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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SUPPLEMENTAL DIRECT TESTIMONY OF

DOUGLAS C. MILLER

ON BEHALF OF

NOCATEE UTILITY CORPORATION

DOCKET NOS. 990696-WS AND 992040-WS

July 31, 2000

Q. Please state your name and business address.

A. My name is Douglas C. Miller. My business address is 14775 St. Augustine Road, Jacksonville, Florida 32258.

Q. By whom are you employed and in what capacity?

A. I am President of England-Thims & Miller, a full service civil engineering firm. I am Engineer of Record for the Nocatee development and have performed the master planning for Nocatee Utility Corporation (NUC).

Q. Have you previously filed direct, intervenor and rebuttal testimony in these consolidated dockets?

A. Yes.

Q. What is the purpose of your supplemental testimony?

A. The purpose is to update my earlier prefiled testimony to advise the Commission of recent developments.

Q. What is the most significant update?

A. My direct testimony described the Letter of Intent

1 which provided for NUC to obtain bulk water, wastewater
2 and reuse service from JEA pursuant to the terms of a
3 definitive service agreement to be negotiated by the
4 parties. It also described the option that NUC had
5 under the Letter of Intent to obtain management and
6 operation services from JEA. Consistent with the
7 Letter of Intent, NUC has now entered into a formal
8 agreement with JEA to finalize these arrangements.

9 **Q. Are you sponsoring any exhibits with this testimony?**

10 A. Yes. I have attached as Exhibit ____ (DCM-13) a copy of
11 the Agreement for Wholesale Utilities, Operations,
12 Management and Maintenance (Agreement) dated July 24,
13 2000 between NUC and JEA. I have also attached as
14 Exhibit ____ (DCM-14) excerpts from the Sufficiency
15 Response filed by the developers of Nocatee to respond
16 to agency questions and requests for clarification
17 regarding the Application for Development Approval for
18 the Nocatee development.

19 **Q. First, could you please summarize the key terms of the**
20 **Agreement between NUC and JEA?**

21 A. Yes. This agreement obligates JEA to provide bulk
22 water, wastewater and reuse service to NUC for at least
23 25 years in sufficient quantities to meet the needs of
24 the Nocatee development. It also obligates JEA to
25 provide operations, management and maintenance (O&M)
26 services to NUC for a minimum of 10 years, with

1 automatic renewal for three additional 5-year periods.
2 JEA agrees to comply with the applicable provisions of
3 the Nocatee Environmental Water Resource and Area Plan
4 (NEWRAP) in the provision of these services. This
5 means that there will be no on-site potable water
6 wells, no use of groundwater as a primary or secondary
7 source for irrigation, no on-site wastewater treatment
8 facilities, and no effluent discharges to the Tolomato
9 River.

10 **Q. What price has NUC agreed to pay JEA for these**
11 **services?**

12 A. NUC had agreed to pay a bundled rate for the bulk
13 utility service and the O&M services that is equal to
14 80% of the JEA retail rates that would apply if service
15 were provided directly by JEA to end-users within NUC's
16 service territory. Under this approach, the charges to
17 NUC for O&M services will vary in proportion to the
18 amount of bulk service provided to NUC.

19 **Q. Please describe any other payments to JEA under the**
20 **Agreement?**

21 A. In addition to the monthly rates for bulk service and
22 O&M, NUC agrees to pay JEA's prevailing connection fees
23 for all connections within NUC's service territory.
24 Finally, NUC agrees to pay the cost of repairs to NUC's
25 system in excess of \$4,000 per event.

- 1 Q. What happens if NUC terminates the O&M portion of the
2 Agreement before the start of any of the renewal
3 periods?
- 4 A. In that case, the rate paid by NUC to JEA for the bulk
5 water, wastewater and reuse service would revert to
6 JEA's generally applicable rates for wholesale service.
- 7 Q. Are there any other features of the Agreement that you
8 wish to call to the Commission's attention?
- 9 A. Yes. NUC has agreed, upon request by JEA, to "upsized"
10 NUC's on-site facilities (such as the backbone water
11 transmission mains and wastewater force mains) as
12 needed to permit JEA to use those facilities to provide
13 regional service to areas outside Nocatee. In the
14 event JEA requests such upsizing, JEA will contribute
15 to the cost of construction of the Joint Project on a
16 hydraulic share basis. When the Joint Project is
17 placed in service, title will be transferred to JEA,
18 and NUC will retain the right to use its share of the
19 hydraulic capacity of the facilities.
- 20 Q. What is the benefit to NUC of this arrangement?
- 21 A. This arrangement may reduce NUC's capital cost for some
22 of its backbone system by allowing it to share in the
23 economies of scale that come from constructing larger
24 facilities. For example, there may be only a 25%
25 difference in cost between a smaller main and a larger
26 main that provides twice as much hydraulic capacity.

1 If JEA requests such an upsizing, and pays for its
2 share of the main on a hydraulic capacity basis (i.e.
3 50%), the cost to NUC of its share of the capacity will
4 have decreased.

5 Q. Even if JEA holds title to some backbone mains, will
6 NUC still own water, wastewater and reuse mains that
7 physically cross the Duval/St. Johns County line and
8 that will be used to provide service in both counties?

9 A. Yes.

10 Q. How do the costs that NUC will incur under this
11 Agreement compare to the cost estimates for bulk
12 service and O&M expenses on which the rates in NUC's
13 application were originally based?

14 A. Ms. Swain is filing supplemental testimony to address
15 these cost comparisons.

16 Q. When were the other parties to this docket made aware
17 of the Agreement?

18 A. The Agreement was provided to the other parties on the
19 morning of July 25, 2000. Because my third deposition
20 in this docket had previously been scheduled for that
21 day, I was able to answer almost two hours of questions
22 about the Agreement within less than 24 hours after it
23 was executed.

24 Q. Are there any additional updates to your previously
25 filed testimony?

1 A. Yes. My intervenor direct testimony included as
2 Exhibit ____ (DCM-11) excerpts from the water and
3 wastewater sections of Nocatee's Application for
4 Development Approval. In July 2000, Nocatee responded
5 to agency questions and comments on the ADA by filing a
6 Sufficiency Response. A copy of the portions of that
7 response related to utility items, including the
8 portion of the response which pulls together all of the
9 elements of NEWRAP, is attached to this supplemental
10 testimony as Exhibit ____ (DCM-14).

11 **Q. Has there been any change since your earlier testimony**
12 **in the date that utility service will first be required**
13 **in NUC's proposed territory?**

14 A. Yes, a minor one. Due to the DRI review process
15 proceeding somewhat slower than originally anticipated,
16 it now appears that the first need for service will be
17 in the 1st or 2nd quarter of 2002, rather than in late
18 2001 as referenced in my earlier testimony.

19 **Q. Does that conclude your supplemental testimony?**

20 A. Yes it does.

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**AGREEMENT FOR WHOLESALE UTILITIES,
OPERATIONS, MANAGEMENT AND MAINTENANCE
BETWEEN
JEA AND NOCATEE UTILITY CORPORATION**

Agreement (hereinafter referred to as the "Agreement"), made and entered into in duplicate, by and between JEA, a public body corporate and politic of the State of Florida (hereinafter called "JEA"), and Nocatee Utility Corporation, a Florida corporation with principal offices and doing business in Duval County, Florida (the "Utility Company" or "NUC").

WITNESSETH:

WHEREAS, JEA is in the business, among others, of constructing and operating electric, water, and sewer facilities and systems and providing electric, water, and sewer utility services; and

WHEREAS, JEA is developing a regional reclaimed water system to facilitate the reuse of water; and

WHEREAS, Sonoc Company, LLC (the "Developer") is the owner of certain lands as described on **Exhibit A** attached hereto and made a part hereof (the "Development") for which it has made application for approval as a development of regional impact under Chapter 380.06, F.S. (the "DRI"); and

WHEREAS, the Developer has incorporated plans and programs dedicated to environmental conservation and preservation as part of its DRI application and Development Plan which must be reflected in the plans and programs for the supply of water, sewer and reclaimed water to the Development; and

WHEREAS, in anticipation of submitting the DRI application, DDI, Inc., an affiliate of the Developer, entered into a Letter of Intent with JEA dated April 14, 1999 under which terms JEA agreed to provide to a utility company to be formed by the Developer, water, wastewater and reclaimed water in bulk to the Development, in particular a supply of reclaimed water well in advance of the Development's anticipated ability to generate sufficient reclaimed water to serve irrigation needs. The DDI has assigned its rights under the Letter of Intent to NUC; and

WHEREAS, NUC has been formed as the utility company to provide service to the Development and has made application to the Public Service Commission for water and wastewater certificates to serve the Development; and

WHEREAS, NUC and JEA desire to provide for terms under which JEA will supply operations management and maintenance services to NUC;

NOW, THEREFORE, for and in consideration of the premises and the mutual agreements hereinafter set forth, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, JEA and NUC hereby agree as follows:

RECITALS

The above recitals are true and correct, and form a material part of this Agreement.

DEFINITIONS

The following terms shall have the meanings established hereinbelow, unless the context otherwise expressly requires:

- A. "Development" shall have the meaning set forth in the Recitals.
- B. "JEA System" shall mean the water treatment plants and wastewater treatment plants, transmission and distribution lines and facilities to the Points of Connection constructed or to be constructed by JEA at its cost in which will be incorporated capacity to serve the Development in accordance with the terms of this Agreement.
- C. "Joint Project" shall mean those regional water, sewer, and reclaimed water facilities constructed or to be constructed in the future to serve the Development and other customers or potential customers of JEA in accordance with JEA's Water and Sewer Standards, Detail and Materials Manual, and JEA's Rules and Regulations for Electric, Water and Sewer Services, in each case, as amended from time-to-time to the extent constructed jointly by JEA and NUC as more particularly described herein. As to Phase I, the Joint Project is described in **Exhibit B** attached hereto and by this reference incorporated herein.
- D. "Party or Parties" shall mean JEA or NUC.
- E. "Points of Connection" shall mean those points of connection of any Joint Project or the Utilities System to the JEA System which shall be the obligation of NUC as a condition to effect sale and service under this Agreement which are as set forth on **Exhibit C** attached hereto.
- F. "Service" or "Services" shall mean water, sewer, or reclaimed water services provided by JEA to NUC to serve the Development. The terms "sewer" and

"wastewater" shall be interchangeable. The terms "reclaimed water" and "reuse water" shall be interchangeable.

G. "O&M Service" shall mean those services to be supplied by JEA to NUC for operation, management and maintenance as more particularly set forth in Section 6 hereof.

H. "Utilities System" shall mean all facilities wherever located other than a Joint Project or JEA System, used to provide water, sewer, and reclaimed water services within the Development and which shall be constructed by NUC in accordance with JEA's Water and Sewer Standards, Detail and Materials Manual, and JEA's Rules and Regulations for Electric, Water and Sewer Services, in each case, as amended from time-to-time and owned by NUC.

I. "Wholesale Rates" shall mean JEA's uniform published rates as applied to commercial water customers, commercial reclaimed water customers, and limited service user sewer customers as may be amended pursuant to public hearing based on cost of service.

1. GENERAL CONDITIONS.

1.1 **Governing Law.** The terms and conditions of this Agreement will be governed by the laws of The State of Florida.

1.2 **Indemnification.**

1.2.1 To the extent allowed by applicable law and subject to the provisions of Sections 402.135 and 768.28, Florida Statutes, JEA shall indemnify, defend and hold harmless NUC from any liabilities arising out of JEA's (i) neglect, act or omission in the operation, maintenance or management of the Utilities System and (ii) breach of this Agreement.

1.2.2 NUC shall indemnify, defend and hold harmless JEA from any liabilities arising out of NUC's (i) neglect, act or omission in the construction, operation and maintenance of the Utilities System and (ii) breach of this Agreement.

