currently uses one permanent mix-load station at the Dunwody Grove to reduce CP product spillage. A well-designed permanent mix/load facility is convenient and provides a place where spill-prone activities can be performed over an impermeable surface that can be easily cleaned. This permanent mix-load station meets IFAS guidelines.

To minimize the risk of CP products accumulating in the environment from repetitive spills, you may wish to construct a permanent mix/load facility with an impermeable surface (such as sealed concrete) so that spills can be collected and managed.

A permanently located mixing and loading facility, or chemical mixing center (CMC), is designed to provide a place where spill-prone activities can be performed over an impermeable surface that can be easily cleaned, and permits the recovery of spilled materials.

Locate CP product-loading stations away from groundwater wells and areas where runoff may carry spilled CP products into surface water bodies. If such areas cannot be avoided, protect wells by properly casing and capping them, and use berms to keep spills out of surface waters.

It is crucial that a CMC facility be properly designed and constructed. Several publications are available to explain design, construction and operational guidelines for permanent mix/load facilities. These publications are listed in the reference section.

Do not build new facilities on potentially contaminated sites, since subsequent cleanup efforts may require the operation to be relocated.

4.12 PORTABLE MIX LOAD SITES

USSC currently uses portable mix load stations to reduce CP product spillage over a prolonged period of time. CP product loading areas should be conducted at random locations in the field with the aid of nurse tanks.

Another option for preventing contamination of mixing and loading sites is to use a portable mixing pad. Some are a little more than a pad of very durable material, while others are made of interlocking steel sections with a custom-fitted liner and built-in sump.

Portable mixing centers usually have no roof, but should be protected from rain. Since the pad may contain CP product residues, the accumulated rain water may need to be applied as a CP product or disposed of as hazardous waste. A heavy rain can cause the pad to overflow, washing CP products into the environment. A sudden thunderstorm can result in a considerable amount of contaminated runoff, or even a spill. Clean portable mixing centers thoroughly immediately after a spill, because the liner material could be damaged by the CP product formulation. Where practical, portable pads for mixing and loading should be used away from wells or surface water. Never leave a tank unattended while filling.

URS has reviewed the USSC portable mix load operations, and the system is in compliance with IFAS.

4.13 UTILIZE NURSE TANKS FOR RANDOM FIELD MIXING

CP product loading areas should be conducted at random locations in the field with the aid of nurse tanks.

Nurse tanks are tanks of clean water transported to the field to fill the sprayer. Nurse tanks make it possible to move the mixing and loading operation away from permanent sites to random locations in the field. Mixing chemicals at random sites in the field lessens the chance of a buildup of spilled materials in one place.

One variation is a self-contained mix/load trailer with a nurse tank at one end and a mix/load area at the other, where the mixture is pumped directly into the sprayer. Another use is portable containment facilities with nurse tanks to set up a temporary mixing/loading site in a remote field, or on leased land where no permanent structure is practical.

4.14 EXCESS MIXTURE

Mix only the amount of CP products needed during an application period.

It is not always possible to avoid generating excess spray material. The appropriate practices to be followed depend on the type of CP product waste. If there is excess CP product material, use it in accordance with the label instructions.

4.15 CONTAINER MANAGEMENT

Develop and implement procedures to appropriately rinse and dispose of, or recycle agricultural chemical containers. .

- No bags, boxes and group I pesticide containers may be burned on-site.

Try to avoid the need to dispose of CP product containers as wastes by:

- Using containers that are designed to be refilled by the CP product dealer or the chemical company
- Arranging to have the empty containers recycled or reconditioned
- Using soluble packaging when available

When disposal is needed, rinse CP product containers as soon as they are empty. Pressure rinse or triple rinse containers and add the rinse water to the sprayer. Shake or tap non-rinseable containers such as bags or boxes so that all dust and material falls into the application equipment. Always wear the proper personal protective equipment (PPE) when conducting these rinse operations.

After cleaning, puncture the CP product containers to prevent re-use (except glass and refillable mini-bulk containers). Keep the rinsed containers in a clean area, out of the weather, for disposal or recycling. Storing the containers in large plastic bags is one option to protect the containers from collecting rainwater.

Recycle rinsed containers in counties where an applicable program is available, or take them to a landfill for disposal. Check with your local landfill before taking containers for disposal, as not all landfills will accept them.

For information about CP product container recycling programs in your area, contact The University of Florida Pesticide Information Office 352-392-4721

4.16 EQUIPMENT SANITATION AND WASH WATER HANDLING

Wash-water from CP product application equipment must be managed properly since it may contain CP product residues. If permanent wash stations are not used, excess mixture needs to be properly disposed of or re-used.

- Wash the outside of equipment at random places in the field to avoid chemical build up at a site.
- Avoid washing contaminated equipment in the vicinity of wells or surface water bodies. Dispose of rinse water according to label instructions.
- If permanent wash stations are used, wash water should be reused or properly disposed.

4.17 STORAGE

Design and build CP product storage structures to keep CP products secure and isolated from the surrounding environment. Store CP products in a roofed concrete or metal structure with a lockable door. Locate this building at least 50 feet from other structures (to allow fire department access) and 100 feet from surface water and from direct links to ground water. Keep CP products in a separate facility, or at least in a locked area separate from areas used to store other materials, especially fertilizers, feed, and seed.

Do not store CP products near burning materials, hot work (welding, grinding), or in shop areas. Avoid storage of CP products in spaces occupied by people or animals. Do not allow smoking in CP product storage areas.

Store PPE where it is easily accessible in the event of an emergency, but not in the CP product storage area to avoid contamination and since that may make PPE unavailable in time of emergency. Check the label and the MSDS for the safety equipment requirements. Keep a written CP product inventory and the MSDS file for the chemicals used in the operation on site. Do not store this information in the CP product storage room.

Depending on the products stored and the quantity, you may need to register the facility with the Department of Community Affairs and your local emergency response agency. Check with your CP supplier about Community Right-to-Know laws for the materials that you purchase. An emergency response plan should be in place. Emergency response phone numbers are provided in **Appendix C**. All farm personnel should be familiar with the plan before an emergency occurs. Individuals conducting emergency CP product cleanups should be properly trained under the requirements of the Occupational Safety and Health Administration (OSHA).

Do not store large quantities of CP products for long periods of time. Adopt the "first in - first out" principle, using the oldest products first to ensure that the product shelf life does not expire.

Store CP products in their original containers. Do not put CP products in containers that might cause children and others to mistake them for food or drink. Keep the containers securely closed and inspect them regularly for splits, tears, breaks, or leaks. Arrange CP product containers so that labels are clearly visible and legible.

All CP product containers should be labeled. Refasten all loose labeling. Use non-water-soluble glue or sturdy transparent packaging tape to refasten loose labels. Do not refasten labels with rubber bands (these quickly rot and break) or non-transparent tapes such as duct tape or masking tape (these may obscure important product caution statements or label directions for product usage). If a label is damaged, immediately request a replacement from the CP product dealer or formulator. As a temporary supplement to disfigured or badly dam-aged labels, fasten a baggage tag to the container handle. On the tag write the product name, formulation, concentration of active ingredient(s) and the date of purchase.

Dry bags should be stored on pallets and covered with plastic to ensure they do not get wet. Do not store liquid materials above dry materials. Store flammable CP products separately from non-flammable CP products.

Segregate herbicides, insecticides and fungicides to prevent cross-contamination and minimize the potential for misapplication. Cross-contaminated CP products often cannot be applied in accordance with the labels of each of the products. This may make it necessary to dispose of the cross-contaminated materials as wastes and could require the services of a consultant and hazardous waste contractor.

Use shelving made of plastic or reinforced metal. Keep metal shelving painted (unless stainless steel) to avoid corrosion. Never use wood shelving because it may absorb spilled CP product materials.

CP product storage structures should be identified such that the nature of the contents is made known to those approaching the building.

The BMPs discussed often address the ideal situation of newly constructed permanent facilities. However, the user is encouraged to apply the principles and ideas put forth to existing facilities, and to portable or temporary facilities that may be used on leased land where permanent structures are not practical.

Plans and specifications for CP product storage buildings are available from several sources, including the NRCS of the United States Department of Agriculture, the Midwest Plan Service, and the UF-IFAS Publications Office.

The current CP storage buildings are in compliance with IFAS guidelines.

4.18 EXCESS FORMULATION

When possible, return excess formulated materials to the CP supplier. In most cases, the excess material must be in an unopened, original container. Contact local dealers for their requirements.

The single best practice to handle excess CP product material is to use it as a CP product in accordance with the label instructions.

4.19 PURCHASE AND TRANSPORT

Appropriately planned and timed purchase of CP products can avoid risks associated with protracted storage.

Adherence to instructions provided by product manufacturers relating to transport of CP products can minimize risks of spillage and contamination in the event of accident or other container failure.

Follow directions for transport provided on product label, taking into consideration exposure to temperature, moisture, UV light and other variables.

Ensure packages and containers are properly closed and secured prior to transport, and are retained in original containers and with original product label attached.

Consider restrictions imposed by manufacturers or transportation agencies on transport within enclosed spaces and/or by personal vehicle.

Appropriate spill response materials should always be transported along with CP products to ensure that immediate spill response can be accommodated.

4.20 PRODUCT USE TRAINING

Training of field operators responsible for handling, loading, and operating spray machinery is essential for effective application of agricultural chemicals.

It is essential that information learned at continuing education classes be transferred to application personnel. Special efforts should be taken to ensure that non-English-speaking field personnel understand proper handling, loading, and operating techniques.

5.0 NUTRIENT MANAGEMENT

Good nutrient management is an integral part of a system of agricultural practices that help conserve and protect natural resources. In fact, water and nutrients are oftentimes linked, and the Florida citrus industry has made great strides in converting many existing groves to low volume irrigation systems. These conversions allow more precise nutrient management via the use of fertigation. As such, implementing appropriate nutrient management practices helps maintain or improve agricultural productivity while minimizing environmental risk.

Management of nitrogen and phosphorus levels, in particular, is essential in maintaining healthy surface water bodies and natural systems in the USSC crop production area. These nutrients originate from a variety of land uses, including: agricultural, urban, suburban, and natural areas. Excess nutrients stimulate algal blooms and growth of noxious plants in receiving water bodies and wetlands. This stimulation of growth may eventually result in reduced dissolved oxygen concentrations due to excessive decomposition of plant material. Moreover, lower dissolved oxygen concentrations may stress desirable game fish, and promote less desirable fish species.

Nitrogen and phosphorus are two of the essential elements for plant and animal growth and are necessary to maintain profitable crop and livestock production. They can also increase the biological productivity of surface waters by accelerating eutrophication, the natural aging of lakes or streams brought on by nutrient enrichment. Although eutrophication is a natural process, it can be accelerated by changes in the land use of a watershed that increase the amount of nutrients added to an aquatic system. Nitrogen and phosphorus both affect eutrophication, but phosphorus is the critical element in most fresh water systems.

Where water salinity increases, as in estuaries, nitrogen generally controls aquatic plant growth. Complicating the problem is the fact that eutrophication sometimes occurs many miles from where high-nutrient runoff originally enters the surface water system. By the time the water quality effects are noticeable (sometimes years to decades after the runoff occurs), remedial strategies can be difficult and expensive to implement. This is why source control of nutrients used in fertilization programs is so important.

5.1 EDUCATION

Proper training of the field operators responsible for handling, loading, and operating fertilizer spreading equipment, and for correct maintenance of field equipment is required and can help achieve desired placement of fertilizers, avoid waste, and prevent contamination of open waters.

Reinforce training with checklists of critical operating points before application of materials. Confirm that each assigned employee is adequately informed about machine operation, rates of discharge, and intended zone of nutrient placement that focuses on "feeding the tree."

5.2 NUTRIENT MANAGEMENT

Develop a nutrient management plan based upon soil, water, plant and organic material sample analyses and expected crop yields. USDA-NRCS routinely develops nutrient management plans, and requires them for practices that receive cost-share benefits. Nutrient management is: management of the amount, source, placement, form, and timing of the application of nutrients and soil amendments to ensure

adequate soil fertility for plant production and to minimize the potential for environmental degradation, particularly water quality impairment.

5.2.1 General Criteria

1. Nutrient Management Plans shall include the following components, as applicable:
    - Aerial site photographs or maps, and a soil map.
    - Current and/or planned production sequence.
    - Soil test results and recommended nutrient application rates.
    - Plant tissue test results, when used for nutrient management.
    - Records for actual fertilizer rate applied. When fertilizer application exceeds recommendations, justification will be required. Assurance should be given by USSC that all over application issues will be resolved.
    - A complete nutrient budget for nitrogen, phosphorus, and potassium for the production system.
    - Realistic yield goals and a description of how they were determined.
    - Quantification of all important nutrient sources (this could include but not be limited to commercial fertilizer, animal manure and other organic byproducts, irrigation water, etc.).
    - Planned rates, methods, and timing (month & year) of nutrient application.
    - Location of designated sensitive areas or resources (if present on the conservation management unit).
    - Guidance for implementation, operation, maintenance, and record keeping.
2. Maximum single application rates of nutrients will be determined based on optimum level of production, producer's goals, soil limitations, site factors, and off-site transport potential.
3. Additional conservation practices that keep nutrients in the soil and root zone area should be planned in environmentally sensitive areas.

