

**Florida Electrical Power Plant Siting Act  
Site Certification Application**

**Volume 2 of 3**

**Greenland Energy Center  
Combined Cycle Conversion Project**

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**September 2008**

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## 4.0 Effects of Site Preparation and Plant and Associated Facilities Construction

### 4.1 Land Impact

#### 4.1.1 General Construction Impacts

JEA will prepare approximately 63 acres for the simple cycle facility. An additional 10 acres will be prepared for the proposed conversion project. Ultimate site development will require an additional 2 acres. Approximately 12.4 acres will be required for the new permanent access road.

The area proposed for the conversion project is, for the most part, the construction equipment/materials lay-down area proposed for construction of simple cycle Units 1 and 2. The construction equipment/materials lay-down area for the expansion will be identified by the contractor and will not alter additional areas within the GEC site proper. Facility locations are shown on Figure 2.1-3 in Section 2.0.

A temporary pervious access road is being permitted with the simple cycle facility to provide construction access to the site from Philips Highway. A railroad spur will not be required.

Construction of the conversion facilities will modify the existing terrain to a minimal extent. The cooling tower area will be cleared and grubbed as needed, and will be raised to a finished grade elevation of 31 feet National Geodetic Vertical Datum (NGVD). No explosives will be used during construction.

Construction materials, such as concrete, steel, and aggregate, will be delivered to the site by trucks.

Used oils, grease, hydraulic fluids, construction wastes, and garbage will be collected, stored, and removed appropriately for disposal at a properly licensed landfill or resource recovery facility by the general services contractor or individual construction contractors. Such activities will be supervised and controlled by the construction manager.

Vegetative matter removed during site clearing may be burned onsite after receiving the proper authorizations from Duval County. Some trees may be removed from the proposed lay-down area, but this area will not require total clearing.

#### 4.1.2 Roads

A new site access road connecting the GEC to Philips Highway will be constructed. Therefore, a "Utility Accommodation Guide" assessment is required. JEA will request FDOT approval to improve (lengthen) an existing turn lane from southbound Philips Highway into the site during the simple cycle project permitting.

The paved plant loop road installed during simple cycle construction will be slightly changed by the conversion project. The plant loop road will be extended out to the cooling tower area for truck access to the chemical tanks and maintenance access for the cooling tower. The plant loop road layout is shown on Figure 2.1-3 in Section 2.0.

#### **4.1.3 Flood Zones**

The GEC site is not located below the 100 year flood elevation. However, construction of the proposed GEC access road within the 100 year floodplain will require compensating floodplain storage. The volume of the 100 year floodplain unavoidably lost will be compensated by regrading the area north of the access road within the property limits. This regrading will also serve as compensatory storage for any unavoidable impacts within the 10 year floodplain.

#### **4.1.4 Topography and Soils**

As described in Subsection 4.1.1, the proposed construction area is, for the most part, the construction lay-down area that will be used during construction of simple cycle Units 1 and 2 and the area to be added for the cooling towers. The cooling towers will be located in an area that will be cleared and regraded. The soils in both of these areas are generally sandy.

### **4.2 Impact on Surface Water Bodies and Uses**

A stormwater detention basin is currently being permitted with the simple cycle project through Environmental Resource Permit (ERP) Application No. 16-289373-001-EI, and will not be affected by the proposed conversion project.

#### **4.2.1 Impact Assessment**

Construction of the conversion project will have no adverse impact on Big Davis Creek. The proposed erosion and sedimentation control measures and site stormwater management facilities will control and minimize such impacts beyond the construction zone. The stormwater pond and drainage ditches that will drain the site will serve as the conversion project construction drainage system, providing both quality and quantity treatment of stormwater through detention. Treated water will discharge from the pond and sheetflow toward Big Davis Creek.



#### **4.2.2 Measuring and Monitoring Program**

JEA holds a valid *Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities* construction stormwater discharge permit for the GEC site, Permit No. FLR10GY43, issued in May 2008.

The existing *Stormwater Pollution Prevention Plan for Stormwater Discharges from Construction Activities* will be revised to address conversion project construction activities. JEA will comply with the measuring and monitoring requirements of the generic permit.