1.3 **Environmental Indemnification and Compliance.** JEA and NUC both agree that during the term of this Agreement each shall at all times comply with all federal, state and local environmental statutes, laws, ordinances, rules and regulations. In the event any investigation or monitoring of site conditions or any clean-up, containment, restoration, removal or other remedial work (collectively, the "Remedial Work") is required pursuant to any applicable federal, state, local law, ordinance, rule or regulation, any judicial order, or by any governmental entity, due to the actions or activities of either party, the party whose actions or activities made the Remedial Work necessary shall bear the responsibility to perform or cause to be performed the

Remedial Work in compliance with such law, ordinance, rule or regulation or order or requirement. JEA, to the extent allowed by applicable law and subject to the provisions of Sections 402.135 and 768.28, Florida Statutes, and NUC both further agree that each shall indemnify, hold harmless, and defend the other from any and all claims, actions, damage, injury, liability, penalty, and any cost and/or expense whatsoever incurred by one as a result of the other's actions or omissions, during the term of this Agreement, which results in a violation of any federal, state or local environmental law, ordinance, rule or regulation that leads to any environmental claim due to such actions or omissions. Each shall give the other prompt notice of any events which may give rise to such liability, and shall cooperate fully with the other in contesting or otherwise resolving such matters. In the event one party incurs any liability, cost, expense or fee(s) as a result of the actions or activities of the other party as contemplated above, it shall be reimbursed the total of all such costs, expense or fee(s) by the offending party promptly upon demand.

1.4 Reclaimed Water Indemnity for Third Party Claims. To the extent allowed by applicable law and subject to the provisions of Sections 402.135 and 768.28, Florida Statutes, JEA shall indemnify and hold harmless NUC from any liabilities arising out of JEA's negligent act or omission in the operation of the water reclamation facility for the purposes described herein. Any obligation, however, on the part of JEA to indemnify NUC shall also be conditioned upon NUC's compliance with reasonable operating practices or restrictions for protecting human health and the environment, including those described in the Florida Department of Environmental Protection ("FDEP") rules in the Florida Administrative Code ("FAC"), specifically Chapter 62-610 ("FAC") titled Reuse of Reclaimed Water and Land Application and any additional reasonable operating practices or restrictions which JEA may establish from time to time and require of NUC. Reasonable operating practices include any requirements established by the United States Environmental Protection Agency ("EPA") or FDEP. JEA shall not indemnify and hold harmless NUC for any liability which is caused by NUC.

1.5 Governmental Acts. If for any reason during the term of this Agreement, a local, regional, state or federal government or agency fails to issue necessary permits, grant necessary approvals, or requires any change in the operation or the treatment, transmission or distribution systems or the application or use of water, sewer, or reclaimed water, then to the extent that such requirement shall affect the ability of any party to perform the remaining terms of this Agreement, the affected party shall be excused from the performance of the affected provisions thereof, and an amendment to this Agreement shall be negotiated by the parties hereto, if necessary, in conformance with such permits, approvals, or requirements. All parties, however, shall exert their best efforts to obtain the permits and approvals necessary to implement this Agreement as written. For any portion of service which JEA cannot provide, NUC may, upon written notice to JEA at its option (i) make arrangements for alternative service or (ii) with respect to a permanent or otherwise material inability to provide service, terminate this

Agreement to the extent it is not economically feasible for NUC to obtain that portion of service JEA cannot provide from an alternative source.

1.6 Duration of Agreement and Termination. This Agreement shall continue in full force and effect as to all its terms, conditions and provisions as set forth herein (i) until such time as the Utilities System is sold in accordance with Section 2 below or termination in accordance with Section 6.3 below or (ii) if certification of NUC by the Public Service Commission is finally denied. All indemnities and indemnification provisions of this Agreement shall survive the expiration or termination of this Agreement. The parties acknowledge that JEA agrees to provide water, wastewater and reclaimed water at JEA's Wholesale Rates for the duration of the Agreement as contemplated in **Exhibit D**; unless sooner terminated in accordance with the provision of Section 6.3 below.

1.7 Exclusive Provider. During the term of the Agreement, JEA shall be the exclusive provider of wholesale water, sewer, and reclaimed water to NUC.

1.8 Severability of Invalid Provisions. If any one or more of the covenants, agreements or provisions of this Agreement shall be held contrary to any express provision of law or contrary to the policy of express law, though not expressly prohibited, or against public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements or provisions shall be null and void, and shall be deemed separable from the remaining covenants, agreements or provisions, and shall in no way affect the validity of any of the other provisions of this Agreement.

1.9 Rights and Obligations Not Transferable. Except as provided in Section 14 of this Agreement, the rights and obligations of the Parties hereunder are not assignable and may not be transferred without the prior written consent of the other Party hereto, which will not be unreasonably withheld. This Agreement shall be construed as having resulted from joint negotiation and authorship.

1.10 Notices. All notices, requests, demands or other communications hereunder shall be in writing and shall be deemed to have been duly given if delivered by hand, delivered by a nationally recognized overnight delivery service or mailed by certified or registered mail, return receipt requested, postage prepaid.

1.10.1 If to JEA, to the Vice President, Construction and Maintenance, JEA, 21 West Church Street, Jacksonville, Florida 32202-3139, with a copy to the Office of General Counsel of the City of Jacksonville at 117 West Duval Street, Suite 480, Jacksonville, Florida 32202.

1.10.2 If to NUC, to the Vice President, Nocatee Utility Corporation, to 4310 Pablo Oaks Court, Jacksonville, Florida 32224, with a copy to Robert A. Leapley, Esquire, Pappas Metcalf Jenks Miller & Reinsch, P.A., 200 West Forsyth Street, Suite 1400, Jacksonville, Florida 32202.

The person and address to whom notices are to be delivered or sent may be changed by delivering written notice thereof to the other party in the manner provided above not less than ten (10) days prior to the effective date of said change.

2. **RIGHT OF FIRST REFUSAL.** Within the term of this Agreement and thereafter until the Utility System is sold to JEA or a third party, NUC hereby agrees to provide to JEA a right of first refusal to purchase the Utilities System, which shall include all facilities used to provide water, sewer and reclaimed water services within the Development; provided, however, in the event of such sale to a third party, that portion of the Utilities System within the Development which is located in Duval County as delineated in **Exhibits A and B** that normally would have been dedicated by a developer to JEA at no cost if JEA had provided retail water, sewer, and reuse services to such developer (including but not limited to all water, reclaimed water and sewer pumping, transmission, distribution, and collection components and appurtenances) will be transferred at no cost to JEA under this provision whether or not JEA is the successful purchaser of the portion of the Utilities System outside Duval County.

3. **OWNERSHIP OF THE JOINT PROJECT.** JEA shall at all times retain ownership of the JEA System and any Joint Project. NUC shall at all times retain ownership of the Utilities System (or until such time that it is sold in accordance with Section 2 above).

4. **RESERVATION OF CAPACITY.** JEA shall at all times reserve to NUC at no cost to NUC for such reservation, that amount of water, sewer, and reclaimed water capacity within the JEA System and any Joint Project sufficient to service Phase 1 of the Development at the quantity as set forth on **Exhibit D** attached hereto and made a part hereof. JEA shall at all times reserve to NUC, at no cost to NUC, that amount of water, sewer or reclaimed water capacity in any Joint Project equal to the amount of such capacity constructed at the expense of NUC.

5. **AVAILABILITY OF WATER, SEWER AND RECLAIMED WATER.** JEA agrees that JEA shall be obligated to supply water, sewer and reclaimed water to NUC, as needed by customers of NUC, subject to the maximum quantities and in accordance with phases two through five of the Development described on **Exhibit D** attached hereto and by this reference incorporated herein. JEA has represented to NUC and the Developer that, as of the execution of this Agreement, JEA has available capacity sufficient to serve the portions of the Development anticipated to be connected to NUC within the next five years. JEA shall continue to expand the

JEA System to meet the water, wastewater and reclaimed water requirements of NUC for the Development as set forth herein, but JEA shall determine the timing of such expansion of capacity which may be necessary to meet the requirements of the Agreement. Additionally, NUC shall cause the Developer to provide to JEA a copy of the annual report required to be delivered pursuant to Chapter 380.06, F.S.

6. OPERATION MANAGEMENT.

6.1 **O&M Service.** JEA will provide operation, management and maintenance service ("O&M Service"), including billing and collection services to NUC for the Utilities System and monitoring compliance with the requirements of Sections 8.6 through 8.10 below. JEA shall operate and maintain the Utilities System in accordance with all applicable federal, state and local laws, ordinances, rules and regulations and in accordance with generally accepted industry practices and consistent with the customary standards of service of JEA to its retail customers for all classes of customers of NUC throughout the term of the Agreement.

6.2 **Maintenance.** JEA will develop and implement a preventive and corrective maintenance program for the water, sewer, and reclaimed water systems of the Utilities System. Preventive maintenance is maintenance that will help prevent interruptions of service and will include scheduled maintenance of all dynamic equipment. Corrective maintenance is maintenance and repair work that is required to return a water, sewer or reclaimed water system or component to proper operating condition. JEA's liability for preventive and corrective maintenance and repair shall be limited to \$4,000 per each event, with JEA responsible for the initial \$4,000 per event (calculated in accordance with JEA's system-wide allocation policy).

6.3 **Term of O&M.** Provision of O&M Service shall continue for a period of ten (10) years and shall automatically be renewed for three (3) successive terms of five (5) years each (each an "Extended Term") unless terminated by either party upon written notice of termination from one party to the other given not later than one (1) year prior to the expiration of the original term or any Extended Term. In the event of termination of O&M Service by either party, JEA will continue to be the exclusive provider of water, sewer and reclaimed water to NUC at JEA's Wholesale Rates for the duration of all phases of the Development as described on **Exhibit D** but not less than a period of twenty-five (25) years from the date of execution of this Agreement.

6.4 **Billings.** As part of its O&M, JEA shall provide for meter reading, monthly billings, collections, and deposits of all funds into JEA's accounts. Meters shall be read and bills sent out on a monthly basis, in accordance with JEA's current billing cycles. JEA does not assume any responsibility for third party collection of debts or the balance owed on late or unpaid accounts. Provided, however, JEA shall be responsible for the collections in accordance

with JEA's customary internal demand for payment and collection practices, cut-on and cut-off practices, and meter testing and shall make all necessary billing adjustments if there are errors. It shall be NUC's responsibility to perform post cut-off collections.

6.5 Maintenance of Reclaimed Water Storage Facilities. As part of its O&M Service, JEA shall be responsible for the operation and maintenance of all components of the reclaimed water system owned by NUC which uses exclusively reclaimed wastewater (i.e., no stormwater) or groundwater and shall be responsible for the operation and maintenance of any quality control stations required for monitoring and controlling the reclaimed water system owned by NUC which uses exclusively reclaimed wastewater (i.e., no stormwater) or groundwater.

6.6 NEWRAP In the performance of its O&M Services, JEA shall comply with those provisions of the Nocatee Environmental Water Resource Plan ("NEWRAP") as identified on **Exhibit E** attached hereto and made a part hereof, and implement the education provisions thereof.

7. WATER, SEWER AND RECLAIMED WATER USAGE CHARGES.

7.1 Water, Sewer, and Reclaimed Water Usage Charges Billed to Customer. JEA will bill monthly each NUC customer that is metered or unmetered for water, sewer, and reclaimed water usage in accordance with NUC's approved tariff rates for such service as those may be amended from time to time. JEA will also bill for any other water, sewer and/or reclaimed water fees or surcharges required by any authorized federal, state, or local governments or regulatory agency.

7.2 O&M Charges. The amount due to JEA for wholesale supply of water, wastewater and reclaimed water and O&M Service, collectively shall be (in addition to those payments referenced in Section 7.3 below) equal to eighty percent (80%) of the uniform published rates (other than those charges listed in section 7.3 below) of JEA (as the same may be amended pursuant to public hearing based on cost of service) for base monthly fees, unit rate per volume used and sewer surcharge fees as measured at the individual customer's meter for each size of meter and class of customer served within the Development (but as to residential customers, reclaimed water rates shall not exceed \$.20/100 cubic feet until December 31, 2004).

7.3 Water, Sewer and Reclaimed Water Capacity Fees, Meter Fees and Tap Fees and Other Fees and Charges. JEA will collect from each water, wastewater and reclaimed water customer connecting to the Utilities System, all applicable meter fees, capacity fees, and service availability charges in accordance with NUC's approved tariffs, as such tariffs may be amended from time to time, including those charges which represent a pass through by NUC to its customers of JEA's connection and capacity charges (including any applicable sewer

surcharge capacity fees) and any other JEA uniform fees and charges. JEA shall retain the portion of such charges which represent the uniform published JEA fees and charges. The amounts due JEA pursuant to Section 7.2 and 7.3 above shall hereinafter collectively be referred to as the "JEA Charges".