Environmentally sensitive areas include, but are not limited to: wetlands, sink holes, wells, mixing sites, karst areas, soils with excessive permeability, and areas that drain into state or federal nutrient restricted areas.

5.2.2 Considerations

1. A nutrient budget worksheet (FL 590-JS) including an estimate of residual amounts present in the soil and in residues of previous crops, along with any organic waste additions, can determine crop nutrient requirements. (The nutrient budget worksheet is available at: ftp://ftp-fc.sc.egov.usda.gov/NHQ/practice-standards/jobsheets/590js.pdf) Additional information is needed following further evaluation by the District and USSC.

2. Realistic yield goals should be set based on soil type, crop variety, tree age and condition, tree density, historical yield data, climatic conditions, and fertilizer costs versus returns.
3. The form of fertilizer and its timing, placement, and method of application can be planned to conform to seasonal variations in nutrient uptake throughout crop development.
4. Consider effects of the seasonal water budget on nutrient balance and on the potential loss by surface runoff or leaching into ground water.
5. Evaluate water quality standards and designated use limitations that exist locally or statewide.
6. Avoid excessive or luxury levels of N, P, and K in the soil to reduce the potential for induced deficiencies of micronutrients.
7. Maintain proper soil pH to provide optimum availability of applied nutrients.
8. Use appropriate application methods and fertilizer formulations that minimize nutrient losses.
9. In high water table soils, water table management will affect the availability and movement of nutrients.
10. Proper calibration and use of equipment will improve nutrient material application efficiency and will reduce undesirable over-applications.
11. Avoid same-place loading/transfer sites to preclude excess contamination of soils in working areas.

5.3 NUTRIENT MANAGEMENT AND UTILIZATION OF WASTE RESOURCES

Use of animal waste and other waste products on land in an environmentally acceptable manner can be helpful in maintaining or improving soil, air, plant, and water resources. Wastes include those from farm, feedlot, dairy operations, compost and agricultural processing plants.

5.3.1 General Criteria

1. Compliance with Federal, state and local laws is required for all utilization of wastes including liquid, slurry, and solid waste. For example, FDEP Rule 62-709 specifies the criteria for use of compost made from solid waste.
2. Waste application will be accomplished in a manner (timing and rate) such that runoff from the application area will not occur due to the application method used.
3. When making applications of waste products to citrus groves, growers will consider factors affecting rate, timing, and application methods as outlined in Florida NRCS Conservation Practice Standard, Nutrient Management (Code 590), available at: ftp://ftp-fc.sc.egov.usda.gov/NHQ/practice-standards/standards/590.pdf.
4. Waste will be applied based on the most limiting nutrient or metal.
5. The soil-limiting nutrient (either N or P) for waste application should be based on the Phosphorus Index calculation (see references for publications showing how the Phosphorus Index is calculated).

6. Crop nutrient removal rates should be based on realistic yields. Crop nutrient removal rates can be obtained from Agricultural Waste Management Field Handbook (AWMFH) or the NRCS has an excellent on-line calculator at: http://npk.nrcs.usda.gov/

7. Waste application setbacks shall be increased from surface water bodies, wells, sink holes, or fractures. Setbacks should be based on criteria for effective filter strips as contained in Florida NRCS Conservation Practice Standard, Filter Strip (Code 393) which can be accessed at: ftp://ftp-fc.sc.egov.usda.gov/NHQ/practice-standards/standards/393.pdf.

8. Content of waste will be analyzed for nutrient and metal (e.g. copper) content.

5.3.2 Considerations

Supplemental fertilizer may be needed to meet the needs of the crop at various stages of plant growth. USSC currently has a FDEP permit for the application of wastewater on the USSC property. Please note that use of wastewater with high conductance could accumulate salts and nutrients into drainage systems, and possibly affect downstream receiving water bodies. These same water bodies may have specific water quality standards or Total Maximum Daily Loads (TMDL) that could be violated through the introduction of high TDS concentrations. The application of wastewater onto the property should remain in compliance with the FDEP permit.

5.4 EMPLOY TISSUE AND SOIL ANALYSES

Fertilizer applications based on leaf tissue and soil tests will help avoid over-fertilization and subsequent losses of nutrients in runoff water.

Application of mobile elements such as N (nitrogen) and K (potassium) should be made on the basis of leaf tissue analysis and production levels. Elements such as Ca (calcium), Mg (magnesium), and P (phosphorus) should be based on soil testing and leaf analysis, instead of regular applications of specific amounts. The comparison of both types of testing will give production standards for applications which are based on plant need and response, rather than routine applications of standard amounts. Proper fertilization results in high yields and minimal environmental effects.

5.5 USE APPROPRIATE APPLICATION EQUIPMENT

Operate machinery as designed so as to achieve precise and desired placement of nutrient materials at specified rates consistent with the form and source of nutrient materials.

Efficient application practices are critical for insuring fertilizer delivery only to target areas, and for reducing losses to leaching and runoff. The following is a list of application techniques for different formulations of fertilizers. Growers may adopt a combination of placement methods exploiting their respective advantages in efficiency and cost. The ultimate goal is to focus on "feeding the tree" by placing nutrients within the root zone of individual trees or drip-line bands along hedgerows of trees. Avoid placement in areas prone to off-site transport of nutrients.

- Precision Agriculture
- Dry Material Spreaders
- Fertigation

- Boom Applications
- Aerial Application

5.6 EQUIPMENT CALIBRATION AND MAINTENANCE

Proper calibration and maintenance of fertilizer application equipment is essential to avoid misapplication of nutrients.

5.7 APPLY MATERIALS TO TARGET SITES

Place nutrients within the root zone of individual trees or drip-line bands along hedgerows of trees. Avoid placement in areas prone to off-site transport of nutrients, especially water furrows.

5.8 AVOID HIGH RISK APPLICATIONS

Do not apply materials under "high risk" situations, such as before forecasted rainfall. Avoid applications of nutrients during intense rainfall, on bare soils with extreme erosion potential, or when water tables are near the soil surface.

For weather information on the Internet, go to:

- FAWN: http://fawn.ifas.ufl.edu/
- NOAA: http://www.nws.noaa.govhttp://weather.noaa.gov/
- The Weather Channel: www.weather.com
- CNN Weather: http://www.cnn.com/WEATHER/
- AccuWeather: http://www.accuweather.com

5.9 FERTILIZER STORAGE

Use caution when storing fertilizer to prevent contamination of nearby ground and surface water.

Fertilizer will be stored in an area that is protected from rainfall. Always store fertilizers separately from pesticides, solvents, gasoline, diesel, motor oil, or other petroleum products. Many fertilizers are oxidants and can accelerate a fire.

Storage of dry bulk materials on a concrete or asphalt pad may be acceptable if the pad is adequately protected from rainfall and from water flowing across the pad. Secondary containment of stationary liquid fertilizer tanks larger than 550 gallons is addressed in DEP rule 62-762, F.A.C. Even where not required, the use of secondary containment is a sound practice.

5.10 SPILLED FERTILIZERS

Immediately remove any fertilizer materials spilled on ground surfaces and apply at recommended rates to crops.

When possible, place a tarp over ground surfaces where fertilizer transfer operations are conducted. Spilled materials should be transferred to the spreader for application to target sites. Spillage can contaminate open waters and thereby cause proliferation of aquatic weeds. Operators of fertilizer spreaders shall be trained how to recover spilled materials for spreader application. Removal of some soil

with the spilled materials is usually necessary and adequate for proper maintenance of this BMP. By its design, the spreader equipment will apply the fertilizer and soil to the target site.

At fixed loading sites, the area can be cleaned by sweeping or vacuuming (or with a shovel or loader, if a large spill), or by washing down the loading area to a containment basin that is specifically designed to permit recovery and reuse of the wash water. Wash water generated should be collected and applied to the target site.

Discharge of this wash water to water bodies, wetlands, storm drains or septic systems is illegal.

5.11 USE CAUTION WHEN LOADING NEAR DITCHES, CANALS AND WELLS

Minimize the potential for spilled materials to pollute surface waters. When possible, locate mixing and loading activities away (according to local setback requirements) from ground water wells, ditches, canals, and other areas where runoff may carry spilled fertilizer into surface water bodies. If such areas cannot be avoided, protect wells by properly casing and capping them and use berms to keep spills out of surface waters. Recover and apply spilled materials to intended zone of application.

A concrete or asphalt pad with rainfall protection permits easy recovery of spilled material. If this is not feasible, loading at random locations in the field can prevent a buildup of nutrients in one location. In this case, place a tarp on the ground underneath the fertilizer hopper while loading. Do not load fertilizers on a pesticide Chemical Mixing Center (CMC) because of the potential for cross-contamination. Fertilizers contaminated with pesticides may cause crop damage or generate hazardous wastes.

5.12 ALTERNATE LOADING OPERATION SITES

Use multiple fertilizer loading and transfer sites to prevent concentration of nutrients in a single area. If this is not feasible, loading at random locations in the field can prevent a buildup of nutrients in one location.

5.13 USE BACKFLOW PREVENTION DEVICES

Use backflow prevention devices on irrigation and spray tank filling systems to preclude entry of nutrients into surface waters. Never leave a filling-tank unattended.

5.13.1 Filling Tanks in the Field

Special precautions should be taken when filling tanks using a hose. Maintain an air-gap between the filling-hose and the liquid tank-mixture. Never leave a tank unattended when it is being filled.

5.13.2 Fertigation and Backflow Prevention Equipment

An anti-siphon device is a safety device used to pre-vent backflow of a mixture of water and chemicals into the water source, or vice versa. In the case of fertigation, the chemicals are fertilizers. Currently, Florida state law (Florida Statutes Section 487.064 for pesticides and Section 576.087 for fertilizers) requires that backflow prevention equipment be installed and maintained on irrigation systems in which chemicals are injected for agricultural purposes. The possible dangers in fertigation include backflow of fertilizers to the water source causing contamination, and water backflow into the fertilizer storage tank. Backflow prevention is an extremely important practice in the prevention of both ground and surface water contamination. Backflow to the storage tank can rupture the tank or cause overflow, contaminating the area around the tank and perhaps indirectly contaminating the water source. Safety equipment is

available which, when properly used, will protect both the water supply and the purity of the fertilizer in the storage tank.

5.14 SPLIT APPLICATIONS THROUGHOUT SEASON

Dividing the annual fertilizer requirement into two or more applications can minimize leaching during the summer rainy season and help maintain the supply of nutrients over the long growing season of Florida.

Frequent fertigations can be an efficient method of application for N and K while minimizing the potential for leaching of nutrients during excessive rainfall events. The trade-off between costs vs. fertilizer use efficiency and resource protection must be considered.

5.15 EROSION CONTROL

Erosion-control practices will be utilized to minimize soil loss and runoff that can carry dissolved and attached nutrients on soil particles to surface waters. A minimum of four (4) particulate matter and sediment controls shall be implemented form the BMP equivalent points reference table.

Vegetative filter strips are effective in reducing the levels of suspended solids and nutrients.

5.16 IRRIGATION MANAGEMENT

Irrigation should be limited to wetting only the root zone where possible. Excessive irrigation can transport nutrients below the root zone through leaching. Proper scheduling and uniform water distribution are necessary to assure control.

5.17 USE OF ORGANIC MATERIALS

In the event of a surface application (mulching), use of organic materials like horticultural waste and urban plant debris (yard trimmings) should occur when possible to help increase soil organic matter, retain nutrients and moisture, improve biological eco-systems, and supply slowly-released nutrition.

The surface application of slowly-degraded organic waste materials like horticultural waste and urban plant debris can increase soil moisture retention and nutrient-holding capacity. The nutrient additive properties of organic matter support:

- Economical ways to safely use non-hazardous wastes.
- Maintenance or increases in soil organic matter content.
- Protection of water quality.
- Protection of air quality.
- Reduction of energy used in manufacturing chemical fertilizer.

Both microbial mineralization and immobilization can occur during decomposition of high carbon-low nitrogen organic materials like horticultural waste. Mineralization occurs when organic forms of a nutrient are converted to inorganic forms. Immobilization is the reverse of this process where microorganisms convert inorganic forms of nutrients to organic forms. The organic forms of the nutrients are not available to plants as they are bound in some part of the soil organic matter. Plants take up nutrients in inorganic forms. Thus, immobilization reduces nutrient (particularly nitrogen) availability, while mineralization increases nutrient availability.

Nitrogen-poor organic materials like straw, fresh sawdust and most fresh horticultural waste cause microorganisms to remove large amounts of inorganic nitrogen from the soil during decomposition, since that nitrogen is required to build new microbial cells. This process decreases nitrogen availability to citrus trees. However, the nitrogen consumed by the microorganisms will be slowly released when microbial cells decompose.

5.18 WELL PROTECTION

Prevent ground water contamination by back plugging improperly constructed and/or deteriorated irrigation wells.