### **4.3 Groundwater Impacts**

#### **4.3.1 Impact Assessment**

Dewatering may be required for excavations deeper than 10 feet during construction of the conversion facilities. The maximum groundwater level reported in the area was Elevation 23.8 in August 2007; historically, the water level generally stays below Elevation 22 feet in the wetter summer months and below 21 feet in the drier winter months. Fluctuations in groundwater have shown increasing variability in recent years. Deeper excavations, or those that encounter free water at shallow depths, should be dewatered with an engineered well point system. All excavations will be monitored for deep erosion because of the infiltrating groundwater. The dewatering should lower the groundwater level a minimum of 2 feet below the base of the excavation. The majority of the underground utilities, miscellaneous pits, and sumps will be constructed above the groundwater surface and will have no impact on the groundwater at the site. However, the circulating water lines, cooling tower pump pits, and steam turbine generator foundation will be below the water table and will need to be dewatered.

Dewatering for these facilities will be completed with a series of well points installed around the perimeter of the excavation. The dewatering activity duration will be short term, less than 120 days, with total withdrawal volumes of less than 1 mgd. Discharge from the dewatering activities will be directed to either the stormwater pond or an upland area. JEA acknowledges that authorization for dewatering activities will be required from the SJRWMD and FDEP. A detailed dewatering plan will be submitted post-certification and prior to any dewatering activities.

The dewatering effects will be temporary and limited to the power block area. The groundwater system will return to its original state after completion of the dewatering.

#### **4.3.2 Measuring and Monitoring Program**

Groundwater monitoring during limited dewatering is not proposed.

#### 4.4 Ecological Impacts

Site preparation and construction of the conversion facilities will have no adverse impact on upland and wetland habitats, and minimal impact on resident wildlife. The location of the conversion facilities will be adjacent to the proposed simple cycle facilities. This area for the conversion facilities will be the temporary construction area used during the simple cycle facility construction. Table 4.4-1 lists resource agencies involved in the ecological aspects of the GEC and permits to be issued by each for the facilities.

The new access road construction will require minor wetland impacts. The driveway at Philips Highway will be modified, which will impact (fill) 0.01 acre of Wetland 1, a small, disturbed depression area. The route will cross the driving range area and impact (fill) 0.22 acre of Wetland 2, a small, disturbed herbaceous area in the existing transmission corridor before reaching the site boundary.

Agency	Permit Name	Permit Number
City of Jacksonville	PBF Zoning	Resolution 2008-390
Florida Department of Environmental Protection	Environmental Resource Permit	16-289373-001-EI
Florida Fish and Wildlife Conservation Commission	Protected Species Compliance	Gopher Tortoise Relocation Permit WR08306
US Army Corps of Engineers	Section 404 Dredge and Fill Permit	SAJ-2008-2310 (SP-NBF)
US Fish & Wildlife Service	Endangered Species Act Compliance	NA (issued through Section 404 Permit)

##### 4.4.1 Impact Assessment

Construction of the proposed GEC facility will result in the development of approximately 80 acres for the main site and access road. No additional land development will be associated with construction of the proposed conversion facility.

Construction activities for the simple cycle facility will result in 0.73 acre of impacts to low quality/low functional value jurisdictional wetlands. Mitigation proposed for those impacts is anticipated to be approved under ERP No. 16-289373-001-EI, and ACOE Permit SAJ-2008-2310(SP-NBF) will result in 0.45 excess mitigation credits.

The proposed conversion project will require additional impacts (fill) of 0.23 acre in Wetlands 1 and 2 for construction of the permanent access road. Based on the

Uniform Mitigation Assessment Method (UMAM) results and mitigation plan anticipated to be approved for the pending simple cycle ERP, this impact represents a Functional Loss value of 0.09 (scale of zero to one). The Relative Functional Gain value of the Wetland 9 conservation easement/preservation area is 0.04. Therefore, 2.3 acres of the easement will be deducted, calculated as  $0.09/0.04=2.3$ . In summary, the deduction from the simple cycle project (2.3 acres) plus the deduction for the conversion project (2.3 acres) will subtract 4.6 acres from the 13.6 acre easement, leaving 9 acres available for JEA's future use.

#### **4.4.2 Wildlife Impacts**

Wildlife species may be temporarily displaced from adjacent communities by the noise, fugitive dust, and other activities caused by the construction, but no long-term, adverse impacts are anticipated.

#### **4.4.3 Threatened and Endangered Species Impacts**

No federal or state protected species are expected to occur onsite during conversion construction. Gopher tortoises will be removed from the site and relocated to the Longleaf Mitigation Bank under Gopher Tortoise Relocation Permit WR08306 in the summer/fall of 2008, prior to any construction at the site.