7.4 **JEA Remit to NUC.** JEA will remit to NUC any collections in excess of JEA Charges and any other collections for fees or surcharges required by any authorized federal, state, or local governmental or regulatory agency for each of the NUC customers, within forty-five (45) days of receipt by JEA.

8. **OBLIGATIONS OF NUC.**

8.1 **Design and Permitting of Joint Project.** NUC shall be responsible for the design and permitting in accordance with JEA's Water and Sewer Standards, Detail and Materials Manual, and JEA's Rules and Regulations for Electric, Water and Sewer Services in each case, as the same may be amended from time to time, of all regional water, sewer, and reclaimed water facilities for any Joint Project. JEA will not be responsible for any of the costs associated with such design and permitting.

8.2 **Ownership and Construction of the Utilities System.** NUC shall own and shall be responsible for the design, permitting and construction of the Utilities System in accordance with JEA's Water and Sewer Standards, Detail and Materials Manual, and JEA's Rules and Regulations for Electric, Water and Sewer Services, in each case, as the same may be amended from time to time, JEA shall have the right to inspect all Utility System components. No Utility System component shall be placed in service prior to JEA's final certification of completion for that component. All work reasonably determined by JEA to be substandard shall be corrected at NUC's expense prior to being placed in service.

8.3 **Intentionally omitted.**

8.4 **Construction of the Joint Project.** If JEA elects to provide for increased capacity in transmission or distribution lines over and above the capacities anticipated for the Utilities System so as to allow JEA to service customers other than customers of NUC, JEA shall provide notice to NUC of such Joint Project as soon as is reasonably practicable. JEA hereby elects to provide for increased transmission and distribution capacities for the Phase I Joint Projects as delineated on **Exhibit B and the reuse line to be constructed from the Reuse Points of Connection to the Development.** Within 30 days of request by NUC, JEA shall provide information to NUC as to the upsizing requirements of JEA for such Joint Projects. NUC shall be responsible for construction of the Joint Project and JEA shall bear the construction cost

of any increased capacity of such Joint Project, on a hydraulic share basis analyzed on the average daily flow requirement and at a velocity of 3.5 feet per second, as and when due in the construction process. JEA agrees that in order to cause such Joint Project lines to be upsized as provided herein, it shall provide sufficient prior notice to NUC so as to avoid interference or delay in the construction schedules of NUC. Any such Joint Project shall be dedicated to JEA upon completion as provided in Section 3 above.

8.5 Easements. NUC shall provide, at no cost to JEA, permanent and temporary easements for any Joint Project inside and outside the Development downstream from the Points of Connection and shall provide, at its own expense, any easements necessary for any portion of the Utilities System and in compliance with all applicable regulatory requirements including FDEP reclaimed water system regulations.

8.6 Backflow Prevention. NUC shall provide, or require its customers to provide, backflow preventors for the water system in accordance with JEA's backflow prevention policies and procedures.

8.7 Industrial Pretreatment. In the event that NUC or any of its customers should be a generator of industrial wastewater, NUC shall implement an approved industrial pretreatment program prior to connecting the facility to the Utilities System and comply with all applicable EPA and FDEP regulations and requirements. Said industrial pretreatment program shall conform to the requirements of JEA's Rules and Regulations for Water and Sewer Service.

8.8 Signage. NUC shall take all reasonable precautions, including the use of signs and appropriate labels, to clearly identify the reclaimed water source and supply system. JEA shall provide NUC with reasonable design criteria, upon request, and appropriate labels and signage guidelines for installation of signage.

8.9 Disconnect and Back Flow. Where required, NUC shall install and maintain, in a manner approved by the appropriate regulatory agencies, a positive disconnect mechanism(s) and/or back flow prevention device(s) between the reclaimed water system and any other water source. These mechanisms and devices shall be subject to inspection by JEA and shall be installed for the purpose of preventing any reclaimed water from being discharged directly into the groundwater or other water bodies regulated by the state.

8.10 Reuse Irrigation System. NUC shall require all reuse water customers to install and solely utilize inground irrigation systems for application of reuse water. No potable water irrigation services and meters shall be installed in the Utilities System.

8.11 Potential Secondary Consumptive Use Permit ("CUP") Requirements. NUC shall be responsible for negotiating and complying with any future St. Johns River Water Management District ("SJRWMD") secondary CUP requirements.

9. REPRESENTATIONS OF NUC. NUC makes the following representations:

9.1 Good Standing. NUC is a corporation duly organized, validly existing and in good standing in the State of Florida, is authorized to do business in the State, and has all requisite corporate power and authority to enter into and fully perform this Agreement, subject to final approval of the PSC Certification.

9.2 Authorization. Subject to the PSC Certification, all necessary action on the part of NUC to authorize execution and delivery of this Agreement and the performance of its obligations under this Agreement have been duly taken and, assuming due authorization, execution and delivery by JEA, this Agreement shall be valid and enforceable against NUC in accordance with its terms.

9.3 No Violation. To the best of NUC's knowledge and belief after due inquiry and upon issuance of the PSC Certification, the terms and conditions of this Agreement do not violate the provisions of any applicable law or any applicable order or regulation of any government authority having jurisdiction over NUC and compliance with this Agreement will not violate the terms and conditions of any agreement or instrument to which NUC is a party.

10. REPRESENTATIONS OF JEA. JEA makes the following representations:

10.1 Good Standing. JEA is a duly organized and validly existing body corporate and politic of the State of Florida. JEA has full power and authority to enter into the transactions contemplated by this Agreement.

10.2 Authorization. To the best of its knowledge and belief after due inquiry JEA is not in default under any provisions of the laws of the State of Florida material to the performance of its obligations under this Agreement. JEA has duly authorized the execution and delivery of this Agreement and, assuming the due authorization, execution and delivery of this Agreement by the other parties, this Agreement constitutes a valid and legally binding obligation of JEA enforceable in accordance with its terms.

10.3 No Violation. To the best of JEA's knowledge and belief after due inquiry, the terms and conditions of this Agreement do not violate the provisions of any applicable law or any provision of the constitution of the State of Florida.

11. **INTENDED THIRD PARTY BENEFICIARY.** The Developer or a successor that purchases all of the remainder of the Development from the Developer is each an intended third party beneficiary of the provisions of Sections 4 and 5 of this Agreement and shall be entitled to independently enforce this Agreement as to the obligations of JEA referenced therein.

12. **POST EXECUTION RELATIONSHIP.** From time to time after execution of this Agreement each party and their respective successors and assigns shall, upon request of the other, execute, acknowledge and deliver, all such further acts, deeds, assignments, transfers or other documentation to confirm and fulfill the obligations and intent of the parties under this Agreement.

13. **FAILURE OF PERFORMANCE.**

13.1 **Breach.** A breach of this Agreement shall mean a material failure to comply with any provisions of this Agreement. If any party breaches any obligation of this Agreement, then, upon receipt of written notice by the non-breaching party, the breaching party shall proceed diligently in good faith to use all reasonable actions to cure such breach and shall continue to take all such actions until such breach is cured.

13.2 **Remedies.** If any party breaches this Agreement, a non-breaching party may proceed at law or in equity to enforce its rights under this Agreement including specifically the right of specific performance and mandamus.

13.3 **Force Majeure.** Neither Party shall be responsible to the other Party for failure to comply with any provisions of this Agreement due to causes beyond their control, including without limitation, acts of God, fire, flood, natural disasters or otherwise provided, however, the parties shall use their best efforts to overcome such force majeure event.

14. **ASSIGNMENT**

14.1. **NUC.** Upon Notification to JEA, NUC or its permitted assignee may assign all of its right, title and interest under this Agreement to a successor owner of the Utilities System, subject to the provisions of Section 2 above.

14.2. **JEA.** JEA may assign its rights under this Agreement only to a successor or assign of JEA who acquires substantially all of the assets of JEA.

15. **AMENDMENTS AND WAIVERS.** This Agreement may only be amended by a written amendment executed by both NUC and JEA. No waiver of any provisions of this Agreement shall be deemed to constitute a waiver of any other provisions of this Agreement.

16. **ENTIRE AGREEMENT.** This is the entire Agreement between the parties pertaining to the subject matter and supersedes the Letter of Intent and all prior and contemporaneous Agreements except as may be specifically set forth in separate written agreement.

[This space left blank intentionally]

IN WITNESS WHEREOF, the undersigned parties have duly executed this Agreement as of the date this Agreement.

NOCATEE UTILITY CORPORATION:

By: Henry D. Hain
Its: VICE PRESIDENT

Witnesses

Date of Execution by NUC:

July 24, 2000

JEA:

By: Scott D. Kelly
Its: VICE PRESIDENT

Date of Execution by JEA:

July 24, 2000

GUARANTEE

Sonoc Company, LLC (the "Developer"), hereby guarantees the prompt payment and performance of all obligations of NUC under the terms of this Agreement, provided, however, with respect to any obligations of NUC under this Agreement that the Developer cannot perform unless it holds a certification from the Public Service Commission, the Developer will promptly pay JEA for all costs, expenses and other damages (including attorney's fees and costs) resulting from NUC's failure to perform such obligations. This is a guarantee of prompt payment and performance and not merely a guarantee of collection, subject however, to all defenses of NUC under the Agreement, and JEA shall not be obligated to pursue or institute proceedings against NUC prior to enforcing its rights hereunder. Nothing contained herein shall be construed a guarantee that NUC will obtain such PSC Certification.

SONOC COMPANY, LLC

A limited liability company
Formed under the laws of Delaware
By: Harry D. Francis
Name: HARRY D. FRANCIS
Title: VICE PRESIDENT

Form approved:

Lele Beth
Office of General Counsel

Attest:

By: Scott D Kelly
Name: SCOTT D KELLY
Title: VICE PRESIDENT

I hereby certify that the expenditure contemplated by the foregoing contract has been duly authorized, and provision has been made for the payment of the monies provided therein to be paid.

By: Scott D Kelly
Title: VICE PRESIDENT

INDEX OF EXHIBITS

- A. The Development
- B. Description of Joint Project
- C. Points of Connection
- D. Development Phases and Demand
- E. NEWRAP Criteria

EXHIBIT "A"

The Development

NOTE:

THE LOCATIONS, CONFIGURATIONS, AND USAGE OF DEVELOPMENT PODS, ROADWAYS, WETLANDS, AND PRESERVATION AREAS ARE CONCEPTUAL AND SUBJECT TO FURTHER REFINEMENT.

LEGEND

 NOCATEE DEVELOPMENT

DUVAL COUNTY

RACETRACK ROAD

ST. JOHNS COUNTY

Park & Ride Light Industrial

Sandy Ridge Village

NEW C.R. 210
COUNTY ROAD 210

U.S. 1

FLORIDA EAST COAST RAILROAD

DUVAL COUNTY
ST. JOHNS COUNTY

Twenty Mile Village

Twenty Mile Greenway (Northwest)

Out

Town Center Village

Town Center Village

Town Center Village

Split Pine Village

Town Center Greenway

F.I.N.D. Site

Cabbage Hammock Pass

Oak Hammock Village (North)

Nocatee Preserve

Town Center Village

Center Pass

Old Bluff Road Village

Oak Hammock Village

Nocatee Preserve

Snowden Greenway (West)

Snowden Greenway (East)

Snowden Village

Twenty Mile Greenway (Center)

South Village

Deep Creek

South Village

Twenty Mile Greenway (South)

South Village

Crosswater Village

Pine Island Greenbelt

INTRACOSTAL WATERWAY

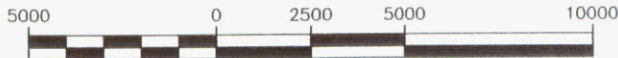
Tolomato River

Spanish Landing

Pine Island



GRAPHIC SCALE



(IN FEET)

MAP REVISED: JULY 20, 2000

**NOCATEE DEVELOPMENT
EXHIBIT A**



England-Thimby & Miller, Inc.

ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS

14775 ST. AUGUSTINE ROAD
JACKSONVILLE, FLORIDA 32258

PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485





EXHIBIT "B"

Description of Joint Project

NOTE:

THE LOCATIONS, CONFIGURATIONS, AND USAGE OF DEVELOPMENT PODS, ROADWAYS, WETLANDS, AND PRESERVATION AREAS ARE CONCEPTUAL AND SUBJECT TO FURTHER REFINEMENT.