This practice involves the protection of existing wells and prevention of problems in wells that are being planned. For existing wells, management activities are aimed at reducing the potential for contamination. This includes evaluating and, if necessary, moving or modifying potential sources of pollution. Such sources of pollution may include fueling areas and/or areas where pesticides and fertilizer are handled or mixed.

The permanent plugging and elimination of such wells may be eligible for cost-share assistance through the District. Please contact your local District Service Office for information.

Points to Consider:

- Anti-siphon devices should be attached to all system discharge points so that backflow siphoning does not contaminate the aquifer.
- Check with local health departments or state water management districts for setback guidelines regarding wells.
- When no longer in use, proper decommissioning or plugging of a well prevents the re-entry of surface water and transport of contaminants to the ground water. Check with your local water management district or USDA-NRCS office for well decommissioning and plugging guidelines.
- Wells should be capped or fitted with valves that close tightly when not in use to reduce the potential for contamination. Artesian wells should be fitted with control valves so that water flow can be regulated or stopped when water is not needed.

5.19 USE APPROPRIATE SOURCES AND FORMULATIONS

Reduce the potential for nutrient leaching and off-site movement by choosing appropriate sources and formulations of fertilizer based on nutritional needs, season (rainy vs. dry), and anticipated weather conditions to achieve greatest efficiency and reduce potential for offsite transport. Utilize controlled-release and slow-release formulations when feasible.

Nitrogen source materials are grouped into three categories: inorganic, synthetic organic, or natural organic. The inorganics and synthetic organics are usually high-analysis materials that are most economical to use in citrus groves. These nutrient source materials are readily available to plants unless they have been formulated in a controlled-release form. Natural organic materials are less readily available and are usually lower in nutrient analysis.

5.20 SALINITY

Fertilizer sources should be monitored closely in groves with high salinity levels. Fertilizers with high salt index levels can compound existing salinity problems.

Additional discussion on salinity management is found in the Water Resource Management Section.

The frequency of injecting nutrients or of applying granular fertilizer has a direct effect on the concentration of total dissolved solids (TDS) in the soil solution. A fertilization program that uses frequent applications with relatively low concentrations of salts will normally result in less salinity stress than programs using only two or three applications per year. Controlled-release fertilizers and frequent fertigations are ways to economically minimize salt stress when using high salinity irrigation water.

Selecting nutrient sources that have a relatively low osmotic effect in the soil solution can help reduce salt stress. The osmotic effect that a material adds to a soil solution is defined as its salt index relative to sodium nitrate, taken to be equal to 100. Since sources of phosphorus (P) generally have a low salt index, they usually present little problem. However, the salt index per unit (lb) of N and potassium (K) should be considered.

The salt index of natural organic fertilizers and slow-release products are low compared to the commonly used soluble fertilizers. High-analysis fertilizers may have a lower salt index per unit of plant nutrient than lower-analysis fertilizers since they may be formulated with a lower salt index material. Therefore, at a given fertilization rate the high-analysis formulation may have less of a tendency to produce salt injury. For instance, the salt index of a fertilizer blend formulated made from ammonium nitrate and potassium nitrate will be about 30% less than that with the same N-P-K analysis blend formulated from ammonium nitrate and muriate of potash (KCl). In addition, the Cl in KCl or Na in NaNO3 materials add more toxic salts to the soil solution.

Choose fertilizer formulations that have the lowest salt index per unit of plant nutrients. Increase the frequency of fertilizations, thereby making it possible to reduce the salt content of each application and aid in preventing excess salt accumulation in the root zone. Maintain optimum but not excessive nutrient levels in soil and leaves with rates based on the long-term production from the grove. Fertilizer rates can usually be lower for trees with high salinity since production levels will probably be lower. Leaf tissue analysis should be used to detect excessive Na or Cl levels or deficient levels of other elements caused by nutrient imbalances induced by salt stress. Leaf Na levels greater than 0.2% and Cl levels over 0.5% indicate imminent problems.

High rates of salt application can alter soil pH and thus cause soil nutrient imbalances. Some ions can also add to potential nutrient imbalances in trees. For example, Na can displace K, and to a lesser extent Ca, in soil solutions. This can lead to K deficiency and, in some cases, to Ca deficiency. Such nutrient imbalances can compound the effects of salinity stress. Problems can be minimized if adequate nutritional levels are maintained, especially those of K and Ca.

5.21 CONSERVATION BUFFERS AND SETBACKS

Strategically incorporating vegetative buffers – either naturally occurring ones or planted forbs and grasses – into the citrus grove design can help to protect water quality by providing biological filtration, increasing residence time and/or residual nutrient uptake.

Managed properly, these vegetative areas or conservation buffers may provide pretreatment, formal treatment and other treatment train opportunities. A treatment train effect is simply a combination of nonstructural and structural BMPs, which are generally effective for reducing or preventing non-point source pollution. Generally speaking, there are certain non-cropped areas that could qualify as conservation buffers within a typical agro-eco-system. Vegetated field borders, tree row middles, water furrows, ditch and ditch banks, wetlands/set-back areas and associated reservoir systems are examples.

Depending on the grove's surface water management system design, buffer areas can contribute significantly and help to manage offsite nutrient impacts. This whole farm management approach ultimately reduces a grower's risk of incurring negative environmental consequences. The BMPs discussed below are intended to give the reader information for the practical application of conservation buffers.

5.21.1 Pre-Treatment Options

Manage tree row middles by keeping them well grassed and by maintaining a minimum blade height of two inches. Growers should not rotary mow when standing water is present. Growers may also want to investigate the feasibility of incorporating leguminous plant(s) within the middles, as these plants may be used as an additional source of nitrogen.

Water furrows and lateral ditches should also be managed to encourage grass cover in order to help reduce flow velocities, thus providing an opportunity for particulate matter to settle out. See BMPS in the Erosion Control and Sediment Management Section for more information on water furrow and ditch bank maintenance.

5.21.2 Formal Treatment Options

- Riparian Buffers – A riparian buffer is an area of trees and/or shrubs located adjacent to and up-gradient from associated watercourses. Existing groves that border perennial watercourses and were constructed before SFWMD surface water regulations should, when economically feasible, explore the use of a riparian buffer. Water sheet flowing across this type of buffer will be treated before discharging to the watercourse. Air drain-age is an important aspect of crop and tree dam-age during cold periods. Prior to implementing a riparian buffer, consideration should be given to its effects on air drainage.

- Dedicated Conservation Buffers – Grassed waterways and/or filter strips are both excellent conservation buffer choices, and can be used to convey and treat smaller volumes of discharge water with a moderate degree of success. In general, these passive treatment areas are more effective in removing phosphorus that is attached to soil particles rather than dissolved nitrogen. Groves that have some topographic relief should consider using grassed waterways or filter strips to treat and discharge surface water runoff.

- Treatment Train Effects - Consider using a combination of structural and non-structural controls to mitigate the potential for offsite nutrient impacts, especially when discharging to sensitive downstream water bodies. See B17 in the Erosion Control and Sediment Management Section for more information.

5.21.3 Other Required Setbacks

Wetland setback areas, also referred to as wetland buffer zones, provide water quality treatment opportunities. If you have an active Environmental Resource Permit for your grove, you are generally required to abide by an average 25 foot setback. Likewise, NRCS generally requires 50 feet along the path of water flow for a filter strip that is being used to address soluble nutrient problems. NRCS buffer practices are listed below and each practice has slightly different uses that should be matched with the specific site. Each NRCS buffer practice may have different minimum widths and other specifications based on the specific resource problem(s) to be addressed.

6.0 ACCEPTABLE AGROCHEMICALS AND NO APPLICATION PERIODS

Because of the intended future land use, care needs to be taken to ensure that at the time of the property's conversion to a reservoir, that the presence of agrochemicals is minimal and will not cause adverse impacts to the anticipated ecosystem. During the interim use of the property, the intent is to phase out the application of identified pesticides on a specified time table to allow for natural degradation.

In addition, as current landowner, the District must ensure that all application of agrochemicals on the grove is conducted in accordance with all applicable laws and regulations.

The **Chemical Application Restrictions** matrix, given below, should be followed. This matrix is based on the U.S. Fish and Wildlife Service's "Derivation of No Application Periods". A copy of the document is included in **Appendix A**. The agrochemical list should be reviewed annually for the effectiveness of the applied chemical, changes in regulations regarding specific pesticides, and changes in the management and use of the pesticides. The experimental use of pesticides and herbicides is prohibited during the interim period. All agrochemicals must be applied in strict accordance to label instructions and restrictions.

CHEMICAL APPLICATION RESTRICTIONS

The following is an example list of chemicals, and at the completion of the Phase I and II ESA activities, this list may change. The following chemicals have the potential to be used subject to the restrictions noted below.* Chemicals not specifically listed below may be evaluated on a case by case basis and added to the appropriate category below. Chemicals with no analytical test method and identified as a potential environmental risk, the chemical manufacturer will be contacted to obtain the chemical standard. The District will then contract a Florida based laboratory to develop an analytical test method for the chemicals.

Citrus Grove

A. May be used at any time but only according to label restrictions:

2,4-D (*Landmaster*)	Isopropylamine salt (*Arsenal*)	Simazine (*Sim-Trol*)
435 Spray Oil (*Sun Pure*)	Mineral oil (*Saf-t-side*)	Triclopyr (*Remedy Ultra*)
Diuron (*Karmex, Direx*)	Paraffin oil (*Citrufilm*)	Dimethyl ammonium chloride (*C-soap*)
Glyphosate (*Roundup*)	Phosphoric Acid (*Nutriphite Magnum*)	

B. Must be discontinued at least 3 months prior to flooding:

Abamectin (*Agri-Mek*)	Oxamyl (*Vydate*)	Alkyl dimethyl benzyl ammonium chloride (*Bell Quat*)
Dimethoate (*Dimethoate*)	Phosmet (*Imidan*)	Carbaryl (*Sevin*)
Fenpropathrin (*Danitol*)	Trifloxystrobin (*Gem Fungicide*)	

C. Must be discontinued at least 6 months prior to flooding:

Aldicarb (*Temik*)	Chloropyrifos (*Nufos*)	Dicofol (*Kelthane*)
Cypermethrin (*Mustang*)	Imidacloprid (*Provado*)	

D. Must be discontinued at least 1 year prior to flooding:

Bromacil (*Krovar*)

E. Must be discontinued at least 2 years prior to flooding:

Mefenoxam (*Ridomil*)

F. Period of discontinuation will be based on the rates of application and copper concentrations in the groves:

Copper Hydroxide (*Champ*)	Zinc, Manganese, Iron, Magnesium, Nitrogen (*Citrite, Dyna Gro*)

* Any pesticide, regardless of the above categories, that is shown to be present in the soil, at or above the SCTLs, may require additional restrictions, including reductions in use or the complete elimination of its use. These situations will be evaluated on a case-by-case basis.

6.1 COPPER COMPOUNDS

Copper is an essential element required for the successful and economical growing of citrus. It is necessary for chlorophyll formulation in the leaves and acts as a catalyst for other plant reactions. It also has beneficial uses as a fungicide, herbicide, and bactericide. It is applied to the soil surface as a granular additive to fertilizer, and directly to the foliage as a spray mix. The Phase II ESA did not identify elevated copper levels in the citrus groves above the Service provisional Snail Kite threshold level of 85 mg/kg. Based on the information provided by USSC, at the current application rates of copper-based agrochemical, the soils within the citrus groves will not be impacted with copper above the 85 mg/kg threshold.

During this interim use period, soil samples should be collected for select areas within the groves to confirm that residual copper concentrations are not accumulating in the soil. In the event that elevated copper concentrations are detected above the 85 mg/kg threshold, then the District and USSC will jointly evaluate the current copper applications for the citrus operation.

If the yearly sampling again indicates elevated copper above the 85 mg/kg the District and USSC will work together to develop a copper application that will control pests and limit the residual copper levels in the soils as much as practical.

7.0 PETROLEUM AND HAZARDOUS WASTE MANAGEMENT

7.1 GASOLINE AND DIESEL FUEL STORAGE AND CONTAINMENT

The goal of AST management is to minimize the possibility of inadvertent petroleum product discharges and properly manage any spills and cleanups. Stationary fuel storage tanks should be in compliance with the FDEP storage tank regulations (Chapter 62-761, FAC (Petroleum Storage Systems)) for both underground and aboveground storage tanks.

Site verification will include discussion with operation managers to understand the agricultural operation petroleum storage and containment management approach. In addition site inspections will be made to observe the following items:

7.1.1 On-Site Equipment

Permanent fuel pumps should be stationed on concrete or asphalt surfaces away from groundwater wells and ditches, laterals and canals where water runoff may carry or transport inadvertently spilled product. Pumps should be equipped with automatic shut off mechanisms. Aboveground petroleum storage tanks with volumes of 550 gallons or greater must be registered and located within secondary containment systems unless of double-wall construction. Visual inspections should be conducted on at least a monthly basis of the storage tanks and hoses to ensure that the system is free from leakage from tank seams, connections, and fittings.