#### **4.4.4 Measuring and Monitoring Programs**

As part of the mitigation required for the simple cycle facility, created wetland monitoring and management is anticipated by the US Army Corps of Engineers and FDEP under the Section 404 Dredge and Fill Permit and Environmental Resource Permit, respectively, in compliance with the *Greenland Energy Center Wetland Mitigation Plan* prepared for these permits. Monitoring the development of the wetland construction and enhancement efforts to demonstrate the progress and success will be initiated upon completion of the wetland construction. Monitoring activities will occur annually in late summer or early fall for a period of 5 years unless the wetland is determined to be successful earlier. Monitoring reports will be submitted annually in the fourth quarter to appropriate federal and state agencies and other interested parties.

The 5 year monitoring activities will annually examine the survivorship and growth rates of tree plantings. Throughout the process, the presence of undesirable exotic vegetation will be monitored and, if necessary, controlled by agency approved methods. Photographic documentation will be made of the area's appearance throughout the monitoring study. The *Wetland Mitigation Plan* has established success goals based on the mentioned criteria that must be met in order for the agencies to declare the

mitigation successful. Minor wetlands impacts (0.23 acre fill) will occur from the construction of the new access road through Wetlands 1 and 2. Mitigation is available from excess mitigation credits/Relative Functional Gain created during simple cycle permitting.

**4.4.4.1 Wetlands Mitigation Plan.** Two low quality/low functional value jurisdictional wetlands will be permanently affected (0.73 acre total impact) as a result of simple cycle project development. Wetland 2 in the access road corridor will be partially filled; Wetland 10 onsite will be completely filled. However, impacts to other higher quality wetlands have been avoided by selectively locating the facilities. JEA has proposed to compensate for these unavoidable impacts by enhancing Wetland 1; creating additional forested wetland in the Big Davis Creek floodplain adjacent to Wetland 1; and placing a conservation easement over Wetland 1, Wetland 9, and the creation area, for a total of approximately 14 acres of conservation easement. A UMAM (UMAM, Ch. 62-345, FAC) study was performed on the impact and mitigation wetlands to evaluate the functional value and to determine mitigation/offset requirements. Table 4.4-2 summarizes the wetlands characteristics and UMAM evaluation scores for the conversion project.

The total acreage of the wetlands in the project area is approximately 29.1 acres; a roadside ditch adjacent to Philips Highway and Big Davis Creek is also within the project area. The total acreage of permanent wetlands impacts due to the simple cycle project is 0.73 acre, or expressed as the sum of the Functional Loss values, a score of 0.16 (on a scale of zero to one). The Relative Functional Gain (RFG) required to offset the Functional Loss will be achieved by enhancing Wetland 1, creating the forested wetland, and preserving Wetland 9 as a conservation easement. A Preservation Adjustment Factor (PAF) of 0.4 (scale of zero to one) was used to determine the RFG of preserving Wetland 9. This value (RFG=0.04) is relatively low because Wetland 9 is a high quality wetland. The PAF value assigned to Wetland 9 also considered post-project development factors such as maintenance of the existing ecological and hydrological characteristics, prohibition of future development/impact (conservation easement), and restricted access (fenced).

The mitigation requirement will be partially satisfied by the wetland creation and partially by the conservation easement. JEA has confirmed that there are no mitigation bank credits available in Basin 5 and has consequently proposed the in-basin, onsite mitigation plan described herein. In addition to mitigating the Functional Loss with the RFGs provided by the creation and preservation efforts, JEA proposes to generate additional mitigation credits by placing a conservation easement over Wetland 9. The remaining 11.3 acres of preservation with an RFG of 0.04, as established herein and by

the pending ERP, are proposed for future use on JEA utility projects in the Sixmile & Julington Creeks Nested Basin (Basin 5).

The wetland creation plan would prepare a shallow excavation between Wetland 1 and the floodway of Big Davis Creek (as shown on Figure 4.4-1), place wetland soils from the wetland impact areas in the excavation area to promote herbaceous growth, and plant wetland trees in the excavated area. No direct hydrologic surface connection to the creek floodway or roadside drainage is proposed. A conceptual wetland creation plan is described below and shown on Figure 4.4-2. Wetland 1 enhancement would remove trash and any listed nuisance or undesirable species.

**Wetland Construction.** A two-tiered, shallow, 0.2 acre excavation is proposed in the herbaceous upland area between Wetland 1 and the Big Davis Creek floodway. No direct surface connection to the floodway or roadside ditch is proposed. Landscape features and floodway limits restrict the area available for this excavation. Prior to planting the excavation area, wetland soils from the impact wetlands will be distributed in the excavated area to provide a herbaceous seedbed.

**Wetland Planting.** Approximately 24 trees will be planted on 20 foot centers in the excavated area. Red maple (*Acer rubrum*) is proposed for the upper perimeter tier (Zone 1); pond cypress (*Taxodium ascendens*) is proposed for the lower areas (Zone 2) of the excavation. Nursery supplied, 3 gallon size trees, will be planted and staked as needed.