LEGEND

-  NOCATEE DEVELOPMENT
-  FORCE MAIN
-  WATER MAIN
-  REUSE MAIN

DUVAL COUNTY

RACETRACK ROAD

ST. JOHNS COUNTY

Park & Ride Light Industrial

Sandy Ridge Village

COUNTY ROAD 210

U.S. 1

FLORIDA EAST COAST RAILROAD

DUVAL COUNTY
ST. JOHNS COUNTY

Twenty Mile Village

Out

Twenty Mile Greenway (Northwest)

Town Center Village

Town Center Village

Town Center Village

High School

Center Pass

Cabbage Hammock Pass

F.I.N.D. Site

Oak Hammock Village (North)

Nocatee Preserve

Oak Hammock Village

Old Bluff Road Village

Nocatee Preserve

Snowden Greenway (West)

Snowden Greenway (East)

Snowden Village

South Village

South Village

South Village

Crosswater Village

Pine Island Greenbelt

INTRACOASTAL WATERWAY

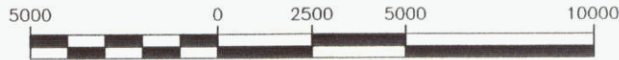
Tolomato River

Spanish Landing

Pine Island



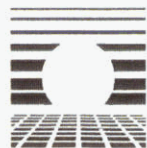
GRAPHIC SCALE



(IN FEET)

MAP REVISED: JULY 20, 2000

**DESCRIPTION OF PROJECT
EXHIBIT B**



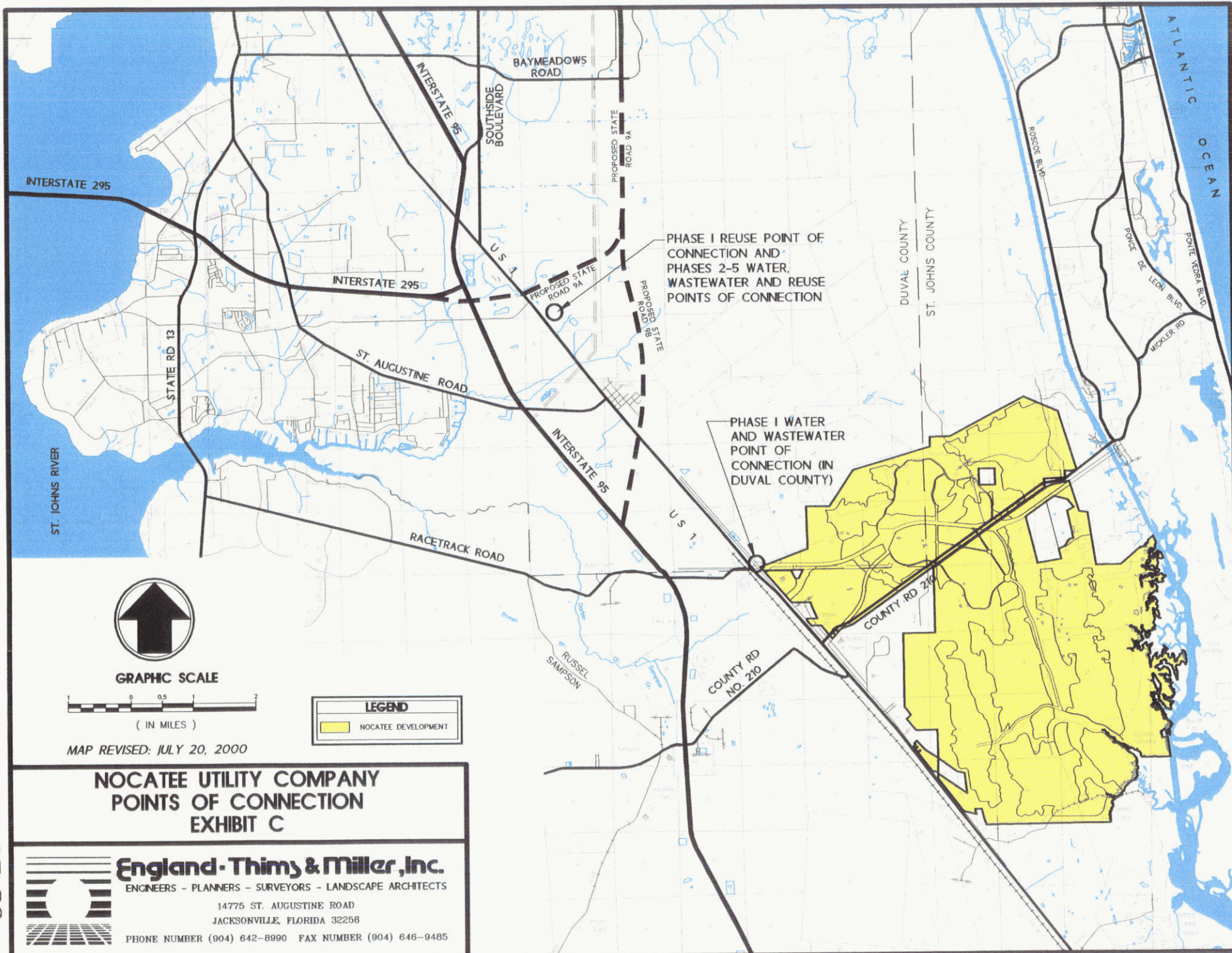
England-Thimby & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS

14775 ST. AUGUSTINE ROAD
JACKSONVILLE, FLORIDA 32258

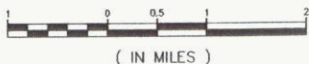
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

EXHIBIT "C"


Points of Connection



GRAPHIC SCALE



MAP REVISED: JULY 20, 2000

LEGEND	
	NOCATEE DEVELOPMENT

NOCATEE UTILITY COMPANY POINTS OF CONNECTION EXHIBIT C



England-Thimys & Miller, Inc.

ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS

14775 ST. AUGUSTINE ROAD
JACKSONVILLE, FLORIDA 32258

PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

EXHIBIT "D"

Development Phases and Demand

EXHIBIT D

SUMMARY OF WATER, WASTEWATER AND REUSE DEMANDS

Phase	Water		Wastewater		Reuse**	
	ADF* (MGD)	Cumulative ADF* (MGD)	ADF* (MGD)	Cumulative ADF* (MGD)	ADF* (MGD)	Cumulative ADF* (MGD)
Phase 1						
2002-2006	0.729	0.729	0.614	0.614	1.228	1.228
Phase 2						
2007	0.222	0.951	0.188	0.802	0.168	1.396
2008	0.222	1.173	0.188	0.990	0.168	1.564
2009	0.222	1.396	0.188	1.179	0.168	1.732
2010	0.222	1.618	0.188	1.367	0.168	1.900
2011	0.222	1.840	0.188	1.555	0.168	2.068
Phase 3						
2012	0.299	2.139	0.257	1.812	0.790	2.858
2013	0.299	2.438	0.257	2.069	0.140	2.999
2014	0.299	2.736	0.257	2.326	0.140	3.139
2015	0.299	3.035	0.257	2.583	0.140	3.280
2016	0.299	3.334	0.257	2.840	0.140	3.420
Phase 4						
2017	0.284	3.618	0.243	3.083	0.788	4.208
2018	0.284	3.903	0.243	3.325	0.138	4.346
2019	0.284	4.187	0.243	3.568	0.138	4.485
2020	0.284	4.472	0.243	3.810	0.138	4.623
2021	0.284	4.756	0.243	4.053	0.138	4.761
Phase 5						
2022	0.273	5.029	0.231	4.284	0.126	4.887
2023	0.273	5.302	0.231	4.515	0.126	5.013
2024	0.273	5.575	0.231	4.747	0.126	5.138
2025	0.273	5.848	0.231	4.978	0.126	5.264
2026	0.273	6.121	0.231	5.209	0.126	5.390

* ADF - Average Daily Flow

** An additional 20% reuse demand will be provided by on-site stormwater.

EXHIBIT "E"

NEWRAP Criteria

EXHIBIT E

NEWRAP COMPONENTS

- There shall be no wastewater effluent discharges to the Tolomato River.
- There shall be no water treatment plant or wastewater treatment plant located within the boundaries of the Nocatee Development.
- There shall be no reliance on groundwater withdrawal within the Nocatee Development to meet potable water demands from the Development.
- Irrigation demands throughout the Nocatee Development, including single-family residential areas, shall be met with reclaimed water and stormwater. Groundwater may be used only as a potential backup to the reclaimed water system.
- A customer and employee Water Conservation Education Program, in accordance with Section 12.2.5.1 (e) of the St. Johns River Water Management District, Consumptive Use Permitting Applicant's Handbook shall be implemented.
- All users of potable water and reclaimed water shall be metered and monitoring, calibration, repair and replacement of meters shall be conducted on a regular basis.
- Audits of the potable and reclaimed water distribution systems shall be conducted every other year (biennial). Leak detection/repair programs shall be conducted on an as needed basis.

EXHIBIT _____ (DCM-14)

Docket Nos. 990696-WS & 992040-WS

EXCERPTS FROM ADA SUFFICIENCY RESPONSE



QUESTION 14 – WATER

To address agency concerns for adequate buffers of sensitive areas, the applicants have committed to a 2500 foot wide plus buffer as provided by the Preserve, 100 foot wide buffers for creeks, and additional buffers as required by current SJRWMD rules. We believe that the overall land preservation of this plan is preferable to the results achieved by strict application of linear buffers to isolated areas. Prohibiting development next to open waters also helps to dramatically reduce the impacts to water bodies.

In response to Question 14-C the applicant states that appropriate buffers will be adjacent to the open surface waters of Durbin, Deep, and Smith Creeks. Exhibit 14-2 depicts these Surface Water Buffers. Please indicate the minimum widths of these buffers. NEFRPC

The most significant buffer is the Nocatee Preserve, which separates the developable lands from the Guana-Tolomato River Aquatic Preserve by a varying distance of 0.5 to 1.5 miles and extends for over 3.5 miles. Certain areas (Deep Creek, Smith Creek, and Durbin Creek) will have 100-foot buffers, and the remaining wetlands will have buffers consistent with SJRWMD requirements. The applicant believes that this variable approach to buffers is the best fit for the Nocatee development. The greatest buffers are placed upon the most significant resources.

Please address the existence of the golf courses on site and their relationship to wetlands. What affect will the golf courses have on water quality and what measures will be taken to ensure that there is no adverse affect? What type of buffer will be provided for the golf courses and what activities will be allowed in these buffers? Will there be a commitment to utilize slow release fertilizers? NEFRPC

The Nocatee project has been developed with a holistic systems approach to water quality, hydrology and wildlife protection. Water quality will be maintained through collection and treatment of stormwater in wet detention stormwater management systems, hydrology will not be adversely altered at wetlands boundaries (and therefore within the wetlands) and wildlife will be protected through a combination of wetlands and upland preservation within the Greenway and Preserve.

The golf courses in Nocatee will incorporate the same approach as the overall project. First, stormwater management for the treatment and attenuation of storm events will be provided in accordance with Chapters 40C-4 and 40C-42, F.A.C. The stormwater from the golf courses will be treated in wet detention facilities prior to discharge from the golf course. Second, an Integrated Pesticide/Nutrient Management (IPM) Plan has been developed for the golf courses and will be included in the Consumptive Uses of Water permitting process with the St. Johns River Water Management District. Nocatee will also require the use of slow release fertilizers where practical. The IPM Plan is provided within NEWRAP. Third, a minimum of 25 feet of upland buffer will be provided between any golf hole and contiguous wetlands. No impacts will be permitted on these wetlands unless otherwise noted on Map F-5, as permitted. All isolated wetlands will also have a 25' upland buffer, however hand trimming of the tree or scrub cover over four feet in height is permitted within the buffer, providing the ground vegetation is not removed. This condition is subject to SJRWMD permitting conditions.

Table 17-3 has identified six existing water wells on the project site. The applicant has indicated that these wells will remain for fire protection until development of these areas of the well or may be used as a backup irrigation supply. Please indicate the status of these wells. Are they free flowing or plugged? Please address well plugging programs to be instituted on site. NEFRPC

Table 17-3 below and Map D (Tab 9) have been revised to reflect the current well locations. As shown in the revised information, there are only three existing wells on the Nocatee site. These three existing



QUESTION 14 – WATER

wells are Artesian wells that have either a valve or cap to prohibit free flow. These wells are used to supply water for fire protection.

During project development, if an existing well becomes unnecessary for fire protection or backup for reuse water/irrigation, it will be properly plugged and abandoned in accordance with St. Johns County and St. Johns River Water Management District requirements.