7.1.2 Fuel Delivery

The fuel delivery driver should report to facility manager upon arrival prior to unloading. An agricultural operation employee should verify available tank capacity prior to product transfer and should remain onsite during delivery to monitor the product transfer. Spill and overfill clean-up equipment, such as absorbent booms or absorbent materials, should be stored nearby for immediate spill containment and clean up.

7.2 EQUIPMENT CLEANING AND MAINTENANCE

The same level of preventive measures should be taken to minimize any adverse water quality impacts from the cleaning of equipment as with agrochemical handling and application. Preventive maintenance and emergency repair of machinery and equipment performed on site should be conducted in a centralized area over an impermeable surface, and be situated at least 100 feet from the closest groundwater well or surface water, grove ditch, lateral, or canal. It is recommended that equipment maintenance be limited to minor or emergency repairs. Onsite maintenance activities, such as engine or mechanical repair, which generate a waste or waste by-product, must be containerized and properly disposed of. Where contamination is already documented in the area, every effort should be made not to increase the existing contamination levels.

Site verification will include discussion with operation managers to understand the agricultural operation hazardous waste management approach. In addition site inspections will be made to observe the following items:

7.2.1 Equipment Maintenance

It is recommended to use compressed air to remove clippings and dust from machinery. This will cause less wear to the equipment's hydraulic seals, eliminate wash water, and produce dry material that is easy to handle. For regular field equipment washdown other than pesticide application equipment, and degreaser or solvents, allow wash water to flow to a grassed retention area, swale, or fields. Do not allow wash water to flow directly to surface water, grove ditches, laterals, or canals. Minimize the use of detergents and use only biodegradable, non-phosphate type. Use spray nozzles that generate high-pressure streams and low volumes that can minimize the amount of water used to clean equipment. If equipment is to be intensively washed, conduct over a concrete or asphalt pad that allows the water to be collected. Collected wash water can be handled through a recycling system, treatment system, off-site disposal at an industrial wastewater treatment facility, or use the wash water for field irrigation.

7.2.2 Solvents and Degreasers

The current facility does not conduct major repairs of equipment on-site. Only routine maintenance is conducted on-site. The introduction of an equipment maintenance area as well as the use of solvents or degreasers onsite must be reviewed and approved by the District prior to the use or construction of the maintenance facility.

Should such approval be granted by the District, general best management practices recommends the replacement of solvent baths with recirculating aqueous washing units. Soap and water or other aqueous cleaners are often as effective as solvent-based cleaners.

7.2.3 Paint

The USSC properties do not maintain an on-site painting facility. All painting is done manually. The introduction of an equipment painting facility (i.e., paint booth, spray hood, etc.) onsite is not allowed. The painting of equipment by power sprayers is prohibited. Such painting must be conducted off-site.

7.2.4 Used Oil, Coolant, and Lead-Acid Batteries

Each of the main properties currently store new oil, used oil, coolants and/or lead acid batteries on-site. These items are properly marked and stored and are in compliance with local and State regulations. The storage of more than what would be used for daily use of these chemicals and products is prohibited. The construction of a storage area onsite to store these chemicals must be reviewed and approved by the District prior to the storage or construction of the facility.

Used oil, coolant and lead-acid batteries are not currently stored onsite, and are not approved to be stored onsite by the District. However, if this type of activity should be approved by the District, the following BMP guidelines must be implemented.

Used oil and oil filters should be stored in separate marked containers and recycled. Oil filters should be drained and taken to the same place as the used oil, or to a hazardous waste collection site. Coolants and antifreeze must be recycled or disposed as a hazardous waste. Do not mix used oil with used coolant or sludge from solvents. Lead-acid storage batteries are classified as hazardous wastes unless they are recycled. Batteries should be stored on an impervious surface and preferably under cover until delivery to an authorized recycling facility.

All used oil, coolant, and lead-acid batteries on the properties are stored in containers in accordance with FDEP rules until being transported offsite for disposal by a licensed contractor.

8.0 SAMPLING AND COMPLIANCE PLAN (CITRUS FIELDS)

8.1 VERIFICATION SAMPLING

Citrus cultivated area sampling will be conducted by the District on an annual basis. Soil samples shall be collected from the cultivated area at randomly selected locations based on the grid pattern and numbering system used in the Phase I/II ESA. The BMP annual sampling event will randomly select a number of those discrete locations sampled during the Phase I/II ESA. The collected samples will be analyzed for a number of parameters of concern. Based on the Phase I/II ESA findings and review of the chemicals list provided by USSC, the sampling activities by the District will involve 5-acre discrete samples using close composite methodology from the top 6 inches of the soil. The collected discrete samples will then be analyzed for a number of parameters of concern.

The number of locations to be sampled is determined according to the *a priori* statistical procedure recommended by the United States Environmental Protection Agency (EPA, 1989, Section 6). This procedure is based on commonly used, well established statistical hypothesis testing processes, in which, collected data during each year is compared to the baseline dataset in order to detect the presence of any statistically significant difference (EPA, 2000). For determination of the sample size, EPA (1989) suggests a null hypothesis that is equivalent to the condition, under which the baseline and subsequent datasets display statistically significant differences. Conversely, the alternative hypothesis corresponds to a condition, under which the baseline and subsequent datasets are devoid of any statistically significant difference. Each year, upon collection of one round of post-baseline samples, the compiled baseline and subsequent datasets are statistically compared to assess whether further investigations are warranted. The components of the proposed statistical process are described in the following sections.

8.1.1 Determining Number of Baseline Locations

EPA (1989, Section 6.3.2) provides a quantifiable measure for determining an adequate sample size. The sample size is driven by three factors: (a) the chosen decision errors, (b) the variability of the potential contaminants of concern, and (c) the desired resolution, *i.e.*, the difference between the baseline and subsequent datasets that needs to be detected at the chosen confidence. The resulting equation is:

$$n = \frac{(z_{1-\alpha} + z_{1-\beta})^2 s^2}{\Delta^2}$$

where,

n = number of grids to be sampled each year

α = the false positive rate, Type I error, or the significance (tolerable error for missing an actual difference between the baseline and subsequent datasets)

$1-\alpha$ = the confidence (probability of correctly identifying a significant change)

β = the false negative rate, or Type II error (tolerable error for incorrectly declaring a difference between the baseline and subsequent datasets)

$1-\beta$ = the test power (probability of correctly identifying the absence of no difference)

$z_{1-\alpha}$, $z_{1-\beta}$= the confidence and power normal deviates

s^2 = standard deviation of parameter of concern

Δ = The minimum difference between the mean concentrations of the baseline and subsequent datasets to be detected at the chosen confidence

Samples collected at the selected locations during the Phase I/II ESA conducted on the USSC property by PSI in August and September 2008 shall be used as the baseline for comparison to future sampling results. Among parameters of concern, copper has been analyzed extensively during Phase I/II ESA. The reported concentrations of these analytes based on 5-acre discrete samples from citrus fields are used in order to compute their corresponding mean and standard deviation, as listed in Table 8.1. This table also displays the number of samples based on the chosen decision errors. In these calculations, the desired minimum difference is set as 20% of the computed mean concentrations. The resulting sample size is 72 locations, which shall be randomly selected for sampling as part of the BMP efforts, as highlighted in Table 8.1.

8.1.2 Baseline/Subsequent Datasets Statistical Comparisons

Annual BMP sampling will be conducted, at field locations with the same GPS coordinates measured during the initial sampling and at a time mutually agreed upon by the parties so as to minimize damage to field crops, to ensure consistency with the original Phase I/II ESA results. Upon completion of each annual BMP sampling round, the analytic results of parameters of concern will be compared to those compiled in the baseline and previous BMP datasets. For this purpose, a series of comprehensive statistical two-sample tests will be conducted. Pursuant to DON (2002), as listed on Table 8.2, two difference hypotheses will be assessed, including:

- Area-wide differences between the baseline and subsequent datasets: This hypothesis corresponds to a condition, under which the baseline concentrations are consistently different from the subsequent concentrations. Consequently, the statistical tests will be conducted through comparison of mean (parametric) and median (non-parametric) concentrations.
- Localized differences between the baseline and subsequent datasets: This hypothesis corresponds to a condition, under which only the elevated baseline and subsequent concentrations are different. Consequently, the statistical tests will be conducted through comparison of higher concentrations or exceedance ratios in each dataset.

The procedural aspects for the selection and implementation of the cited tests in Table 8.2 are described in details in DON (2002, Chapter 4). Appropriate statistical comparisons, including parametric t-tests, non-parametric Wilcoxon Rank Sum test, and non-parametric Slippage tests, will be conducted annually. Depending on the statistical characteristics of the subsequent datasets, additional test may be performed. In the case of detection of a statistically significant increase at 5% significance, when the increase in mean or median concentrations is greater than 20 %, among subsequent measured concentrations with respect to the baseline concentrations, additional investigations will be pursued.

The specific objectives of additional investigations are: (a) to determine whether the detected increase in post-baseline concentrations are real, and not numeric artifacts caused by the variability of individual samples results, and (b) if real, to determine whether the detected increases in post-baseline

concentrations are due to inappropriate practices by the tenant. For this purpose, additional investigations will be initiated, including a review of laboratory QA/QC results and information provided by the tenant concerning its chemical use practices during the period of interest. If an increase in mean concentrations is attributed to few outlier samples among post-baseline data, locations associated with these outliers will be re-sampled to ensure the validity of the original results. The cost of additional investigations shall be the responsibility of the party requesting it.

If the District determines that a detected increase in mean or median concentrations in excess of 20% is a numeric artifact caused by the variability of individual samples, or attributed to historic conditions, no further action with regards to the tenant's lease will be pursued. On the other hand, if the increase in mean or median concentrations in excess of 20% is deemed to have been caused by other factors, the District will notify the tenant in writing of its determination and its basis, and the tenant will be requested to implement those measures, if any, that the tenant considers appropriate to prevent further increases in concentrations, including but not limited to additional sampling or best management practices.

If a statistically significant increase in concentrations is detected during a subsequent consecutive year and determined by the District to not be a numeric artifact or caused by variability of individual samples, the tenant shall work cooperatively with the District to develop a more comprehensive BMP plan to reduce or eliminate further increases. The new BMP plan shall be approved by the District, implemented by the tenant, and incorporated into the lease and, in the case of a subtenant, its sublease. In the event a subsequent consecutive sampling event results in a third, consecutive statistically significant increase, the District, in consultation with the tenant, shall review the tenant's standard farming practices, which review should include an assessment of the practices in terms of potential risk to future aquatic ecosystems or human health. If it is determined that the increase in concentrations may cause significant risk to future ecosystems that may be constructed in the area or human health to workers or occupants, the tenant will implement changes to its standard practices prescribed by the District, after joint consultation with the tenant, to reduce the potential for such risk. Failure to implement this review within the prescribed schedule will be considered a default of the tenant's lease.

8.1.3 Summary of BMP Sample Plan

Table 8.3 lists BMP sample plan inside and outside of citrus cultivation areas, as well as the current list of parameters of concern. Given the fact that for a number of parameters of concern there are currently no baseline dataset available, the sample size computations will be repeated after the first round of BMP periodic sampling, which may result in applicable modifications of this BMP Plan to address elevated parameters of concern covering parts or the entire extent of the investigated areas. Future changes in subsequent rounds of BMP may include further division of the investigated areas into more homogenous subareas for the purposes of sampling and statistical comparisons. Such changes may require additional sampling to accommodate the delineated subareas. Furthermore, in the event that obvious and excessive impacts are visibly detected during periodical site visits conducted by the District, a more comprehensive site specific sampling plan, which would depend on the magnitude of the impact, should be developed under the direction of the District and any applicable regulatory agencies. A list of potential parameters to be analyzed for is given below.