**Wetland Monitoring.** A 5 year monitoring plan and success criteria to monitor tree survival has been developed for the creation area as described below. However, if success criteria are met for any 3 consecutive years during the 5 year period, JEA will request a success determination and cessation of monitoring. Annual monitoring events are proposed beginning with the year of planting. Monitoring is proposed for late in the growing season. An annual monitoring report will be provided.

**Tree Survivorship.** Survivorship will be determined by examining all trees for an increase in growth (diameter) or the appearance of fruit, cones, or green leaves. Diameter will be measured at breast height (dbh at 4.5 feet) of all trees.

**Success Criteria.** The enhancement will be considered successful when the specific criteria defined below has been met for three consecutive years.

Survivorship for planted trees must be maintained at 80 percent. Trees must be living and growing and/or reproducing naturally.

Table 4.4-2  
Wetlands Summary

Wetland Area	Size (AC)	Description	Jurisdiction		Impact (Acres)	Score <sup>1</sup>	UMAM		
			Corps	DEP			FL Value <sup>2</sup>	RFG <sup>3</sup>	FL Offset <sup>4</sup> (Acres)
W-1	0.05	Mixed hardwood depression; severely disturbed	x		0.01	0.3	0.003	--	0.07 @ DEP 0.07 @ Corps
W-2	0.54	Wet prairie; in T-line ROW	x	x	0.22	0.4	0.09	--	2.2
W-3	0.19	Wet prairie; in T-line ROW	x		0	--	--	--	
W-4	0.39	Wet prairie; in T-line ROW	x		0	--	--	--	
W-5	0.76	Wet prairie; in T-line ROW	x	x	0	--	--	--	
W-6	0.05	Wet prairie; on driving range	x		0	--	--	--	
W-7	3.36	Forested wetland (Existing Conservation Easement)	x	x	0	--	--	--	
W-8	3.36	Forested wetland; relatively undisturbed	x	x	0	--	--	--	
W-9 (Preservation Area)	13.6	Mixed hardwood wetland; relatively undisturbed	x	x	0	0.7	--	0.04 @ DEP 0.04 @ Corps	4 @ DEP 4 @ Corps
W-10	0.68	Intermittent pond/depression	x	x	0	0.2	--	--	
W-11	4.1	Mixed hardwood wetland; relatively undisturbed	x	x	0	--	--	--	
S-1	Stream	Roadside ditch	x	x	0	--	--	--	
S-2	Stream	Big Davis Creek	x	x	0	--	--	--	
OW-1	2	Open, surface water	x	x	0	--	--	--	
Creation Site	0.2	Forested/mixed hardwood, herbaceous	x	x	0	0.7	--	0.45 @ DEP 0.46 @ Corps	0.36 @ DEP 0.35 @ Corps
<b>Total</b>	<b>29.1 (without creation site)</b>				<b>0.23</b>		<b>0.093</b>		

<sup>1</sup>Score = Existing wetland score/value considering location, hydrology, and vegetation factors.  
<sup>2</sup>FL Value = Functional Loss of wetland values.  
<sup>3</sup>RFG = Relative Functional Gain of wetland values by mitigation.  
<sup>4</sup>FL Offset = Acreage calculated to offset the total functional loss.