Table 17-3: Nocatee Existing Water Wells

Well No.	Casing Dia. (inches)	Depth (ft)	Flow Rate (gpm)	Type
19. South Bend Micklers	12	1014	1043	Fire protection
23. Twenty Mile	3	unknown	unknown	Fire protection
6-N. Old Scout Camp	4	400	33	Fire protection

gpm - gallons per minute

Source: England, Thims & Miller, 2000

22. Question 14; Water: The response does not include information regarding wetland and buffer sizes, as per Question 13. This information is needed to determine if a water quality management program is necessary. Also, please provide a water quality management plan. Please include this information in your response. NEFRPC

Nocatee proposes a water quality plan based upon functionality rather than the set distance of a linear buffer. Nocatee has provided an extensive preservation, conservation and greenway system, which serves as the backbone of the surface water quality management plan. No development has been planned adjacent to the open waters of any watershed serving Nocatee. As outlined in the stormwater management plan, all stormwater will be collected and treated prior to discharge, including treatment to OFW standards for all discharges into the Tolomoto Basin. In addition, treated stormwater will be discharged into the greenway system to enhance on site detention and treatment prior to reaching open waters. This system of constructed treatment facilities and maintaining hydrologic regimes in larger natural systems is the most effective water quality management plan for the post construction environment.

This plan as well as details on techniques to maintain water quality during construction are outlined in detail in NEWRAP, included with this submission.

1. Please provide a map with the mean high water line, the marsh line, and the preservation boundary lines. DEP

The Mean High Water and Boundary Survey (Sheets 1-7 of 7) as prepared by Angas Associates, Inc. is included separately. This map series is included separately with this response to relevant agencies. The MHWL, along with the approximate marsh line and preservation boundary lines and Preserve boundaries are also shown on Maps H-1, H-3, and F-3 (Tab 9).



QUESTION 17 – WATER SUPPLY

Note: ADA Table 17-3, Existing Water Wells, has been corrected and is shown below.

Table 17-3: Nocatee Existing Water Wells

Well No.	Casing Dia. (inches)	Depth (ft)	Flow Rate (gpm)	Type
19. South Bend Micklers	12	1014	1043	Fire protection
23. Twenty Mile	3	unknown	unknown	Fire protection
6-N. Old Scout Camp	4	400	33	Fire protection

gpm - gallons per minute

Source: England, Thims & Miller, 1999

According to the applicant the Nocatee Utility Corporation will be an integral part of encouraging and promoting the goals and objectives of NEWRAP. Are all of the goals and objectives of the NEWRAP represented in the ADA or are there other goals and objectives related to water supply in a NEWRAP planing program? The applicant also states that the NEWRAP includes a plan to meet the irrigation demands of the project with reclaimed water and stormwater to conserve the groundwater resources. Does this plan differ from that which is presented within the ADA, and if so, how? NEFRPC

Please see the separate NEWRAP document. The plan presented in the ADA for use of reclaimed (reuse) water and stormwater for irrigation, which conserves the ground water resources, is consistent with NEWRAP.

The applicant has committed to using reuse throughout the Nocatee project area. Please include specifics on other efforts to promote a comprehensive approach to water conservation. How will requirement of such techniques as xeriscape, including common landscaped areas, be ensured? NEFRPC

A Water Conservation Plan is included in NEWRAP, which is included with this submittal. The applicant will ensure compliance with the Water Conservation Plan through deed restrictions.

26. Questions 17; Part H; Service Area Boundary: The response indicates that the Nocatee Utility Corporation has applied for a service area boundary with the Public Service Commission and the application is pending. Please include information on the status of the application in your response. DCA

The application is under review by the Public Service Commission and has been scheduled for a formal hearing in August 2000. A final order on the certificate application is scheduled for issuance in November 2000.

Under 17-H on page 17-10, the text indicates that the Nocatee Utility Corporation has applied for a service area boundary with the Public Service Commission. In light of the fact that Nocatee has not been awarded a franchise certificate and that Intercoastal Utility is applying for the same service area, what other options are Nocatee considering for service provision if not awarded a certificate? SJC

The applicant believes the Nocatee Utility Corporation will be awarded a utility franchise by the PSC and has demonstrated its ability and commitment to serve in the ADA application. Therefore, the applicant has not explored other options for service. However, regardless of the provider, the utility for Nocatee will be required to meet the stringent standards and criteria outlined for services in the ADA application and Final Development Order, as well as in NEWRAP.



QUESTION 17 – WATER SUPPLY

Please address the fact that St. Johns County appears to have the prior right to serve this area through its Water and Wastewater Agreement with JEA and that the water lines along U.S. 1 will become the property of the County once the capital costs of construction are repaid to JEA. SJC

The Water and Wastewater Utility Services Agreement dated April 13, 1999 between the JEA and St. Johns County appears to cover only the Walden Chase development, Allen D. Nease High School (Phase I) and the Marshall Creek development (Phase II). Nothing in that agreement contemplates that it will be the basis for service to the Nocatee development.

Under the JEA/St. Johns County agreement, the portion of the water and wastewater lines along U.S. 1 located in St. Johns County will become the property of the County once the capital costs of construction are repaid to JEA. Nocatee plans to interconnect with JEA within Duval County and will not use the lines to be owned by the St. Johns County. Under the agreement, the lines in Duval County to which Nocatee will interconnect remain the property of JEA.

The report indicates that the existing JEA Utility will supply the potable water for the five phases of this project. The report indicates that the projected water demand for the complete project is 6.121 MGD. The irrigation water will be supplied by reuse water, on-site irrigation wells or stormwater ponds.

The report indicates that JEA will have the capacity to serve the water needs of this project during construction and at all times after build-out. JEA will have to upgrade their facilities and add new water plants in time to meet the additional demands for this project.

The applicant of this project needs to obtain the necessary permit(s) to construct the water mains and distribution system from the Department. Also, JEA will have to obtain the necessary permits to expand their water plant capacity to serve this project. The Nocatee Utility Company will be regulated as a consecutive water system under DEP regulations, as they plan to purchase bulk potable water from JEA and supply it to their customers. DEP

Permits will be obtained from the Department of Environmental Protection for construction of water mains and the distribution system. Further, Nocatee Utility Corporation will follow the regulations for consecutive water systems as required by Rules 62-550 and 62-555, F.A.C.

District staff commend the applicant on using reuse throughout the Nocatee project area! SJRWMD

Thank you. The use of reuse water throughout the project represents a significant financial commitment to the environmental ethic of the Nocatee project.

It appears that in determining the single-family potable demands that the amount (350 gpd/unit) used includes a component for outdoor or discretionary uses. If the outdoor component, which is primarily for irrigation, will be reclaimed water, this amount needs to be revised to exclude outdoor use. A reasonable request for indoor use based on 2.7 persons per home or approximately 100 gpcd is approximately 270 gpd/unit. SJRWMD

Similar communities in Northeast Florida are averaging in excess of 600 gpd/ERC (Equivalent Residential Connection) for potable and irrigation consumption. We have projected reuse irrigation demand at Nocatee to be 261 gpd/ERC, therefore leaving 339± gpd/ERC for potable water demand.



QUESTION 17 – WATER SUPPLY

Some irrigation demands by FDEP rule can not be met by reuse water. In addition, other water uses such as pool fill, makeup water, car washing, etc. must be met with potable water. Therefore, it would appear 350 gpd/ERC is a reasonable demand to use to conservatively Master Plan this community. Obviously, the project goals outlined in the Water Conservation Plan are to use the minimum potable water practical.

Further, District staff commend the applicant on incorporating Xeriscaping/native vegetation throughout the development. However, specifics on the amount of Xeriscape/native vegetation that will be required in common and residential areas should be provided (percentages, District staff recommend 75% by landscaped area). Additionally, the applicant should provide information on the number of acres that will be turf, per 18-holes of golf, with an emphasis on limiting turf areas. By limiting turf areas, the applicant may be able to avoid using ground water as a back-up source. **SJRWMD**

The applicant/Developer will establish a goal of 75% xeriscaping within the common areas in an attempt to meet the District's recommended 75% goal. Reclaimed (reuse) water will be used throughout the project for all land uses. Also, other water conservation measures will be implemented throughout the project. The combination of xeriscaping, reclaimed water use and other water conservation measures will provide an integrated Water Conservation Plan. It should be noted that using reclaimed water translates to providing a method of wastewater effluent disposal. This effluent disposal must be a reliable, consistent means of disposal so the wastewater treatment facility can minimize wet weather discharges. This provides additional water quality efforts by minimizing discharges of effluent to St. Johns River.

The golf courses have not been designed at this time. Therefore, the acres of turf have not been determined. The golf course developer(s) will be required to abide by NEWRAP, which encourages the use of natural features in the golf course design, the use of native vegetation when possible and the limiting of turf as much as possible.

Since the applicant has provided little information on the placement, design and number of holes of golf to be included in this development, District staff recommend that the applicant review the steps necessary to qualify as an Audubon International Signature Golf Course. By this, District staff are not recommending that the applicant, necessarily, *become* a member of this program, however it is meant to emphasize the type of approach that the District supports the applicant using in this environmentally sensitive area. **SJRWMD**

Please note that the application shows that the development will include three 18-hole golf courses. The applicant will encourage golf course developers to qualify courses as Audubon International Signature Golf Courses.

Additional Consumptive Use Permitting Information

Chapter 40C-2 will require the Nocatee Utility Corporation to obtain a Consumptive Use Permit pursuant to Chapter 40C-2.041(g) and as defined in paragraph 2.0(x) and paragraph 3.2.3 (secondary user) of the Applicant's Handbook. Some of the requirements for permit issuance follow:

a) All individual service connections (apartments, individual commercial establishments etc.), will be required to be submetered.



QUESTION 17 – WATER SUPPLY

b) The NUC will be required to implement a St. Johns River Water Management District approved water conserving rate structure.

c) The NUC must develop and implement for permit duration a customer and employee water conservation education program as outlined in Section 12.2.5.1 (e) of the Consumptive Use Permitting Applicant's Handbook.

d) Annual audits of the potable water distribution system.

e) Potential leak detection/repair programs and meter replacement surveys. **SJRWMD**

Nocatee Utility Corporation will comply with Chapter 40C-2.041(g), F.A.C. and its specific requirements.



QUESTION 18 – WASTEWATER

If septic tanks are used on a temporary basis, as indicated by the applicant, for the golf courses, please indicate the proximity to the wetlands and the means by which to ensure these septic tanks do not become permanent fixtures. NEFRPC

The temporary septic drain fields will be located no closer than 75 feet from a wetland or any other body of water. Temporary septic tanks will only be used on a minimal basis for remote locations such as golf course restrooms and guardhouse restrooms. When central sewer is available within 1000 feet, the temporary septic tank will be eliminated.

The application projects that wastewater generated by the proposed development will increase from 0.614 million gallons per day (0.614 MGD) at the end of Phase I to 5,208 MGD by the end of Phase 5. Wastewater treatment will be provided by the JEA Mandarin Water Reclamation Facility (WRF). We note that the Mandarin AW currently has a permitted capacity of 7.5 MGD annual average daily flow, and is currently receiving monthly average daily wastewater flows of 5.15 MGD, as of July 1999. We also note that the proposed Bartram Park project will also send another 2.626 MGD of wastewater to the Mandarin WRF. In addition, there are numerous permits for domestic wastewater collection/transmission systems which have been issued for connection to the Mandarin ATRF and are not included in the figures cited here. When the three (3) month average daily wastewater flows reach 100% of permitted capacity, new permits for connection to the Mandarin VtrRF may not be issued if the JEA has not submitted appropriate applications to the Florida Department of Environmental Protection (DEP) for expansion. The applicant is advised of this situation and may wish to meet with JEA officials to discuss their schedule for expanding the Mandarin WRF in order to accommodate the projected wastewater flows from Nocatee. JRES D

It is agreed that JEA must expand their facilities in order to accommodate the projected wastewater flows from Nocatee and other proposed developments. The Nocatee development through Nocatee Utility Corporation has requested and received a service availability letter from JEA stating "JEA can provide service for all five phases of the project to meet the flow projections". Nocatee Utility Corporation has been meeting with JEA for over a year with regards to Nocatee and JEA providing service. It is anticipated that meetings will be ongoing throughout development of Nocatee.