- EPA Method 8141 (Organophosphorus Pesticides)

- EPA Method 8151 (chlorinated herbicides)
- EPA Method 6010/7471 (copper)
- FL-Pro Method (total residual petroleum hydrocarbons)
- EPA Method 8100 (polynuclear aromatic hydrocarbons)
- EPA Method 8020 (volatile organic hydrocarbons)

Table 8.1. Statistical Determination of the Number of Baseline Grids

Decision Parameters	Selected Value	Normal Variate	
Significance = alpha	5%	$z_{1\text{-alpha}}$ =	1.64
Power = 1 - beta	80%	$z_{1\text{-beta}}$ =	0.84

Chemical-Specific Parameters	Copper (mg/kg)
Desired Resolution set at 20% of Baseline Mean	6.4
Baseline Mean*	32.2
Baseline Standard Deviation*	21.9
n (Number of Samples)	72

*Computed based on Phase 2 Citrus 5-acre Discrete (CD) Data

Table 8.2. Statistical Comparative Tests

Difference Hypothesis	Test	Comparison	Type
Area-wide Difference	Wilcoxon Rank Sum (WRS)	Median	Non-parametric
	Gehan	Median	Non-parametric
	Student's two-sample t-test	Mean	Parametric
	Satterthwaite t-test	Mean	Parametric
Localized Difference	Slippage	High concentrations	Non-parametric
	Quantile	High concentrations	Non-parametric
	Two-sample test of proportions	Percent of measurements above a given cutoff	Non-parmetric

Table 8.3. Summary of Sample Plan

Areas	Number of Samples		Parameters*
Citrus Cultivation Area	72 samples	Annually (5-acre discrete sample using close composite methodology – top 6'')	Copper Dicofol Diuron Mefenoxam
Pump Stations	No Sample	If no staining / stressed or disturbed vegetation	
	1 each site	If impacts observed (five point composite soil sample – top 6'')	EPA Method 602 EPA Method 610 FL-PRO
Chemical and Equipment Storage Areas	No Sample	If no staining / stressed or disturbed vegetation	
	1 each site	If impacts observed (five point composite soil sample – top 6'')	EPA Method 602 EPA Method 610 FL-PRO Copper Dicofol Diuron Mefenoxam

**Parameter Descriptions*

EPA Method 602 (purgeable aromatics)
EPA Method 610 (polynuclear aromatic hydrocarbons)
Copper by EPA Method 6010/7471
Dicofol by EPA Method 8081
Diuron by EPA Method 8151
Mefenoxam by EPA Method 8141

9.0 STANDARDIZED FORM: BMP SITE VERIFICATION FINDINGS SUMMARY

Future BMP site verification visits will be conducted at the request of the District. BMP implementation will be reviewed per the guidelines and implementation requirements described for each BMP earlier in this document as well as taking site specific issues and time of year into account. The site verification findings, including a written review of observations, site photographs taken, and a summary of records reviewed, are expected to be provided by the field reviewer in a detailed report. The field verified implementation status of each BMP will be classified in one of three categories:

- Implementation Verified
- Implementation Verified with Comment
- Additional Attention Required

The standardized form for reporting *BMP Site Verification Findings Summary* to be included in the BMP field verification report is included in Appendix B.

APPENDIX A

Derivation of "No Application Periods" for Interim Use Pesticides

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October 2000

I. INTRODUCTION

The South Florida Water Management District (SFWMD) is actively acquiring agricultural lands in South Florida in connection with the Everglades Restoration Project. These lands are slated for various water management projects including conversion to water attenuation reservoirs, creation of stormwater treatment areas (STAs) for removal of phosphorus and other nutrients, and restoration of wetlands in areas formerly drained for agriculture. All of these projects will likely attract large numbers of birds and other wildlife. Since all of these areas were, or still are, agricultural areas, they have probably been exposed to heavy pesticide applications for decades and residues of some of those pesticides very likely still remain in the soil. Some of the pesticides used were organochlorine compounds such as toxaphene and DDT, which are now banned due to their extreme persistence in soil and their tendency to bioaccumulate in the food web. Residues of these chemicals in soils at a recent wetland restoration project in Florida (Lake Apopka) have resulted in bird die-offs following flooding of the site.

Following land acquisition for a water management project, there may be a delay of up to five years before completion of the project and actual flooding of the wetland or reservoir occurs. During this "interim use period," the former landowner is usually allowed to lease the property and continue with existing agricultural uses. Because of the risks to fish and wildlife that will be attracted to the site following flooding, questions arise as to what types of pesticides, and in what quantities, should be allowed to be applied to these lands during the interim use period. This document was developed in response to these questions.

Because the U.S. Fish and Wildlife Service (Service) must approve these interim uses of grant lands, it has sought to discover what chemicals are being used in conjunction with the uses. The Service has sought the assistance of the SFWMD in this effort; however, the Service and the SFWMD do not agree as to the necessity for, and the feasibility of, obtaining this information from the former landowner. This issue has delayed the finalization, acceptance and implementation of a mutually agreeable protocol by which the SFWMD can seek, and the Service grant, approval of the interim uses. Until the protocol can be developed, the Service cannot provide formal approval of the uses.

In order to resolve this issue, the Service has developed an alternative to requiring the SFWMD to submit chemical use information. Instead, the protocol itself will contain the following chemical use schedule, which the SFWMD will incorporate the pertinent portions into any leases, reservations, or any other methods of allowing an interim use on lands acquired with grant funds. The schedule identifies chemicals which may be used on grant lands, and the amount of time the use of each chemical must cease prior to the incorporation of the parcel into an Everglades restoration project. The time period for each chemical is based upon that chemical's $T_{1/2}$ value (half-life). Accordingly, regardless of which chemicals had been applied to a specific parcel before it was acquired by the SFWMD with grant funds, the SFWMD will be authorized only to allow the use of certain chemicals for certain amounts of time.

II. METHODS

Information on persistence and degradation, toxicity, and use of pesticides in Florida was obtained from various internet databases and published references. The publication *Summary of Agricultural Pesticide Usage in Florida: 1995 - 98* (Shahane, 1999) was reviewed to develop a list of pesticides commonly used in South Florida. Data on half-life, degradation rate, and toxicity of these substances were obtained primarily from the Hazardous Substances Data Bank (HSDB), the Environmental Fate Database (EFDB), and the Extension Toxicology Network (EXTOXNET). For many of the chemicals used in Florida, environmental fate has been researched extensively and numerous literature values for half-life and/or degradation rate were available. For some chemicals, only a few values could be located.

Degradation rates of pesticides in soil can vary tremendously depending on soil type, climate, soil pH, moisture content, depth beneath the surface, and other variables. Therefore, the $T_{1/2}$s and degradation rates reported in the literature for the same chemical may vary over a wide range, depending on the conditions in the different studies. No attempt was made to select only those studies most appropriate to conditions in Florida soils. All relevant values for a chemical, including both field and laboratory experiments, were included in the database for that chemical; however, obviously irrelevant studies (such as those using sterile soils) were not included.

Many studies presented calculated soil $T_{1/2}$ values for the chemical being studied, and these values were entered directly into the database for that chemical. Other studies did not calculate $T_{1/2}$ values, but instead presented raw degradation rates. For example, an entry might state that the chemical was 67% degraded in 10 days. For these situations, the $T_{1/2}$ was calculated using the following formula (assuming 1st order kinetics) (Casarett et al., 1996):

$$T_{1/2} = \frac{.693 * t}{2.303(2 - \log(100 - d))}$$

where t = time since application and d = percent degraded.

All $T_{1/2}$ values obtained directly from the online databases and those calculated from raw degradation data were entered into a spreadsheet (see Appendix A). Using all of these data, median and maximum $T_{1/2}$ values were determined for each chemical. In addition, some studies presented persistence times for pesticides, i.e., the length of time required for all of the chemical to be degraded. Although $T_{1/2}$ values could not be calculated from these data, the range of reported persistence was also recorded. Table 1 summarizes all half-life, persistence, and toxicological information considered for each chemical.

The "no application period" is defined as the period of time prior to conversion of the agricultural land to conservation purposes (e.g., flooding to create wetlands) during which a particular pesticide hazardous to fish and/or wildlife should *not* be applied, in order to allow adequate time for breakdown

of pesticide residues before use of the land by Service trust resources. This period of time was defined as 5 times the median half-life, representing 97 percent degradation. Based on this 5 X $T_{1/2}$ value, the pesticide was placed into one of the following no application periods: 3 months, 6 months, 1 year, or 2 years (Table 1). Due to uncertainties of the planning and scheduling process, it was decided that those rare pesticides requiring more than 2 years to break down should not be applied at all.

In those cases where $T_{1/2}$ data were scanty or differed substantially from persistence data, professional judgement was used. Preference was sometimes given to persistence data, particularly in the case of highly toxic compounds. For example, the pesticide disulfoton, which is highly toxic to fish and wildlife, was placed in a 1 year no application category based on the longer persistence of toxic metabolites compared to the parent compound. In this case, use of five times the median half-life of the parent compound would have underestimated the breakdown time to nontoxic products (Table 1).

III. RECOMMENDATIONS

A. The following pesticides are approved for application during the interim use period with **no restrictions** other than those required by the label:

2,4-D
Bacillus thuringiensis (Bt)
copper compounds
dicamba
diquat
diuron
EPTC
fluazifop-p-butyl
glyphosate
metolachlor
metribuzin
norflurazon
potassium salts
sethoxydim
sulfur
simazine

B. The following lists include some of the most commonly used pesticides in South Florida that are thought to be hazardous to fish and wildlife. These chemicals are approved for application during the interim use period with the following restriction: Use of these chemicals should be discontinued for the indicated time period prior to flooding agricultural lands for wetland restoration, creating water retention reservoirs, or any other activity likely to attract fish and wildlife to the site.

Use of the following should be **discontinued at least 3 months** prior to flooding:

acephate
alachlor
diazinon
dimethoate
malathion
methidathion
methyl parathion
oxamyl
trichlorfon

Use of the following should be **discontinued at least 6 months** prior to flooding:

aldicarb	ethoprop
azinphos-methyl	ethyl parathion
carbaryl	permethrin
carbofuran	phorate
chlorpyrifos	terbufos

Use of the following should be **discontinued at least 1 year** prior to flooding:

atrazine	esfenvalerate
cyfluthrin	fenamiphos
disulfoton	fonofos
endosulfan	

Use of the following should be **discontinued at least 2 years** prior to flooding:

dicofol	trifluralin

C. Due to their high toxicity and/or extreme persistence in the environment, the following chemicals **should not be applied** during the interim use period to lands being acquired for wetland restoration, water retention, or similar purposes. Interim uses which require these chemicals will not be permitted.

benomyl	paraquat

D. Other pesticides which do not appear on the above lists may come up from time to time. These will be evaluated on a chemical-by-chemical basis and added to the appropriate category above.

E. *Any* pesticide, regardless of the above categories, shown to already be present in soil at or above the appropriate sediment guideline, may require additional restrictions. For example, copper is a metal which does not degrade in the environment and may already be present in some soils (e.g., orchards) at levels above the Florida Department of Environmental Protection's Sediment Quality Assessment Guideline (MacDonald, 1994). In this case, further use of copper compounds during the interim use period would have to be reduced or eliminated altogether. These situations will be evaluated on a case-by-case basis. Add: can't push over SQAGs.

IV. SOURCES OF INFORMATION

A. Publications

~~Casarett, L.J., M.O. Amdur and C.D. Klaasen (eds.). 1996. Casarett and Doull's Toxicology: The~~ Basic Science of Poisons, 5th Edition. McGraw Hill.

1997 Farm Chemicals Handbook (Vol. 83). Meister Publishing Co., Willoughby, Ohio.

MacDonald, D.D. 1994. Approach to the Assessment of Sediment Quality in Florida Coastal Waters. Florida Department of Environmental Protection, Office of Water Policy, Tallahassee, Florida.

Milne, G.W.A. 1995. CRC Handbook of Pesticides. CRC Press, Boca Raton, Florida. 402 pp.

Shahane, A.H. 1999. Summary of Agricultural Pesticide Usage in Florida: 1995-98. Florida Department of Agriculture and Consumer Services, Tallahassee, Florida. 111 pp.

B. Online Databases

Environmental Fate Database, Syracuse Research Corporation, Syracuse, New York. http://esc.syrres.com/efdb.htm

Hazardous Substances Data Bank (HSDB), TOXNET, National Library of Medicine, Washington, D.C. http://toxnet.nlm.nih.gov/

Extension Toxicology Network (EXTOXNET), Oregon State University, Corvallis, Oregon. http://ace.orst.edu/info/extoxnet/ -

Table 1. Environmental and Toxicological Characteristics of Pecticides Considered in Establishing the No Application Period.