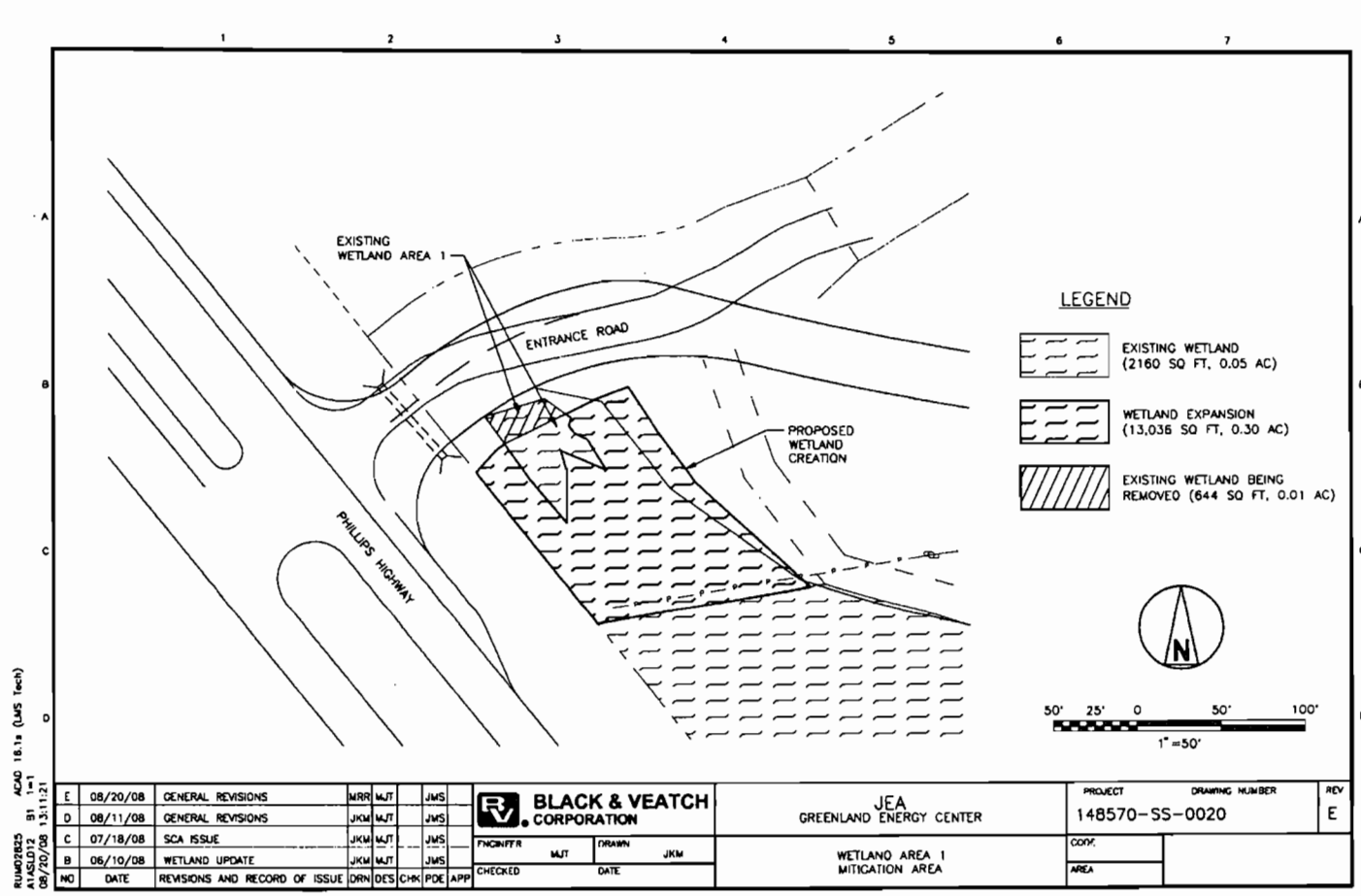


Figure 4.4-1  
Wetland Area 1 Mitigation Area

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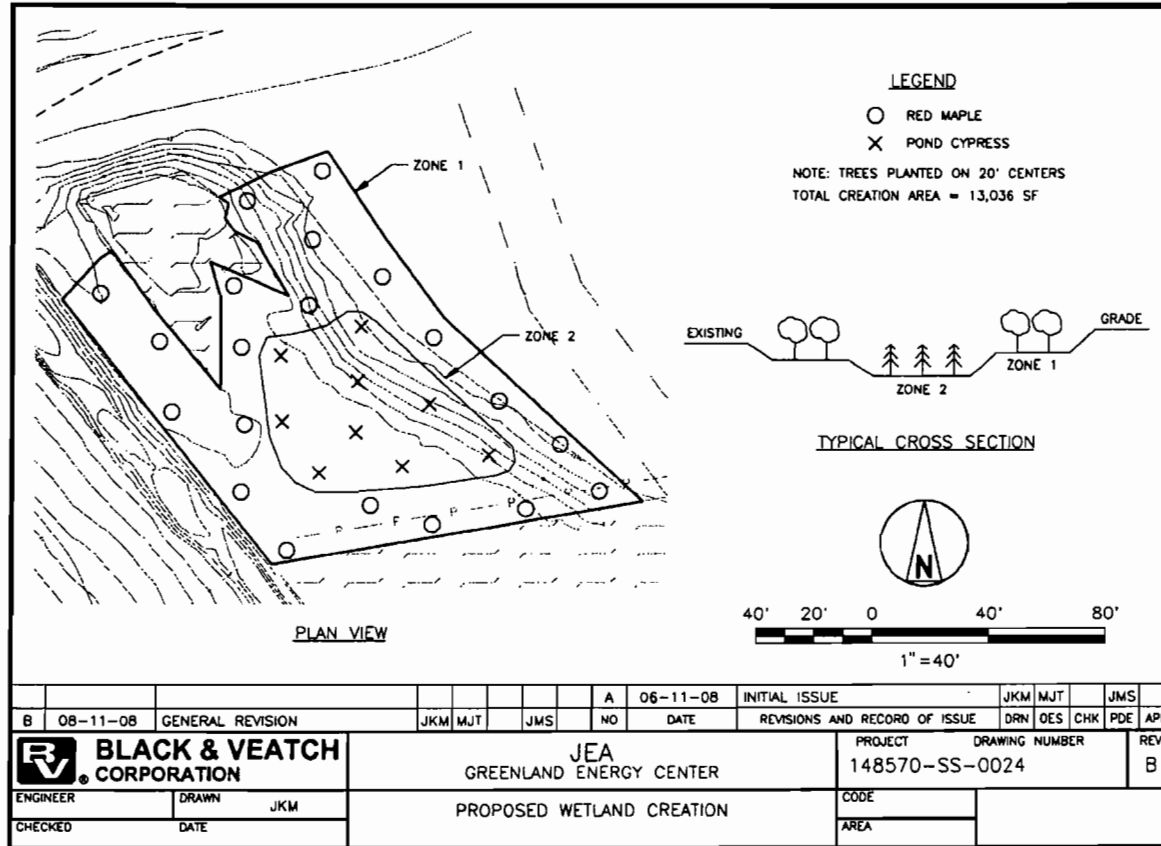