The applicant will need to submit an Application to Construct a Domestic Wastewater Collection /Transmission System (WWCTS) to AWQD and Florida DER We note that WWCTS permits are usually valid for no more than five (5) years. Therefore, the applicant will have to submit a series of applications to cover the proposed phases of the project. JRES D

Permits will be obtained from the Department of Environmental Protection for collection systems within St. Johns County and from the Jacksonville Regulatory Environmental Services Department for collection systems within Duval County. Each permit will be obtained prior to construction and construction will be completed within the five-year permit period or the permit will be renewed, if necessary.

It is anticipated that the project will be developed in five major phases and within each phase there will be development parcels (i.e. an office complex, several single-family subdivisions, a multi-family complex, a school, etc.). Each individual parcel will be permitted as a separate unit.

The text indicates that the Nocatee Utility Corporation will be the wastewater collector and treatment provider for the Nocatee project. In light of the fact that Nocatee has not been awarded a franchise



QUESTION 18 – WASTEWATER

certificate and that Intercoastal Utility is applying for the same service area, what other options are Nocatee considering for service provision if not awarded a certificate? SJC

The applicant believes the Nocatee Utility Corporation will be awarded a utility franchise by the PSC and has demonstrated its ability and commitment to serve in the ADA application. Therefore, the applicant has not explored other options for service. However, regardless of the provider, the utility for Nocatee will be required to meet the stringent standards and criteria outlined for services in the ADA application and Final Development Order, as well as in NEWRAP.

Please address the fact that St. Johns County appears to have the prior right to serve this area through its Water and Wastewater Agreement with JEA and that the sewer lines along U.S. 1 will become the property of the County once the capital costs of construction are repaid to JEA. SJC

The Water and Wastewater Utility Services Agreement dated April 13, 1999 between the JEA and St. Johns County appears to cover only the Walden Chase development, Allen D. Nease High School (Phase I) and the Marshall Creek development (Phase II). Nothing in that agreement contemplates that it will be the basis for service to the Nocatee development.

Under the JEA/St. Johns County agreement, the portion of the water and wastewater lines along U.S. 1 located in St. Johns County will become the property of the County once the capital costs of construction are repaid to JEA. Nocatee plans to interconnect with JEA within Duval County and will not use the lines to be owned by the St. Johns County. Under the agreement, the lines in Duval County to which Nocatee will interconnect remain the property of JEA.

It is understood that current plans are for wastewater to be treated off site by the JEA Mandarin Wastewater Treatment Facility (WWTF) and for Mandarin WWTF reclaimed water to be provided to the Nocatee Utility Corporation for reuse (public access irrigation) within the development.

The Jacksonville Regulatory Environmental Services Department should be contacted on collection system permit requirements within Duval County. Since part of the collection system construction work will be in St. Johns County, the DEP Northeast District Domestic Waste Section should be kept up to date on planning for this work.

The JEA Mandarin WWTF currently has a capacity of 7.5 mgd. The monthly average flow during the last six months of 1999 was 5.39 mgd. Expansion(s) of the WWTF within the phased development period will be necessary to accommodate service to this development. These require permitting by the DEP Northeast District, and any questions should be directed to this agency.

The DEP Northeast District Domestic Waste Section should be contacted by JEA, Nocatee Utility Corporation, or others if there are questions on reuse requirements including those related to permitting relative to the proposed expansion of the Mandarin WWTF's reclaimed water lines and other construction to accomplish reuse (public access irrigation) within the development. DEP

Permits will be obtained from the Department of Environmental Protection for collection systems within St. Johns County and from the Jacksonville Regulatory Environmental Services Department for collection systems within Duval County.

**QUESTION 18 – WASTEWATER**

In advance, we will be recommending completion of a water quality monitoring and management plan for ground and surface waters, an integrated pest management plan (IPMP) for golf courses and common areas, and a commitment to use slow-release fertilizer throughout the development. The monitoring recommendation is made in order to measure the post developing community against the pre-development situation. District staff recommend that the applicant commit to modifying the IPMP if post monitoring indicates a degradation in water quality on site. This approach of making post development meet pre-development water quality is one of the strong points in the Audubon International program. **SJRWMD**

The need for and benefit of a water quality monitoring plan is under review and has not been demonstrated at this time. If the District and other environmental regulatory agencies can demonstrate a clear need for a monitoring plan, then the application will provide such monitoring. The Applicant has developed a Stormwater Pollution Prevention Construction Operating Plan as well as a plan for stormwater treatment (by wet detention) throughout the project. These plans provide a basis for water quality management during and after construction. (See response to Question 14, Regional Planning Council #22.)

The Developer will provide an integrated pest management plan for the golf course and common areas, and will also commit to use of slow-release fertilizers where practical in these areas. However, it does not appear feasible to commit to use of slow release fertilizers throughout the project, especially in single-family residential areas. It does not appear that this could be policed or monitored.

In addition, if (as the applicant states it will be) reuse will be available for residential commercial, common areas, parks etc., it is recommended that Nocatee develop an ordinance or deed restriction to prohibit the use of private irrigation wells in areas where reuse will be available. **SJRWMD**

Nocatee will have deed restrictions to prohibit the use of private wells, including private irrigation wells, throughout the project, except back-up wells for the reclaimed water irrigation system. These wells would only be used in the case of an emergency when reclaimed water was not available, typically during times that the wastewater treatment plant is experiencing difficulties meeting public access reuse standards.

Finally, in the event that ground water is requested to supplement the reuse demand it will be necessary for NUC or the Community to have in place *measures* to minimize waste of reuse to prevent or reduce reliance on ground water. **SJRWMD**

Groundwater is only proposed as a backup supply to reuse and stormwater. The combination of xeriscaping, reclaimed water use and other water conservation measures will provide an integrated Water Conservation Plan. This plan is for the conservation of all sources of water throughout Nocatee.

This letter does not substitute or constitute permit review. **SJRWMD**

We agree.



QUESTION 19 – STORMWATER

1. Is a Homeowners Stormwater Training Program being designed for the development? **DEP**

A Homeowners Stormwater Training Program will be developed upon approval of the ADA. The program will be a layperson's guide to being a responsible citizen of Nocatee and will address a variety of issues, including fertilization, irrigation, xeriscaping, Greenway management and use, fire management of natural areas, wildlife issues, and other related matters. Until the Nocatee development plan is approved and conditions are defined, this program cannot be finalized.

2. Will each sub-community have its own homeowners association? **DEP**

There will be multiple Homeowners Associations in the Nocatee community. However, the deed restrictions will consistently incorporate the overall requirements of the Nocatee development as found in the PUD and Development Order, to be administered by each association. This program will be developed prior to conveyance of any residential or commercial properties within Nocatee.

3. Based on past experience diversion dikes and swales are ineffective strategies. What other strategies are being proposed for this development? **DEP**

Diversion dikes and swales are not proposed as water quality treatment devices in Nocatee. Rather, treatment techniques outlined in Rule 40C-42.026, F.A.C. will be provided.



Nocatee

NEWRAP

*Nocatee Environmental and Water
Resource Area Plan*

July, 2000



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1. EXECUTIVE SUMMARY

Nocatee Environmental Water Resource and Area Plan (NEWRAP) was originally developed as a concept for integrating the project's planning goals related to the environmental resources. NEWRAP has evolved into a document that provides much of the detail for implementing the project's planning goals, ensuring that Nocatee will be developed as an environmentally sensitive and conscious community. NEWRAP addresses the following components of the development:

- ◆ **Water.** Under the current plans, potable and non-potable water will be supplied by JEA through the Nocatee Utility Company (NUC). Although Nocatee has extensive groundwater resources on site, on-site water supply is not proposed for Nocatee except as a potential backup to the reuse water system. Nocatee is committed to the utilization of reuse water (wastewater effluent) and stormwater for irrigation throughout the project including residential areas. Additional water conservation measures will include xeriscaping and low-flow plumbing fixtures.
- ◆ **Wastewater and Reuse.** NUC will be the wastewater collection provider and will connect to JEA. Nocatee's commitment to the utilization of reuse as an irrigation source will increase JEA's reuse disposal and reduce discharges of effluent to the St. Johns River. Nocatee will utilize reuse water as an irrigation source throughout the site including single-family home sites.
- ◆ **Wetland, Habitat Resources, and Management.** Wetlands comprise a substantial portion of the Nocatee land, and most of the wetlands are included in the Nocatee Preserve and Nocatee Greenway. The Nocatee Preserve will be donated to St. Johns County as a passive conservation/recreation park. This preserve comprises over three miles of frontage on the Guana-Tolomato River Aquatic Preserve, and ranges in width from 0.5 to 1.5 miles. Both of these areas will have individual management plans. Within the Preserve and Greenway are over 1000 acres of upland habitats including examples of every ecological community on site. NEWRAP also includes a conceptual mitigation plan for wetland impacts associated with the development. Mitigation will include restoration, enhancement, creation, and preservation elements as well as long-term management of the undeveloped lands that will comprise over 50 percent of the original project area. The Greenway Preliminary Management Plan and the Nocatee Preserve Preliminary Management Plan will be defined in final form (i) in conjunction with SJRWMD as part of the conceptual permitting process and (ii) in conjunction with St. Johns County as to the Preservation Plan. As a result, these documents are included in preliminary form for informational purposes, and they are subject to modification. Future modifications are not subject to review as part of the DRI review process.
- ◆ **Silviculture.** Silviculture has long been the land use of the Nocatee property, and silviculture is proposed to continue within the same footprint where it currently occurs with no harvesting to occur in greenway wetlands (except for selective thinning needed for habitat improvement). Only ecologically-based silviculture practices will be permitted within the Greenway to the extent authorized by the Greenway Management Plan.



1. EXECUTIVE SUMMARY

- ◆ **Buffers.** The buffer strategy for Nocatee as described above varies depending on the specific needs of the various resources. One hundred-foot wide buffers from wetland jurisdictional lines will be established for open waters of streams. The Nocatee Preserve is a unique and ecologically significant buffer between the development areas and the aquatic preserve, with a buffer width ranging from over 2,500 feet to over 8,000 feet. The Greenway incorporates internal buffers that follow SJRWMD guidelines. Overall, the project incorporates variable buffers to allow the best fit for the wetlands. Not all of the buffers are linear, however all buffers include a range of habitats to ensure continued biodiversity. **The overall upland buffer width exceeds 96 feet.**¹
- ◆ **Wildlife.** Wildlife management at Nocatee will be primarily based upon habitat management. The Greenway and Preserve provide habitat and extensive corridors and connections to important systems that minimize fragmentation. Provisions have been made to facilitate wildlife crossings (including underpasses), and protected species will be accommodated consistent with USFWS and FFWCC guidelines.
- ◆ **Stormwater Management.** Wet detention will be the primary method of stormwater management to treat stormwater runoff, reduce flooding and provide attenuation. The applicant has voluntarily agreed to treat stormwater which ultimately discharges to the Intracoastal Waterway to the highest standards required by SJRWMD (Outstanding Florida Waters standards). Stormwater will be used to supply approximately 20 percent of irrigation needs. A Stormwater Pollution Construction Operating Plan (SWPPP) and an Integrated Pesticide/Nutrient Management Plan is included in NEWRAP.
- ◆ **Hazardous Wastes.** Hazardous wastes are products of many businesses that may be in Nocatee. A plan has been prepared (Appendix H) and will be provided to all businesses within Nocatee to encourage compliance with state and federal regulations regarding hazardous waste.
- ◆ **Development Guideline and Public Education.** Development guidelines will be incorporated within the covenants and restrictions of Nocatee property owners that address minimum requirements for xeriscaping, fertilization and pesticide management, greenway and upland buffer restrictions, and zoning standards. A public educational program will be prepared which will consist of environmental education in the form of interpretive trails, environmental kiosks and pavilions, and marketing and dissemination of written materials that describe the unique ecosystems of Nocatee.
- ◆ **Implementation and management.** A property owners' association will be established to ensure long-term fiscal and operational management of the Greenway, stormwater system, protected wetlands, open space, infrastructure, and other common facilities identified in the NEWRAP plan.

¹ This figure is derived by dividing the total preserved upland buffer acreage by total development frontage along wetlands.



1. EXECUTIVE SUMMARY

NEWRAP defines Nocatee's approach for a variety of environmental issues. In many instances the commitments of the applicant exceeds regulatory requirements. The document and its various appendices are subject to review and modification as necessary to comply with comments made during agency coordination during environmental permitting with SJRWMD, U.S. Army Corps of Engineers, and other agencies.