Pesticide	No Application	$T_{1/2}$ soil (days)		Persistence	5 X $T_{1/2}$	Class	Bird Kills?[1]	LD50 (rat, oral)	LC50 (fish)
	Period	median	max		(months)			mg/kg	mg/l
acephate	3 mo.	3	14		0.5	OP	YES	866 - 945	>1000
alachlor	3 mo.	14	133	6 wk - >1 yr	2.3	acetanilide		930 - 1350	(3.7)
aldicarb	6 mo.	19	990	1 - 15 d	3.2	carbamate	YES	1	1.5
atrazine	1 yr.	63.8	1898	73 d - 2 yr	10.6	triazine		1780	slightly toxic
azinphos-methyl	6 mo.	37.0	484		6.2	OP	YES	4.4 - 16	0.003
benomyl	Do Not Apply	270	360	15 d - 4 wk	45.0	carbamate		>10,000	.006 - 14
carbaryl	6 mo.	25.5	379.4	40 d	4.3	carbamate		246 - 283	28
carbofuran	6 mo.	29	334.2	56 d - 14.5 mo	4.8	carbamate	YES	8	0.24
chlorpyrifos	6 mo.	22.6	84		3.8	OP	YES	96 - 270	0.18
cyfluthrin	1 yr.	56.0	63.0		9.3	pyrethroid			.00068 - .022
diazinon	3 mo.	11.5	35	3 - 14 wk	1.9	OP	YES	1250	toxic
dicofol	2 yr.	60		>1 yr	10.0	OC		570 - 595	0.12 - 0.37
dimethoate	3 mo.	11	122		1.8	OP	YES	235	30.2
disulfoton	1 yr.	5.6	70.0	56 d - 2 yr	0.9	OP	YES	1.9 - 12.5	0.038
endosulfan	1 yr.	40.5	150	10 - 160 d	6.7	OC	YES	18 - 160	0.001
esfenvalerate	1 yr.	52.5	90		8.8	pyrethroid		458	.0002 - .001
ethoprop	6 mo.	19.5	84		3.3	OP	YES	61.5	
ethyl parathion	6 mo.	22	2957.2	20 d - >16 yr	3.7	OP	YES	2	1.5
fenamiphos	1 yr.	43.5	470.2	92 d	7.3	OP	YES	2 - 19	0.11 - 9.6
fonofos	1 yr.	42.5	93.3		7.1	OP	YES	8 - 17.5	0.05
malathion	3 mo.	1.7	6.0		0.3	OP		5500	200
methamidophos	3 mo.	4.8	12.0		0.8	OP	YES	16 - 21	25 - 100
methidathion	3 mo.	7.0	23.0		1.2	OP		25 - 54	.002 - .014
methyl parathion	3 mo.	15.0	915.6	3 - 5 mo.	2.5	OP	YES	6 - 50	1.9 - 8.9
oxamyl	3 mo.	12.5	50		2.1	carbamate	YES	5.4	4.2 - 17.5
paraquat	Do Not Apply	1000	2409		166.7	bipyridyl		150	13 - 32
permethrin	6 mo.	34	38		5.7	pyrethroid		430 - 4000	.0018 - .0054
phorate	6 mo.	23.3	167.6	2 wk - 4.5 mo	3.9	OP	YES	2 - 4	0.002
propargite (omite)	[redacted]					??		1480 - 2200	.031 - .100
terbufos	6 mo.	19.5	151.8		3.2	OP	YES	1.3 - 1.6	.001 - .39
trichlorfon	3 mo.	0.97	140	8 d - 1.5 mo.	0.2	OP		450 - 650	.26 - 2.5
trifluralin	2 yr.	88.2	405	157 d - >40 wk	14.7	dinitroaniline		>10,000	.02 - 3.4

[1]YES in this column indicates pesticides that have caused documented die-offs of migratory birds.

Appendix A. Reported Soil Half-Lives (in days) for South Florida Pesticides.*

alachlor	aldicarb	atrazine	azinphos-methyl	benomyl	carbaryl	carbofuran	chlorpyrifos	cyfluthrin	diazinon	dicofol	dimethoate	disulfoton	endosulfan
Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)
15	9.9	15	5	180	22	26	81	56	7	60	2.5	1	32
7	23	300	484	360	12	110	28	63	14		4	4	150
14	990	1898	21		25.5	14	84	Calc. $T_{1/2}$	35		122	7	39
4	7	53	68		8	28	7	42.1	11.5		7	56	42
49	12	113	10		12	60	18		6.3		11	70	Calc. $T_{1/2}$
7.8	23	28	30		Calc. $T_{1/2}$	75	11.5				29	Calc. $T_{1/2}$	42.0
Calc. $T_{1/2}$	2	181	Calc. $T_{1/2}$		379.4	30	25.1				36	4.3	24.2
133.3	15	115	44.0		195.2	60	8.7				Calc. $T_{1/2}$	3.1	
	54	48	51.3		51.7	28	Calc. $T_{1/2}$				6.6	10.5	
	20	357			43.8	43	20.1				53.1		
	46	78				53	30.0						
	18	20				8							
	154	58				10							
	60	67				14							
	9	Calc. $T_{1/2}$				73							
	12	84.0				Calc. $T_{1/2}$							
	20	48.3				9.7							
	361	20.0				2.8							
	Calc. $T_{1/2}$	10.0				334.2							
	8.9	48.3				113.4							
	2.0	127.5				22.6							
		[illegible]											
		26.4											
		134.3											
		279.9											
		149.9											
		36.5											
		89.7											
		23.4											
		92.3											
		60.6											

*Values were taken directly from the literature or calculated from degradation rates.

Appendix A. Reported Soil Half-Lives (in days) for South Florida Pesticides.*

esfenvalerate	ethoprop	ethyl parathion	fenamiphos	fonophos	malathion	methamidophos	methidathion	methyl parathion	oxamyl	paraquat	permethrin	phorate
Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)
15	25	7	50	40	1	1.9	5	4	11	1000	30	82
90	3	11	2.1	30	6	4.8	7	45	15	2409	38	2
	56	112	4	45	Calc. $T_{1/2}$	6.1	23	10	6	Calc. $T_{1/2}$		6
	14	182	11	18	4.3	12		15	14	268.7		30
	84	22	Calc. $T_{1/2}$	82	2.3	Calc. $T_{1/2}$		Calc. $T_{1/2}$	4			69
	12	23	13.1	Calc. $T_{1/2}$	1.0	2.7		4.3	33			Calc. $T_{1/2}$
	16	Calc. $T_{1/2}$	138.2	93.3	0.3			915.6	8			167.6
	73	12.1	462.8	75.0				203.1	50			23.3
	Calc. $T_{1/2}$	34.2	470.2	28.5								7.5
	23.0	2.4	43.5									98.2
	12.6	4.9										20.8
		16.2										1.6
		131.5										
		20.0										
		2957.2										
		224.9										

*Values were taken directly from the literature or calculated from degradation rates.

Appendix A. Reported Soil Half-Lives (in days) for South Florida Pesticides.*

terbufos	trichlorfon	trifluralin
Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)	Lit. $T_{1/2}$ (d)
5	1.1	38
22	140	61
16.9	0.6	211
86.6	0.8	405
12.8		Calc. $T_{1/2}$
66.5		66.7
10		109.8
4.5		
Calc. $T_{1/2}$		
22.5		
12.1		
151.8		
97.8		

*Values were taken directly from the literature or calculated from degradation rates.

Appendix B. Half-life Calculation Worksheet.

Atrazine	Lit. $T_{1/2}$	units	$T_{1/2}$ (days)	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	0.5	mo	15	50	12	wk	12.0	84.0
	10	mo	300	70	12	wk	6.9	48.3
	5.2	yr	1898	50	20	d	20.0	20.0
	53	d	53	75	20	d	10.0	10.0
	113	d	113	70	12	wk	6.9	48.3
	28	d	28	29	9	wk	18.2	127.5
	181	d	181	60	75	d	56.7	56.7
	115	d	115	86	75	d	26.4	26.4
	48	d	48	71	8	mo	4.5	134.3
	357	d	357	13.8	60	d	279.9	279.9
	78	d	78	75	10	mo	5.0	149.9
	20	d	20	85	100	d	36.5	36.5
	58	d	58	90	298	d	89.7	89.7
	67	d	67	93	3	mo	0.8	23.4
				86	262	d	92.3	92.3
				95	262	d	60.6	60.6

Trichlorfon	Lit. $T_{1/2}$	units	$T_{1/2}$ (days)
	1.1	d	1.1
	140	d	140
	14	hr	0.6
	20	hr	0.8

Aldicarb	K_{el}	units	Calc. $T_{1/2}$
	0.078	d^{-1}	8.9
	0.35	d^{-1}	2.0

Phorate	Lit. $T_{1/2}$	units	% degraded	time	units	Calc. $T_{1/2}$
	82	d	18	48	d	167.6
	2	d	76	48	d	23.3
	6	d	90	25	d	7.5
	30	d	47	90	d	98.2
	69	d	95	90	d	20.8
			95	7	d	1.6

Carbaryl	Lit. $T_{1/2}$	units	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	22	d	12	10	wk	54.2	379.4
	12	d	22	10	wk	27.9	195.2
	25.5	d	80	120	d	51.7	51.7
	8	d	85	120	d	43.8	43.8
	12	d					

Methyl Parathion	Lit. $T_{1/2}$	units	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	4	d	99.5	33	d	4.3	4.3
	45	d	64	45	mo	30.5	915.6
	10	d	99	45	mo	6.8	203.1
	15	d					

Appendix B. Half-life Calculation Worksheet.

Alachlor	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	85	1	yr	0.4	133.3

Carbofuran	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	95	42	d	9.7	9.7
	97	14	d	2.8	2.8
	7	5	wk	47.7	334.2
	60	5	mo	3.8	113.4
	99	5	mo	0.8	22.6

Chlorpyrifos	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	62	4	wk	2.9	20.1
	50	30	d	30.0	30.0

Cyfluthrin	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	90	140	d	42.1	42.1

Dimethoate	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	77	2	wk	0.9	6.6
	98	10	mo	1.8	53.1

Disulfoton	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	68	1	wk	0.6	4.3
	79	1	wk	0.4	3.1
	90	5	wk	1.5	10.5

Endosulfan	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	50	42	d	42.0	42.0
	70	42	d	24.2	24.2

Ethoprop	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	19	1	wk	3.3	23.0
	32	1	wk	1.8	12.6

Ethyl parathion	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	96	8	wk	1.7	12.1
	20	11	d	34.2	34.2
	96	11	d	2.4	2.4
	95	3	wk	0.7	4.9
	95	10	wk	2.3	16.2
	10	20	d	131.5	131.5
	50	20	d	20.0	20.0
	3	130	d	2957.2	2957.2
	33	130	d	224.9	224.9

Appendix B. Half-life Calculation Worksheet.

Fonophos	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	59	4	mo	3.1	93.3
	67	4	mo	2.5	75.0
	64	6	wk	4.1	28.5

Malathion	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	80	10	d	4.3	4.3
	95	10	d	2.3	2.3
	50	24	hr	24.0	1.0
	90	24	hr	7.2	0.3

Paraquat	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	13	54	d	268.7	268.7

Terbufos	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	35	14	d	22.5	22.5
	80	28	d	12.1	12.1
	12	4	wk	21.7	151.8
	18	4	wk	14.0	97.8

Trifluralin	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	85	0.5	yr	0.18	66.7
	90	1	yr	0.30	109.8

Fenamiphos	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	94.6	55	d	13.1	13.1
	24.1	55	d	138.2	138.2
	9	63	d	462.8	462.8
	9.8	70	d	470.2	470.2
	67.2	70	d	43.5	43.5

Azinphos-methyl	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	50	44	d	44.0	44.0
	93	197	d	51.3	51.3

Methamido-phos	% degraded	time	units	Calc. $T_{1/2}$	$T_{1/2}$ (days)
	92	10	d	2.7	2.7

APPENDIX B

APPENDIX B
Best Management Practice Checklist

United States Sugar Corporation
Hendry County
State of Florida

Best Management Practices (BMP) Site Verification Checklist

Tract No.:
SFWMD
Representative(s):
Property
Representative(s):
Inspection Date:

BMP	Description/Comment	Implementation Verified	Additional Attention Required
Property Use and Structures			
Housekeeping:			
General Site -			
Storage Areas -			
Additional Observations -			
Employee Training			
Schedule -			

Topics -			
Additional Observations -			
Hazardous Material/ Chemical Use			
Chemicals Used -			
Application Type -			
Application Schedule -			
Material Records -			
Additional Observations:			
Petroleum Products			
Product Use -			
Pump Station(s) -			
Storage Location(s) -			
Additional Observations:			
Chemical Storage			
Storage Location -			
Building/Area Type -			

Pump Station(s) -			
Additional Observations:			
Mixing & Loading Areas			
Area Description -			
Area Observations -			
Additional Observations:			
Waste Storage and Disposal			
Waste Types -			
Storage Location -			
Waste Disposal -			
Waste Disposal Records -			
Additional Observations:			
Water Management			
Observations -			
Water Mgmt Controls -			
Weather Monitoring -			
Additional Observations:			

Erosion/Sediment Controls			
Erosion Controls -			
Sediment Controls -			
Additional Observations:			

Exotic Vegetation Management			
Observations -			
Physical Controls -			
Biological Controls -			
Chemical Controls -			
Additional Observations:			

General Field Notes

Notes:

N/A - Not Applicable

APPENDIX C

APPENDIX C
EMERGENCY RESPONSE and CHEMICAL HAZARD INFORMATION PHONE NUMBERS

EMERGENCY REPORTING

For Ambulance, Fire, or Police **Dial 911**

State Warning Point 24hrs. Toll Free 1-800-320-0519
(Department of Community Affairs, or (850) 413-9911
Division of Emergency Management)

National Response Center 24hrs. Toll Free 1-800-424-8802
(Federal law requires that anyone who releases into the environment a reportable quantity of a hazardous substance [including oil when water is or may be affected] or a material identified as a marine pollutant, must immediately notify the NRC).