Figure 4.4-2  
Proposed Wetland Creation



## 4.5 Air Impacts

During the construction phase, atmospheric dust (particulate matter) will be generated from the mechanical disturbance of soils and granular material that becomes exposed to the wind at the construction site. The particulate matter dust is often referred to as fugitive dust, because its source is particulate matter that cannot be reasonably discharged to the atmosphere in a confined flow stream.

### 4.5.1 Sources of Construction Fugitive Dust

Construction activities, including material moving activities, site preparation, and vehicle traffic, if not properly monitored and controlled, have the potential to generate large amounts of fugitive dust. The construction activities at GEC may be generally broken down into the following three phases as related to generating fugitive dust:

- Phase 1 - Debris Removal--Debris removal consists of removing any man-made or natural obstructions from the site. Under extreme circumstances, this phase of construction may require blasting, explosion, or mechanical dismemberment of the obstructions in order to clear the site. However, this level of debris removal is not anticipated and will likely be limited to material loading/unloading, small disturbed areas, and vehicular travel on unpaved surfaces.
- Phase 2 - Site Preparation--Site development includes the general site grading and soil stabilization techniques used to bring the site to a final or near final grade. These techniques will typically include cut and fill as well as aggregate surfacing operations. Typical fugitive dust emissions sources of this phase include movement of large earthmoving equipment (e.g., scrapers and dozers) over disturbed surfaces, material/aggregate loading and unloading, and vehicular travel on unpaved surfaces.
- Phase 3 - General Construction--The construction phase is the final, but generally the longest, phase of the construction activities. This phase includes everything from foundation work, structural and reinforcing steel erection, exterior/interior operations, to piping/electrical work and final landscaping. In contrast to Phases 1 and 2, fugitive dust emissions during Phase 3 are somewhat sporadic in nature, depending on the delivery schedule of parts and materials, with many simultaneous operations throughout the construction site.

Within each of the major construction phases described above, there may be one or more specific construction activities occurring during that phase that can be a source(s) of fugitive dust. The fugitive dust emissions sources resulting from these construction activities are typically assigned into one of four categories, which include disturbed surface areas, open storage piles, earthmoving, and vehicular traffic. The following subsections describe each of these fugitive dust emissions sources as applicable to the construction site.

**4.5.1.1 Disturbed Surface Areas.** Many of the construction activities will result in disturbed surface areas in the power block area, which may be subject to wind erosion. A disturbed surface refers to a portion of the earth's surface that has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emissions of fugitive dust. Disturbed surfaces do not include those areas which have been restored to a natural state such that the vegetative ground cover is similar to any adjacent natural conditions, or which have been paved or covered by a permanent structure.

**4.5.1.2 Storage Piles.** A storage pile is any accumulation of bulk material, generally with a 5 percent or greater silt content, that is not fully enclosed or otherwise covered or chemically stabilized. The storage pile may be composed of soil, stored temporarily during cut and fill operations, or composed of aggregate used in foundation work and construction materials. Storage piles of this nature are typically left uncovered because of the frequent need to transfer material into and out of storage.

Fugitive dust emissions may occur at several points in the storage pile cycle, including material loading or unloading (material handling), and dust entrainment in wind currents on the exposed slopes of the storage pile.