II. INTRODUCTION

Prior to Nocatee's announcement in March of 1999, a team of planners, engineers, environmental specialists, and developers evaluated the tract for over a year. The team believed that any large-scale development on this site would have to be a sustainable, environmentally sensitive development. To a large degree, the land plan was dependent upon environmental opportunities and constraints. Thus, from the outset, an environmental plan was the primary criterion for land planning.

The environmental considerations for the land included a variety of issues considered by the project team to be important. As the list of issues materialized over several months of review, the project team developed plans to deal with the issues. These plans evolved into a set of general guidelines around which the land plan was created. The planning team coined a phrase for the plan, calling it "Nocatee Environmental Water Resource and Area Plan," which in turn led to the acronym "NEWRAP."

NEWRAP was intended to be the paradigm for the land plan for the community. Although NEWRAP is based upon environmental principles and environmental rules and regulations from governmental entities, it was never intended to be more than a concept and was not intended to be an additional layer of rules and regulations. This comprehensive environmental program was established to guide the responsible management of the land's natural resources. NEWRAP's principles represent holistic and comprehensive environmental protection measures, as well as the desires expressed by elected officials, agency representatives, and members of the surrounding community. NEWRAP embodies surface and groundwater management, wastewater and reuse management, development guidelines and public education, stormwater management, and wetland/habitat resource protection and management. It is important to note that many of the commitments made by NEWRAP exceed current regulatory requirements.

An overriding set of sustainability-oriented principles has been created to recognize the critical importance of preserving, managing, and enhancing Nocatee's environmental assets. Community balance and sustainability is sought through a mix of land uses, pedestrian orientation, environmental stewardship, utilization of an extensive system of greenways and parks, and effective design controls. NEWRAP addresses a number of environmental issues through a single, integrated, comprehensive program. The program includes the following key features:

- ◆ water supply protection and sensitivity;
- ◆ aquifer protection;
- ◆ water conservation practices;
- ◆ central wastewater treatment;
- ◆ comprehensive wastewater effluent reuse program;



II. INTRODUCTION

- ◆ wetlands, uplands, and buffer habitat protection;
- ◆ continuation of silviculture management plan and sustainable forestry program;
- ◆ forest and recreation area management;
- ◆ wildlife and habitat management;
- ◆ state-of-the-art stormwater management;
- ◆ 0.5- to 1.5-mile-wide buffers along the Guana-Tolomato River Aquatic Preserve;
- ◆ a prohibition against marinas, docks, or real estate development along the Tolomato River (except those limited facilities such as canoe launches);
- ◆ best management practices during construction;
- ◆ an integrated pesticide/nutrient management plan for golf courses ;
- ◆ a hazardous waste plan; and
- ◆ a public education program that includes xeriscaping and environmental and sustainability education program;

As the concepts for NEWRAP have developed over the past two years, the planning team has defined the details that support the original NEWRAP concepts. The following document includes a discussion of the various components of NEWRAP. The NEWRAP document provides an integrated, comprehensive, and environmentally-based approach to planning for Nocatee. This document and its various appendices are subject to review and modification as necessary to comply with conditions imposed as part of environmental permitting with SJRWMD, U.S. Army Corps of Engineers, and other agencies including local governments.



III. NEWRAP COMPONENTS

The initial purpose of NEWRAP is to serve as a comprehensive set of environmental objectives for the Nocatee development. The model meets or exceeds existing regulatory requirements and integrates planning for a spectrum of environmental issues, including but not limited to water (water supply, aquifer protection, and water conservation), wastewater and reuse management, wetland and habitat management (Nocatee Greenway, Nocatee Preserve, upland habitats, buffers, silviculture and wildlife management), stormwater management, and development guidelines for public education.

A. Water

1. Water Supply

Potable and non-potable water for Nocatee will be supplied by JEA through Nocatee Utility Corporation (NUC). JEA has extensive groundwater resources available particularly in the western and northern portions of their service area within Duval County and can supply the Nocatee project through buildout.

A detailed, peer-reviewed groundwater study was conducted for the Nocatee property. This study including extensive groundwater modeling and a wellfield management plan for an on-site water supply. The study demonstrates that the site contains an adequate and sustainable groundwater supply of high quality sufficient to serve the buildout of the Nocatee project with minimal impacts offsite or to existing users exists under the Nocatee land. Despite the ample water supply, an onsite water supply is not proposed by the Nocatee Utility Corporation service concept. The groundwater at Nocatee will be conserved.

2. Aquifer Protection

The aquifer protection program for Nocatee has two parts. First, the aquifer below Nocatee will not be used as the water supply for Nocatee for either potable water or non-potable (irrigation) water, except potentially as backup to the reuse water system. Since the aquifer below Nocatee could supply the water for the project through buildout with only minimal impacts, the conservation of this resource provides a tremendous protection of groundwater resources. This groundwater resource is conserved in the Nocatee Plan.

The second major aspect of aquifer protection is Nocatee's commitment to utilize reuse water and stormwater as irrigation sources for land uses throughout the Nocatee project, including single-family residences. The use of reuse water and stormwater for irrigation will reduce the dependency of the project on groundwater resources by approximately 6.7 million gallons per day (MGD) at buildout.



III. NEWRAP COMPONENTS

3. Water Conservation

The Nocatee project places a priority on water conservation. Nocatee will conserve approximately 6.7 MGD of potable water by utilizing reuse water from JEA and project stormwater as irrigation sources. Reuse water is planned for all Nocatee land uses, including single-family residences. Additionally, private wells for irrigation purposes will be prohibited by deed-restrictions. The use of reuse water for the entire development is a significant financial commitment to conserve the community and water resources.

NUC will provide metering of all users of potable water and reuse water as well as monitoring, calibration, repair, and replacement of meters on a regular basis. NUC will conduct audits of the potable water and reuse water distribution systems every other year, and will provide leak detection/repair programs on an as needed basis.

The project will incorporate existing native vegetation, xeriscape (drought-resistant native plantings), and other conservation-oriented landscape design features will part of private and public regulations. Low flow plumbing fixtures, as specified in the Water Conservation Act, Chapter 533.14, F.S. (water closets with a maximum flush of 3.5 gallons and shower heads and faucets with a maximum flow rate of 3.0 gallons per minute) will be used throughout the project to reduce water consumption.

NUC will implement a customer and employee water conservation education program as specified in Section 12.2.5.1 (e) of the St. Johns River Water Management District, Consumptive Use Permitting Applicant's Handbook.

B. Wastewater and Reuse

1. Central Collection System

NUC will be the wastewater collection provider for Nocatee. The Nocatee wastewater management plan will include a central wastewater collection system tied to a regional system. The Nocatee development's wastewater production will be treated off-site by JEA through NUC. Since reuse irrigation demands will exceed wastewater production, Nocatee will actually increase JEA reuse disposal and will therefore reduce effluent discharge to the St. Johns River.

Nocatee will prohibit the use of permanent septic tanks. Temporary septic tanks will only be used on a minimal basis for remote locations such as golf course restrooms and guardhouse restrooms. When central sewer is available within 1000 feet, the temporary septic tank will be removed.

Nocatee will not include wastewater treatment plants within the project boundaries. Further, there will be no effluent discharges from the project to the Tolomato River, an Outstanding Florida Water.



III. NEWRAP COMPONENTS

2. Reuse Program

The total daily non-potable (irrigation) water demand upon buildout is estimated at 6.7 MGD. Approximately 80 percent of the non-potable water (irrigation) demand will be supplied by reuse water, and the remaining 20 percent of the demand will be supplied by stormwater. Groundwater will only be used as backup to the reuse/stormwater system.

NUC will operate the public access reuse storage, pumping and distribution system. A bulk purchase of reuse water from JEA will allow NUC to meet the project's irrigation demands with reuse water even in the early phases of the project when wastewater generation volumes are less than irrigation demand.

Nocatee has planned an extensive reuse water system for irrigation purposes throughout the entire development including residential single-family residential areas. The reuse system will be constructed to supply reuse water from the project beginning to its buildout. While there will be considerable additional utility costs for the reuse system, the applicant believes that the resulting environmental protection and water conservation provided by an integrated reuse system is a worthwhile expenditure.

C. Wetland Habitat Resources and Management

1. Nocatee Preserve

The Nocatee Preserve comprises approximately 2,400 acres (16 percent of the Nocatee project) and is located between eastern Nocatee villages and the Guana-Tolomato Aquatic Preserve. This tract will be donated to St. Johns County to be maintained as a natural area for its intrinsic environmental value and to serve as a regional passive recreation and education resource.

The Nocatee Preserve is the highest valued real estate within the original parent tract; however, its greatest value is in the areas of conservation and education. The Preserve is strategically located between the environmentally sensitive Guana-Tolomato River Aquatic Preserve and the developable land within Nocatee. The Preserve serves as a valuable buffer (0.5 to 1.5 miles wide) that protects and maintains the ecological integrity of the Aquatic Preserve. The Preserve provides considerable wildlife habitat and corridors for many species. The Preserve will be donated to St. Johns County to ensure its perpetual role as a conservation land with compatible education and recreation uses. *The Nocatee Preserve Preliminary Management Plan* is enclosed as Appendix A.

2. Nocatee Greenway

The Nocatee Greenway comprises 4,764 acres of integrated and interconnected uplands and wetlands (32 percent of the Nocatee project). The Greenway extends from the Nocatee Preserve, which forms the buffer between the development and the Guana-



III. NEWRAP COMPONENTS

Tolomato River Aquatic Preserve, to Durbin Creek at the northwest corner of the property and to US 1 opposite Twelve Mile Swamp at the southwest corner of the site. (A hydrologic connection exists between Nocatee lands and Twelve Mile Swamp under US 1, a road that separates the Greenway and Twelve Mile Swamp.) The Greenway comprises varied wildlife habitat with examples of all of the vegetative community types on-site. *The Nocatee Greenway Preliminary Management Plan* is provided in Appendix B.

3. Upland Habitats

The Greenway and Preserve were designed to conserve wetlands and their contiguous upland areas. The upland habitats included within the Greenway, Preserve, and other upland buffers together comprise 1,659 acres and are categorized as follows:

Nocatee Upland Habitats Table

Community Type	FLUCFCS Code	Acreage
Pine Flatwoods	411	5
Long Leaf Pine-Xeric Oak	412	16
Sand Pine	413	17
Pine-Mesic Oak	414	7
Xeric Oak	421	9
Temperate Hardwoods	425	52
Live Oak	427	1
Hardwood-Conifer Mixed	434	15
Coniferous Plantation	441	1,498
Xeric Coniferous Plantation	441x	37
Sand Pine Plantation	4411	2
Total		1,659

These upland areas include examples of each vegetative community at Nocatee prior to development. These communities are part of the Greenway and Preserve Preliminary Plans. They serve as buffers for wetlands and add diversity to the wetland communities. This conservation plan exceeds St. Johns County LDR requirements for imperiled communities. These areas provide habitat for protected species including gopher tortoises, Sherman's fox squirrel, and a nesting pair of bald eagles.

The upland habitats will be properly maintained by controlled burns per the Greenway and Preserve Preliminary Management Plans.

4. Buffers

The Nocatee wetland buffer strategy has three components: protection of wetlands from erosion and sedimentation, maintenance of water quality, and protection of wildlife



III. NEWRAP COMPONENTS

Tolomato River Aquatic Preserve, to Durbin Creek at the northwest corner of the property and to US 1 opposite Twelve Mile Swamp at the southwest corner of the site. (A hydrologic connection exists between Nocatee lands and Twelve Mile Swamp under US 1, a road that separates the Greenway and Twelve Mile Swamp.) The Greenway comprises varied wildlife habitat with examples of all of the vegetative community types on-site. *The Nocatee Greenway Preliminary Management Plan* is provided in Appendix B.

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Nocatee Upland Habitats Table

Community Type	FLUCFCS Code	Acreage
Pine Flatwoods	411	34
Longleaf Pine-Xeric Oak	412	75
Sand Pine	413	17
Pine Mesic Oak	414	7
Xeric Oak	421	88
Temperate Hardwoods	425	76
Live Oak	427	142
Hardwood Conifer Mixed	434	105
Coniferous Plantation	441	6,904
Xeric Coniferous Plantation	441x	524
Sand Pine Plantation	4411	199
Total Uplands		8,171

These upland areas include examples of each vegetative community at Nocatee prior to development. These communities are part of the Greenway and Preserve Preliminary Plans. They serve as buffers for wetlands and add diversity to the wetland communities. This conservation plan exceeds St. Johns County LDR requirements for imperiled communities. These areas provide habitat for protected species including gopher tortoises, Sherman's fox squirrel, and a nesting pair of bald eagles.