FDEP Emergency Response, 24 hrs. Toll Free **1-800-342-5367**

HELP LINE NUMBERS

Chemical hazard information and regulatory questions

• **CHEMTREC HOT LINE (Emergency only) 24 hrs**	Toll Free 1-800-424-9300
• SARA Title III help line	Toll Free 1-800-535-0202
• CERCLA / RCRA help line	Toll Free 1-800-424-9346
• Pesticide Container Recycling Program	352-392-4721
Pesticide Information Officer at University of Florida	

COUNTY COOPERATIVE EXTENSION OFFICES

Pam Beach County	559 N. Military Trail West Palm Beach, FL 33415	(561) 233-1700
Hendry County	1085 Pratt Boulevard Dallas B Townsend Agricultural Center Labelle, FL 33935	(863) 674-4092
Glades County	900 US Highway 27 SW Moore Haven, FL 33471	(863) 946-0244
Gilchrist County	125 East Wade Street Trenton, FL 32693	(352) 463-3174

STATE OF FLORIDA AGENCIES

Florida Department of Agriculture and Consumer Services

Bureau of Pesticides	(850) 487-0532
Bureau of Compliance Monitoring	(850) 488-3314
Division of Agriculture and Environmental Services	(850) 488-3731

Florida Department of Environmental Protection

FDEP Stormwater/Nonpoint Source Management Section (Tallahassee)	(850) 488-3605
FDEP Hazardous Waste Management Section (Tallahassee)	(850) 488-0300
FDEP District offices - West Palm Beach	(561) 681-6800

Florida Fish and Wildlife Conservation Commission

620 South Meridian Street
Tallahassee, FL 32301

(850) 488-4066 or
(850) 488-4069

Water Management Districts

South Florida Water Management District (West Palm Beach) — (561) 686-8800 or 1-800-432-2045

University of Florida (Gainesville)

Pesticide Information Office — (352) 392-4721
Agricultural Law Policy Office — (352) 392-1881

UNITED STATES AGENCIES

EPA National Offices & Numbers

Office of Water — (202)-382-5700
4604, 401 M Street, SW
Washington, DC 20460
(Provides Information on Clean Water Act and related water pollution regulations)

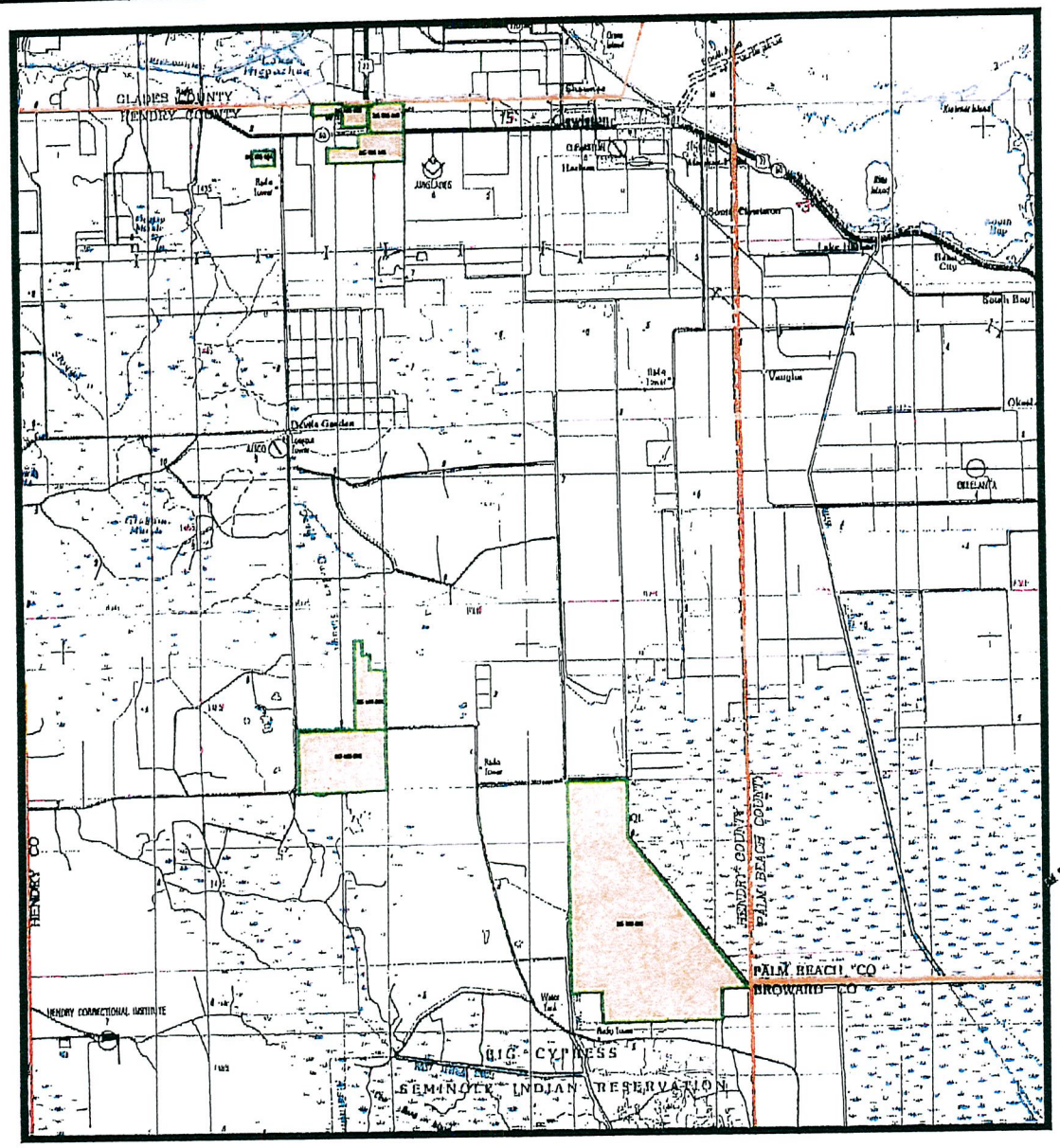
Florida Administrator of EPA Pesticide Registration

Bureau of Pesticides/ Division of Inspection — (850) 487-2130
Dept. of Agriculture and Consumer Services
3125 Conner Blvd., MD-2
Tallahassee, FL 32399-1650

National Pesticide Telecommunications Network

Provides information on pesticides and pesticide poisonings. — 1-800-858-7378
Operating 24 hours a day, 365 days a year.

FIGURE 1



PARCELS USED FOR CULTIVATION OF CITRUS

UNITED STATES SUGAR CORPORATION
111 PONCE DE LEON AVENUE
CLEWISTON, FL.

JOB NO.: 38617-027 DATE: SEPTEMBER 2008

CITRUS PARCEL LOCATION VICINITY MAP

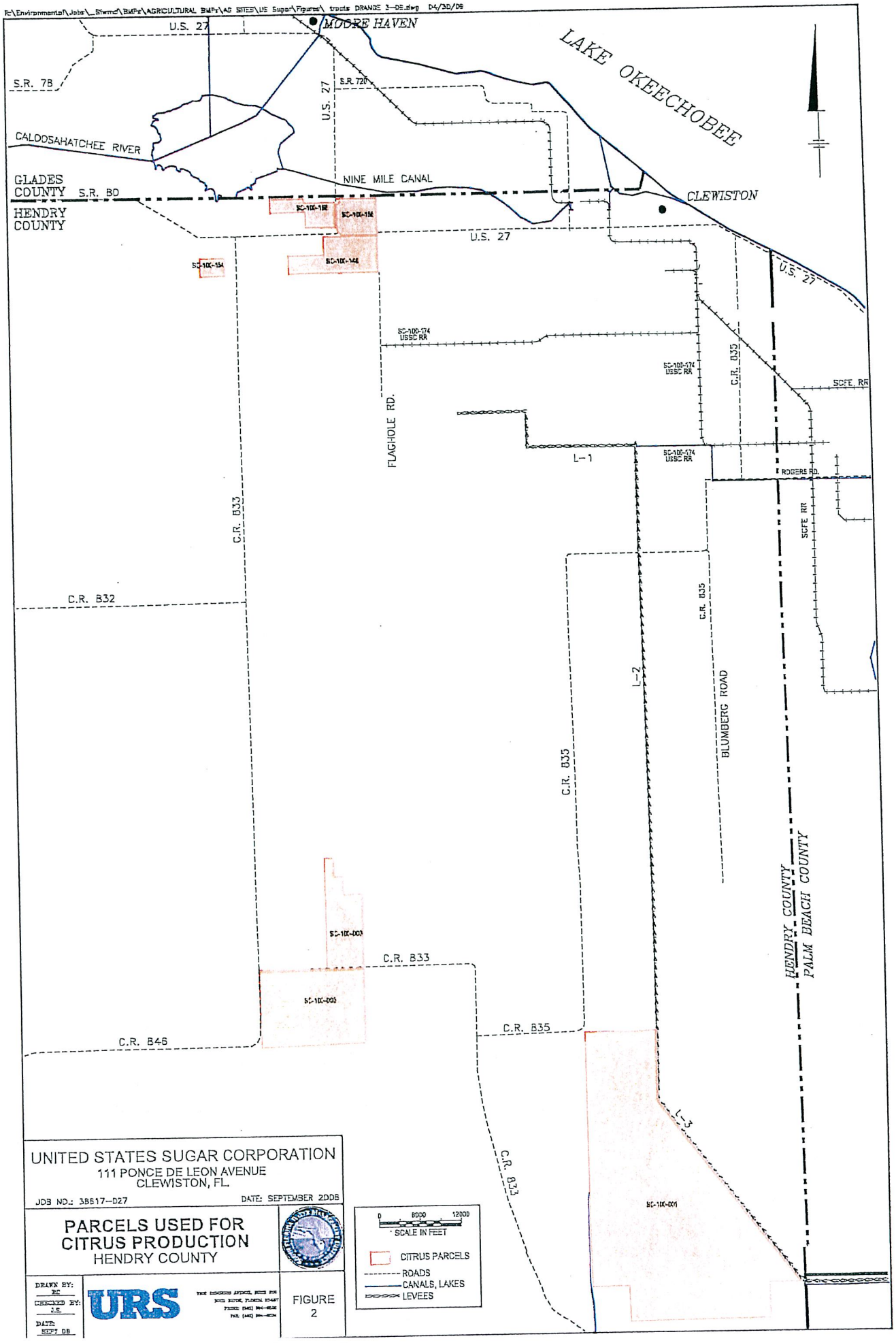
DRAWN BY: HC
CHECKED BY: JH
DATE: DEC 08

URS

FIGURE 1

R:\Environmental\Jobs_Sites\BaP\AGRICULTURAL BMPs\AG SITES\US Sugar\figures\ bmp 08 ALL.dwg 05/11/09

FIGURE 2


F:\Environmental\Jobs_Sterno\BMPs\AGRICULTURAL BMPs\AG SITES\US Sugar\Figures\ tracts DRANGE 3-08.dwg 04/30/08
U.S. 27
MOORE HAVEN
LAKE OKEECHOBEE
S.R. 78
S.R. 720
U.S. 27
CALOOSAHATCHEE RIVER
NINE MILE CANAL
GLADES COUNTY
S.R. 80
HENDRY COUNTY
CLEWISTON
U.S. 27
U.S. 27
SC-10X-154
SC-10X-146
SC-100-174 USSC RR
C.R. 835
SCFE, RR
FLAGHOLE RD.
L-1
ROGERS RD.
C.R. 833
C.R. 832
SCFE RR
C.R. 835
L-2
BLUMBERG ROAD
C.R. 835
HENDRY COUNTY
PALM BEACH COUNTY
SC-10X-003
C.R. 833
C.R. 846
C.R. 835
L-3
C.R. 833
SC-10X-001
UNITED STATES SUGAR CORPORATION
111 PONCE DE LEON AVENUE
CLEWISTON, FL.
JOB NO.: 38617-027
DATE: SEPTEMBER 2008
PARCELS USED FOR CITRUS PRODUCTION
HENDRY COUNTY
0 6000 12000
SCALE IN FEET
CITRUS PARCELS
ROADS
CANALS, LAKES
LEVEES
DRAWN BY: EC
CHECKED BY: J.S.
DATE: SEPT 08
URS
FIGURE 2

SCHEDULE "4"

Insurance Provisions

In lieu of the insurance requirements set forth in **Paragraph 16** of this LEASE, the following requirements shall apply:

Insurance:

A. **LESSEE** shall procure and maintain throughout the Lease Term at **LESSEE's** sole cost and expense the following types of insurance:

(1) **Worker's Compensation Insurance:** **LESSOR** acknowledges and agrees that, in lieu of providing Worker's Compensation Insurance, **LESSEE** self-insures for such matters and **LESSEE** shall not be obligated to provide any evidence of insurance with respect thereto; provided that **LESSEE** shall be obligated to satisfy all Worker's Compensation requirements under Florida law and shall provide proof of such compliance annually to **LESSOR**. The Worker's Compensation Insurance policy required by this **LEASE** shall also include Employer's Liability.

(2) **Liability Insurance**: Comprehensive General Liability Insurance relating to the Premises and its improvements and appurtenances, which shall include, but not be limited to, Premises and Operations; Independent Contractors, Products and Completed Operations and Contractual Liability. This policy shall provide coverage for death, bodily injury, personal injury, and property damage that could arise directly, indirectly or proximately from the performance of this **LEASE**. The minimum limits of coverage shall be $1,000,000 per occurrence and $2,000,000 in the aggregate for Bodily Injury Liability and Property Damage Liability. The limits of comprehensive general liability insurance shall in no way limit or diminish the **LESSEE's** liability under **Paragraph 13** hereof and (B) Umbrella liability insurance containing minimum limits of Fifty Million and No/100 Dollars ($50,000,000.00) for the Premises and coverage shall which shall include, but not be limited to, Premises and Operations; Independent Contractors, Products and Completed Operations and Contractual Liability.