**4.5.1.3 Earthmoving.** Earthmoving refers to a broad range of construction activities using heavy equipment to clear land, excavate, cut, and fill. The activities may directly expose material to wind erosion through excavation, scraping, hauling, loading, transferring, and other material moving activities.

**4.5.1.4 Vehicular Traffic.** Vehicular traffic associated with the construction activities will include worker vehicles, equipment deliveries, and heavy construction vehicle traffic over unpaved surfaces. When a vehicle travels on an unpaved surface, the force of the wheels on the surface causes the material on the road to become lifted, dropped, and then entrained into the turbulent air currents caused by the velocity of the vehicle. As such, the vehicle's speed and size, silt content of the road surface, and material moisture content all play a role in determining the magnitude of the fugitive dust emissions from unpaved roads.

**4.5.2 Available Control Methods**

Fugitive dust emissions may result from a variety of activities that can require a multitude of different emissions control alternatives. Additionally, the relatively short-term nature of construction activities makes some fugitive dust control methods more cost-effective and practical than other methods. Tables 4.5-1 through 4.5-4 describe several available fugitive dust control methods and practices associated with disturbed surfaces, storage piles, earthmoving, and vehicular traffic that may be employed to control fugitive dust during construction. The available control methods identified in each table are summarized in the following subsections. The control methods ultimately used will be agreed upon by the Contractor and Construction Manager.

Table 4.5-1 Available Fugitive Dust Control Methods for Disturbed Surface Areas	
Control Method	Description/Remarks
Work Practice Controls	Paving identified roads and access points early in the construction process, phasing of earthmoving activities to reduce disturbed surface extent, compaction and/or stabilization of disturbed surfaces as quickly as practical. Onsite traffic control program to direct, control, and restrict unnecessary traffic.
Watering	Use of water or water plus a wetting agent to suppress fugitive dust over disturbed areas. Typically applied with spray nozzles attached to a special truck adapted for this purpose. Temporary in nature, but cost-effective even with frequent reapplication.
Graveling	Graveling of high volume traffic areas within the disturbed area of the construction site provides a physical stabilization of the exposed surface and covers the surface with a material that has a lower silt content.
Wind Fencing	Wind fencing provides a sheltered region behind the fence line that reduces the mechanical turbulence generated by the ambient winds. The sheltered area of dust control is proportional to the physical height of the fence around the disturbed surface.
Physical Stabilization	Physical stabilization methods involve the application of materials such as rock, bark, wood chips, straw, or other suitable materials to cover the exposed surface, thus preventing the wind from disturbing the surface particles. Graveling is one example of physical stabilization.
Vegetative Stabilization	Vegetative cover provides a physical stabilization and wind shelter of the disturbed surface. However, it is effective only on inactive areas of the disturbed surfaces where frequent mechanical (e.g., earthmoving) activities are not anticipated. As such, it is typically not implemented during short-term construction activities.
Chemical Stabilization	Chemical stabilization is a dust suppressant method that uses binding agents that, upon application, bind the surface particles to form a protective crust over the disturbed surface. Typically, the temporary nature of construction activities does not warrant their use because they are not cost-effective over such a small scale of application and reapplication.

**Table 4.5-2  
Available Fugitive Dust Control Methods for Storage Piles**

Control Method	Description/Remarks
Work Practice Controls	Effective practices involve minimizing temporary material storage pile(s) size and number by utilizing phased earthmoving activities. Minimize drop height when adding material to the pile(s), and perform loading and unloading operations on the leeward (downwind) side of the pile. Clean up spillage and maintain material to the confines of the pile.
Watering	Water or water plus a wetting agent would be used to suppress fugitive dust from the storage pile. Temporary in nature, but cost-effective even with frequent reapplication.
Wind Fencing/Barriers	Wind fencing or partial temporary barriers or enclosures provide a sheltered region in the vicinity of the storage pile which reduces the mechanical turbulence generated by the ambient winds. The sheltered area of dust control is proportional to the physical height of the fence or barrier.
Chemical Stabilization	Chemical stabilization is a dust suppressant method that uses binding agents that, upon application, bind the surface particles to form a protective crust over the disturbed surface. Typically, the temporary nature of construction activities does not warrant their use because they are not cost-effective over such a small scale of application and reapplication.