The upland habitats will be properly maintained by controlled burns per the Greenway and Preserve Preliminary Management Plans.

4. Buffers

The Nocatee wetland buffer strategy has three components: protection of wetlands from erosion and sedimentation, maintenance of water quality, and protection of wildlife



III. NEWRAP COMPONENTS

corridors for wildlife and minimizes habitat fragmentation. After the Development Order and environmental permits are finalized, plans for controlled burns to reduce fuel and enhance habitats will be implemented. Controlled burns will benefit wildlife, particularly in flatwoods and xeric habitats. Controlled burns will continue on a three to seven year cycle.

The wildlife management plan addresses all protected species which have been observed or may possibly occur on-site.

- a. **Animals.** The protected animals which have been identified on-site include:
- (1) American alligator. The number of American alligators may increase in the Nocatee development as stormwater management ponds are created.
 - (2) Gopher tortoise. Gopher tortoises will be impacted by the development and impacts will be mitigated consistent with Florida Fish and Wildlife Conservation Commission guidelines. Some habitat preservation (approximately 55.3 acres) will occur on-site; the balance will be handled by Incidental Taking Permit or relocation.
 - (3) Little blue heron, wood stork, snowy egret, tricolored heron, and white ibis. No significant impact is expected for these wading birds. Freshwater wetland creation will likely benefit these species. There are no known rookeries on-site, although a single little blue heron nest was observed on the "alligator pond" within Snowden Greenway (west). This nest site is protected within this greenway. The Nocatee Preserve comprises a major portion of the high quality habitat on-site for these birds and it will be protected in perpetuity. This will provide significant roosting, foraging and nesting habitat.
 - (4) Bald eagle. The bald eagle nest that occurs on-site is protected within the Greenway with a 1500-foot buffer, consistent with United States Fish and Wildlife Service guidelines.
 - (5) Peregrine falcon. The falcons are migrants that use the eastern flyway and in spring or fall may be observed in coastal areas. The Nocatee Preserve will protect habitat which may be used by peregrine falcons. The development is expected to have no significant impact on peregrine falcons.



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- (6) West Indian manatee. No impact to manatees will occur as a result of the development. All water bodies within Nocatee where manatees may occur are conservation areas.
- (7) Sherman's fox squirrel. Sherman's fox squirrels were observed only north of CR 210. The few individuals observed infer a very low population. These squirrels will utilize the remaining sandhill habitat and other upland communities in the Greenway as well as ecotones. Therefore, the development should provide adequate habitat for the continued existence of fox squirrels within Nocatee.
- (8) Florida black bear. The Nocatee plan includes conservation of the Greenway (4,764 acres), Preserve (2,400 acres) and 1,586 acres of additional uplands and wetlands within villages. Greenway corridor widths run between 300 feet and over 2,000 feet, with an average width that exceeds 1,250 feet. The areas are connected to provide large blocks of contiguous habitat and corridors for movement of Florida black bears. While the applicant has proposed a greenways network and wildlife underpasses which may benefit the Florida black bear, the northeast Florida area is not expected to contain a sustainable population of bears over the long term. Fortunately, there are four sustainable populations of bears centered on public lands elsewhere in Florida. The Florida Game and Fresh Water Fish Commission (FGFWFC) recommended a minimum habitat size of 500,000 to 1,000,000 acres as the minimum sustainable area for bears. This was stated in Staff Report, "*Management of the Black Bear in Florida*" (Florida Game and Fresh Water Fish Commission, September 21, 1993). The *Closing the Gaps Report* identified 92,870 acres of black bear habitat in St. Johns and Duval Counties east of Interstate 95, and concluded that unless there are occasional immigrants from other bear populations (which may be limited due to Interstate 95), this habitat area is "not capable of sustaining a population for an extended period of time." The FGFWFC recognized in the Management Plan that while there is a population of bears in the St. Johns region (which includes St. Johns County), habitat conservation should be targeted for those areas where there are existing large tracts of publicly owned lands in order to assemble the necessary 500,000 to 1,000,000 acres of contiguous habitat for a sustainable population (*FGFWFC Management Report # 10*). The U.S. Fish and Wildlife Service recently concluded that although the St. Johns population would probably not persist over the long term (particularly the area east of Interstate 95), this subspecies was not in danger of extinction for the foreseeable



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future because there are four stable bear populations with habitats centered upon large tracts of public land elsewhere in the state (63 Fed. Reg. 67615-16, 67618, Dec. 8, 1998). Again, the expansive habitat needs of the Florida black bear are met and will continue to be protected in four areas elsewhere in Florida, outside the Nocatee area.

- b. **Plants.** The only endangered or threatened plant species which is known to occur on-site is the green-fly orchid which is epiphytic on several tree species in the deep, mature swamps on-site. Therefore, these species are located in areas where they will be protected.

7. Wetland Mitigation Plan

The development of Nocatee will cause wetland impacts and the Nocatee plan proposes an extensive mitigation plan to compensate for permissible impacts. The wetland impacts can be addressed in three general categories with estimated impact type and acreage.

- ◆ C.R. 210 Realignment to connect to Racetrack Road (98 Acres)
- ◆ Town Center Development (200 Acres)
- ◆ Other impacts within villages (176 Acres)
- ◆ Wetland Impact Total: 474 Acres

A regionally significant mitigation plan to address wetland impacts is included as Appendix D. The scale of the mitigation activities will have benefits to the entire northeast Florida Region and will include: regionally significant wetland preservation including 2,400 acres and over three miles of frontage along the Guana-Tolomato Aquatic Preserve, wetland restoration, wetland enhancement, wetland creation, upland conservation, and the enhancement or creation of extensive wildlife corridors.

D. Stormwater Management

1. State-of-the-Art Stormwater Management

The stormwater management system for the Nocatee project will provide for the effective treatment of stormwater from the development areas through a series of wet detention ponds designed to reduce flooding, provide treatment of stormwater runoff, and prevent any increases in post-development peak discharge rates from the pre-development conditions.

Due to the high water table, it is anticipated that wet detention will be the primary method used for the stormwater treatment and attenuation for this project. The normal water elevation (NWL) of each pond will be designed and maintained so the groundwater elevation of the adjacent wetland systems is not adversely affected. The wet detention



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systems will be designed to meet the criteria established by the St. Johns River Water Management District and as provided in Subsection 14.1 of the St. Johns River Water Management District, Applicant's Handbook: *Regulation of Stormwater Management Systems*, dated January 11, 1999.

Furthermore, areas that ultimately discharge into the Intracoastal (Tolomato) basin will receive additional treatment because of its OFW designation. The following criteria for treatment will be employed:

- a) An additional fifty percent of both the required treatment and permanent pool volumes, or
- b) Pre-treatment of the stormwater prior to the stormwater entering the wet detention pond. The level of pre-treatment must be at least that required for retention, underdrain exfiltration, or swale systems.

The open waters of the existing systems will not be used as the primary outfall from stormwater management systems. Rather the extensive Greenway and Preserve systems linking Nocatee's drainage basins will serve as the drainage outfalls. This will minimize changes in hydrology systems and maximize times of concentration and retention within the preserve areas that protect the water quality in Durbin Creek, Twelve Mile Swamp, and the Tolomato River.

2. Stormwater Use

Along with reuse water, stormwater will be used to meet the irrigation demand of the Nocatee project. It is projected that approximately 20 percent of the irrigation demand will be met by stormwater. By using stormwater for irrigation, groundwater is conserved for potential future potable use.

3. Water Quality

Surface water quality must be protected throughout the Nocatee project, especially during construction of the project. The buffers to open waters are a significant component to this protection plan (see maps in Appendix E). However, managing and monitoring of construction activities is a critical element of water quality maintenance. To ensure water quality is maintained during construction, Nocatee will require implementation of a Stormwater Pollution Prevention Construction Operating Plan (SWPPP) for each project greater than one acre in size. A draft SWPPP is provided in Appendix F. Prior to the start of site construction, the applicant or his designee will conduct a pre-construction conference to address stormwater pollution prevention as well as sediment and erosion control. The purpose of the conference is to review the site-specific details of the SWPPP and identify the individual(s) responsible for its implementation. In addition,



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specific conditions of regulatory permits will be reviewed and persons assigned to the monitoring for compliance with these conditions.

The SWPPP includes the Best Management Practices (BMP) that will be implemented during construction to prevent turbid or polluted water from leaving the project site. The BMPs are erosion and sediment control stabilization practices required to meet the sediment and turbidity requirements imposed on the project site by regulatory agencies.

A Homeowners' Association (HOA) or Community Development District (CDD) will be established to maintain the stormwater management facilities upon completion of each parcel. The applicant shall be the responsible maintenance and operation entity until such time that the HOA or CDD is formed and the individual parcels are sold. Portion of the drainage collection system may be owned and maintained by St. Johns County or the City of Jacksonville depending on the appropriate jurisdiction.

A Nocatee Integrated Pesticide/Nutrient Management Plan (Appendix G) has been developed for the proposed golf courses within the Nocatee project to reduce dependence on chemicals through an ongoing turf monitoring and management program. The plan has been designed to fulfill the following three principal objectives:

- a) Maintain a balanced and healthy turf to maximize its natural resistance to disease;
- b) Control turfgrass infestations below levels which necessitate widespread chemical treatments; and
- c) Progressively reduce dependence on chemicals through an ongoing turf monitoring and management program.

Beginning with golf course construction and continuing through project buildout, this IPM Plan focuses primarily on the six basic and essential elements described below.

Golf Course Development: Follow construction strategies that take into account and provide for soil selectivity and conditioning, site shaping and contouring, erosion control, turfgrass suitability, opportunities for a variety of environmental enhancements.

Cultural Practices: Maintain a healthy and luxuriant turf over golf areas, and in other lawn acreage throughout the golf course to minimize need for fertilizers, insecticides and other chemicals.

Biological Practices: Minimize fairway play acreage; while establishing the most disease resistant turfgrasses; and utilize to the greatest possible extent native vegetation and roughs.



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Chemicals: Apply chemical treatments only on an as-needed basis, and selectively use effective, non-persistent products that are formulated for local soils. Application instructions will be strictly followed, and care will be taken to avoid highly toxic pesticides and those that product allergenic or otherwise objectionable aerosols.

Records: Keep a daily log(s) to record all maintenance and improvement activity associated with the golf course. This would include repairs, modifications, and new construction; mowing and irrigation schedules; and particulars (labels) on fertilizers, conditioners, and pesticide applications (personnel, compound, purpose, date, time, ambient weather, rate, precautions and procedures). Also, comply with the sampling submittal, and record-keeping requirements of permitting and regulatory agencies.

Upgrading: Provide a framework for effective and efficient operations, and review and evaluate features needed to make measurable improvements in the plan as experience and technology dictate.

4. Protection of Surface Water

Nocatee is committed to not adversely affect surface water quality in the three drainage basins that serve the project. Post-development water quality will be maintained using several techniques. The first technique is a state of the art stormwater management system to be constructed and operated in each development area, as described above. The second technique is to provide appropriate buffers adjacent to open surface waters of Durbin Creek, Deep Creek, and Smith Creek. These buffers are shown in Appendix E. The third technique is to not allow discharge into open waters as the primary outfall from stormwater management systems. Finally, as outlined above, Nocatee will require implementation of a Stormwater Pollution Prevention Construction Operating Plan (SWPPP) for each project greater than one acre in size.

E. Hazardous Waste Plan

A community the size of Nocatee will have hazardous waste generators. A generalized hazardous waste plan has been developed for Nocatee which emphasizes segregation of wastes, recycling and reuse, safe storage, and proper disposal through compliance with USEPA regulations. The hazardous waste plan is enclosed as Appendix H.

F. Development Guidelines and Public Education

Development guidelines will be incorporated within the covenants and restrictions of Nocatee property owners that address minimum requirements for xeriscaping, fertilization and pesticide management, greenway and upland buffer restrictions, and zoning standards. A public educational program will be prepared which will consist of environmental education in the form of interpretive trails, environmental kiosks and pavilions, and the marketing and dissemination of written materials that describe the unique ecosystems of Nocatee.