(3) **Business Automobile Liability Insurance**: Business Automobile Liability Insurance which shall have minimum limits of $5,000,000 per occurrence, Combined Single Limit for Bodily Injury Liability and Property Damage Liability with a maximum deductible or self-insured retention of $1,000,000. This shall include owned, hired, non-owned and employee non-ownership coverage.

(4) **Casualty Insurance**: Property insurance insuring against loss or damage customarily included under so called "all risk" or "special form" policies which shall include fire and extended coverage insurance including loss caused by any type of windstorm or hail (including Named Storms), on all buildings and structures on the Premises in an amount which will equal the replacement cost of such buildings and structures, with a deductible of up to 5% of the insurable value of the damaged or destroyed real property improvements or personalty.

(5) **Environmental Impairment Insurance**: Environmental Impairment Insurance in an amount of $5,000,000, with a maximum deductible of $250,000 and a policy term which extends through the Expiration Date of the Lease. Said policy must provide coverage for third-party claims for unknown pre-existing conditions & new conditions. Additional insurance coverage must also be provided for all above-ground storage tanks, with limits not less than $1,000,000 per occurrence and $5,000,000 in the aggregate. Acquisition of this insurance shall in no way limit or diminish the **LESSEE**'s liability under **Paragraph 18.F.** hereof.

B. **Proof of Insurance**: The **LESSEE** shall provide the **LESSOR** with insurance certificates for all insurance required pursuant to this **LEASE** as proof of insurance prior to the Commencement Date and each year, upon renewal, thereafter. Upon request, **LESSEE** shall provide **LESSOR** with complete copies of the policies. The **LESSEE** shall, upon request by the **LESSOR**, have its insurance agent provide certified copies of all insurance coverage required by this **LEASE**. Such copies shall be provided within ten (10) days of request or, with respect to any renewal or replacement policies, as soon as such policies are available from the applicable insurer. All insurance required under this **LEASE** shall be written by a financially sound company with a rating of "A VIII" or better with AM Best or a "A" or better with S&P and shall name the **LESSOR** as loss payee and/or as additional insured as their interests may appear (with the exception of Workers Compensation coverage). Said policies (other than worker's compensation) shall contain a waiver of subrogation in favor of the **LESSOR**.

C. **Notice of Insurance Cancellation**: The **LESSEE** shall notify **LESSOR** at least thirty (30) days prior to cancellation or modification of any insurance required by this **LEASE**. Insurance required under **Paragraphs A.(2), (3), (4), and (5)** above of this schedule shall contain a provision that it may not be cancelled until thirty (30) days after written notice to **LESSOR** (with the exception of ten (10) days notice for non-payment of premium). In the event **LESSEE** fails to obtain and keep any insurance required hereunder in full force and effect, **LESSOR** may at its option obtain such policies and **LESSEE** shall pay to **LESSOR** the premiums therefore, together with interest at the maximum rate allowed by law, upon demand as Additional Rent.

D. **Subcontractor Insurance**: It shall be the responsibility of the **LESSEE** to ensure that all subcontractors are adequately insured, including, but not limited to, Workers Compensation coverage.

E. **Self-Insurance**.

(1) Notwithstanding anything in this Schedule to the contrary, so long as **LESSEE** elects to post a letter of credit pursuant to the requirements set forth in **Paragraph 33(B)(2)** in the amount of $1,000,000 (the "Deductible LC"), which shall be accompanied by an escrow agreement substantially in the form of the Escrow Agreement, but conformed to the provisions of this schedule, then, with respect to liability insurance under **Paragraph A(2)** above, **LESSEE** shall have the right to maintain a deductible or self-insured retention in the amount of $1,000,000.

(2) Notwithstanding anything in this Schedule to the contrary, in lieu of the environmental impairment insurance under **Paragraph A(5)** above, **LESSEE** may elect to post a letter of credit pursuant to the requirements set forth in **Paragraph 33(B)(2)** in the amount of $5,000,000 (the "Environmental Impairment LC"), which shall be accompanied by an escrow agreement substantially in the form of the Escrow Agreement, but conformed to the provisions of this schedule.

(3) The Escrow Agent shall have the right to draw on the Deductible LC and/or the Environmental Impairment LC, as applicable, if **LESSOR** is named in an action within the applicable coverage as set forth in **Paragraph A(2)** and **Paragraph A(5)**, above, and **LESSEE**: (i) does not defend the same; or (ii) does defend the same, but does not pay the applicable amounts under a final and unappealable judgment against **LESSOR** which is the responsibility of **LESSEE** under this **LEASE**; whereupon, in the event of clauses (i) or (ii) above, the Escrow Agent can draw on the Deductible LC and/or the Environmental Impairment LC, as applicable. If the Deductible LC and/or the Environmental Impairment LC, as applicable, is drawn upon as set forth above, then a Default shall be deemed to have occurred under this **LEASE**.

F. Casualty.

(1) In the event of a loss or damage to all or any portion of the Premises due to fire or other casualty during the Lease Term, then **LESSEE** shall have the option of restoring such loss or damage, by electing to do so in a written notice to **LESSOR** within one hundred and twenty (120) days after such loss or damage.

(2) In the event that **LESSEE** elects to restore such loss or damage as provided above, then: (i) if the cost of such restoration is determined to be less than or equal to $500,000, then **LESSOR** shall instruct the insurance company that the insurance proceeds for restoration shall be paid directly and solely to **LESSEE**; or if paid jointly to **LESSEE** and **LESSOR**, **LESSOR** shall immediately endorse such check payable to the order of **LESSEE**; or (ii) if the cost of such restoration is determined to be more than $500,000, then **LESSEE** and **LESSOR** shall endorse any checks received so that the insurance proceeds can be paid into a bank account controlled by a mutually and reasonably acceptable third party escrow agent that will disburse the insurance proceeds to **LESSEE** from time to time as restoration progresses in order for **LESSEE** to timely pay all invoices related to same in accordance with the terms of a mutually and reasonably agreed upon escrow agreement, with any excess or surplus following completion of restoration to be paid to **LESSEE**. **LESSOR**'s consent shall not be required for the type, plans or manner of such restoration; provided, however, the same shall be completed in accordance with applicable laws.

(3) In the event that **LESSEE** does not elect to restore such loss or damage as provided above, then insurance proceeds for the property damage shall be paid to **LESSOR** with all other recoveries being paid to the **LESSEE**. In such event, **LESSEE** shall also pay to **LESSOR** the amount of any deductible under such insurance or a lesser amount if the reasonably estimated cost to repair or replace such casualty is less than the full amount of the deductible.

(4) Notwithstanding anything contained herein to the contrary, to the extent that **LESSEE** elects to restore any loss or damage to the Premises under subparagraphs (1) and (2) above, **LESSEE** may solely settle and adjust any claim with the insurance company regarding the amount to be paid for any loss or damage under insurance as to which **LESSOR** is named as an additional insured and/or loss payee without **LESSOR's** participation or consent (except that **LESSOR** shall cooperate in executing any documents relating to such settlement or adjustment, upon **LESSEE**'s request); otherwise, if **LESSEE** does not elect to restore any loss or damage to the Premises as provided above, then **LESSOR** shall have the right to settle and adjust any claims with the insurance company for insurance proceeds for property damage under insurance as to which **LESSOR** is named as an additional insured and/or loss payee without **LESSEE**'s participation or consent (except that **LESSEE** shall cooperate in executing any documents relating to such settlement or adjustment, upon **LESSOR's** request). In no event shall **LESSOR** have any claims or rights with respect to any business interruption/loss insurance proceeds which are payable under any insurance maintained by **LESSEE**.

SCHEDULE "5"

Escrow Agreement

[EXHIBIT 7.A.X TO PURCHASE AGREEMENT TO BE ATTACHED]]

SCHEDULE "6"

Form of Letter of Credit

Irrevocable Standby Letter of Credit No.:
Date Issued:
Beneficiary:
Applicant:
Amount:
Expiry Date:

By order of our client, _____, we hereby establish this irrevocable Letter of Credit No. _____ in your favor for an amount up to but not exceeding the aggregate sum of _____ effective immediately, and expiring at the offices of _____ on _____unless renewed as hereafter provided.

The term "Beneficiary" includes any successor by operation of law of the named Beneficiary including, without limitation, any liquidator, rehabilitator, receiver or conservator.

Funds under this Letter of Credit are available to you against your sight draft(s), drawn on us, bearing the clause "Drawn under Credit No. _____ in the form attached hereto.

This Letter of Credit will be automatically renewed without amendment for a one year period upon the expiration date set forth above and upon each anniversary of such date unless at least sixty (60) days prior to such expiration date, or prior to any anniversary of such date, we notify you in writing by registered mail or courier that we elect not to so renew this Letter of Credit.

Upon receipt of you of our notice of election not to renew this Letter of Credit, you may draw hereunder by your sight draft(s) drawn on us and bearing the clause "Drawn under Credit No. _____".

This Letter of Credit sets forth in full the terms of our undertaking. Such undertaking shall not in any way be modified, amended or amplified by reference to any document or instrument referred to herein or in which this Letter of Credit is referred to or to which this Letter of Credit relates and any such reference shall not be deemed to incorporate herein by reference any document or instrument.

All charges and commissions incurred under this transaction will be for the applicant's account. The drawing amount will be paid in full without any deductions for banking related charges.

We hereby agree with the drawers, endorsers and bona fide holders of drafts drawn under and in compliance with the terms of this Credit that such drafts will be duly honored upon presentation to the drawee. We shall honor drawings under the Letter of Credit, without enquiring whether you have a right as between yourself and our said Customer to make such demand and without recognizing any claim of our said Customer. The obligation of _____ under this Letter of Credit is the individual obligation of _____, and is in no way contingent upon reimbursement with respect thereto.

Except as otherwise expressly stated herein, this Credit is subject to and governed by the Laws of the State of New York and 1993 Revision of the Uniform Customs and Practice for Documentary Credits of the International Chamber of Commerce (Publication No. 500) and, in the event of any conflict, the laws of the State of New York will control. If this Credit expires during an interruption of business as described in Article 17 of Said I.C.C. publication, we agree to effect payment if the Credit is drawn against within 30 days after the resumption of business.

Signing Officer Authorized Signing Officer

SCHEDULE "7"

Lead Based Paint Disclosure

Lead Warning Statement.

Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, lessors must disclose the presence of known lead-based paint and/or lead-based paint hazards in the dwelling. LESSEE must also receive a federally approved pamphlet on lead poisoning prevention. LESSOR hereby advises LESSEE that LESSOR believes that there may be lead-based paint and/or lead-based paint hazards in residential structures that are being leased to LESSEE in this transaction, however, LESSOR has no reports or records pertaining to the same. By execution of this LEASE, LESSEE acknowledges that it has received the pamphlet "Protect Your Family from Lead in Your Home".

EXHIBIT 19.f.ii

TENANT ESTOPPEL CERTIFICATE

TO: SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. Box 24680
West Palm Beach, FL 33416-4680

RE: Tenant:_____, as Tenant of those certain properties described as _____ _____ (the "Premises") pursuant to a Lease (the "Lease") dated _____, with _____, Landlord

This is to advise the South Florida Water Management District ("SFWMD") that the undersigned Tenant(s), (whether one or more, hereinafter referred to as the "undersigned") is the Tenant of the above-described Premises pursuant to the Lease. The undersigned understands that the SFWMD has agreed to purchase the real property containing the Premises. It is the undersigned's further understanding that the SFWMD will receive an assignment of the Landlord's interest in and to the Lease at Closing.

The SFWMD has requested that the undersigned confirm certain facts relative to the undersigned's occupancy and possession of the Premises and any rights or interest the undersigned may have in and to the Premises. Accordingly, the undersigned hereby confirms and certifies to the SFWMD the following facts with full knowledge that the SFWMD will rely thereon in purchasing the Premises:

1. The undersigned is the Tenant of the Premises under the Lease.

2. The Lease is current and in good standing and not in default as to either the obligation of the undersigned and/or the Landlord as of this date.

3. The Lease is in full force and effect and as of this date the undersigned is not entitled to any credit, offset or deduction in rent and has no claim against the Landlord for damages or other form of relief.

4. The Lease term expires on _____.

5. The undersigned has not been granted any option or right of first refusal to purchase the Premises or any portion thereof and has not been granted concessions of free rent.

6. The undersigned's rental payment is currently in the monthly amount of $_____ plus $_____ for sales tax and is payable in advance on the _____ day of each month. The undersigned last made a rental payment on _____, which payment was in the

amount of $_____ and constituted payment of rent for the month of _____.

7. The undersigned has not prepaid any rent.

8. The current balance of the undersigned's security deposit is: $_____.

9. The Premises are in good condition and repair and the Landlord is not currently obligated to make any repairs.

10. The undersigned has an option to extend this Lease for an additional _____, _____-year period(s) which option(s) **[please circle one:]** (have)(have not) been exercised.

Dated this _____ day of _____, 200____.

Witnesses:	Tenant:
_____	By:_____
Print:_____	Print:_____
_____	By:_____
Print_____	Print:_____

EXHIBIT 19.j

RELOCATION AGREEMENT