**Table 4.5-3  
Available Fugitive Dust Control Methods for Earthmoving**

Control Method	Description/Remarks
Work Practice Control	Onsite traffic control program to direct, control speed, and restrict unnecessary traffic. Reduce offsite hauling with balanced cut-and-fill operations and construction management. Cover truck beds during material hauling operations.
Watering	Preapplication of water or water plus a wetting agent to suppress fugitive dust prior to, and to the extent possible, during earthmoving operations. Temporary in nature, but cost-effective even with frequent reapplication.
Wheel Washing	Water washing of heavy construction equipment wheels and undercarriages at construction site egress points to prevent material trackout and deposition outside of the construction site. System may include automatic or manual sprayers, and/or drive-through wheel washing basins.
Wind Fencing/Barriers	Wind fencing or partial temporary barriers or enclosures provide a sheltered region in the vicinity of the earthmoving which reduces the mechanical turbulence generated by the ambient winds. The sheltered area of dust control is proportional to the physical height of the fence or barrier.
Chemical Stabilization	Chemical stabilization is a dust suppressant method that uses binding agents that, upon application, bind the surface particles to form a protective crust over the disturbed surface. Typically, the temporary nature of construction activities does not warrant their use because they are not cost-effective over such a small scale of application and reapplication.

Table 4.5-4 Available Fugitive Dust Control Methods for Vehicular Traffic	
Control Method	Description/Remarks
Work Practice Controls	Onsite traffic control program to direct, control speed, and restrict unnecessary traffic. Reduce offsite hauling with balanced cut-and-fill operations and construction management. Cover truck beds during material hauling operations.
	UNPAVED ROADS
Watering	Application of water or water plus a wetting agent to suppress fugitive dust prior to, and to the extent possible, during earthmoving operations. Temporary in nature, but cost-effective even with frequent reapplication.
Graveling	Graveling of high volume unpaved traffic areas provides a physical stabilization of the exposed surface and covers the surface with a material that has a lower silt content.
Chemical Stabilization	Chemical stabilization is a dust suppressant method that uses binding agents that, upon application, bind the surface particles to form a protective crust over the disturbed surface. Typically, the temporary nature of construction activities does not warrant their use because they are not cost-effective over such a small scale of application and reapplication.

**4.5.2.1 Watering.** Watering is an effective stabilizing tool that controls fugitive dust by using water (or water combined with a surfactant as a binder) by either maintaining soil moisture content or establishing a crust that prevents soil movement under windy conditions. The water can be applied by any suitable means such as trucks, hoses, and/or sprinklers appropriate for the site characteristics and size. Watering is most effective when an area or road surface is pre-watered, with frequent reapplication as necessary.

**4.5.2.2 Chemical Stabilizers.** Chemical stabilizers are commercially available and contain approved chemical soil binding agents to artificially crust soil and prevent soil movement during windy conditions. Stabilizers are effective for temporary periods. Depending on the application rates and/or materials involved, stabilizer use may extend the durability and longevity of the artificial soil crust for longer periods. As such, stabilizers are best suited for areas not subject to daily disturbance.

**4.5.2.3 Physical Barriers.** Physical barriers provide a sheltered region behind the barrier to allow gravitational settling of larger fugitive dust particles, as well as a reduction in the wind's erosion potential. Physical barriers reduce the mechanical turbulence generated by the ambient winds for a downwind distance proportional to the height of the barrier and porosity. Physical barriers include portable wind screens and fences, partial enclosures, straw bales, tree lines, and terraces. Wind screens and fences can be used to control a wide variety of fugitive dust sources at a construction site, including disturbed areas, storage piles, and providing shelter for material handling

operations such as storage pile loading or unloading. Furthermore, fences and screens are portable and thus capable of being relocated around the construction site as necessary.

**4.5.2.4 Vegetative Stabilization.** Vegetative stabilization uses established cover or locally recommended varieties and seeding rates that approximate native cover to stabilize soil against wind erosion and emissions of fugitive dust. Either temporary or permanent cover can be established using standard agricultural methods, hydroseeding, or hand seeding. Temporary cover for areas that will be disturbed again after a short period is best established by using rapidly emerging varieties of vegetation with rapid initial growth. Maintenance of the original vegetative cover and opportunistic vegetation such as weeds and native species are also options, but may require some watering to establish.

Vegetative stabilization as a fugitive dust control method is most effective only on inactive areas of the disturbed surfaces where frequent mechanical (i.e., earthmoving) activities are not anticipated. As such, it is typically not implemented on a large scale for the control of fugitive dust emissions during short-term construction activities.

**4.5.2.5 Work Practice Controls.** There are a number of work practice controls that can be applied to reduce the fugitive dust emissions during construction activities. These work practices include both active and preventive fugitive dust control methods, which are typically integrated into a comprehensive construction management plan. The following list contains several common work practice activities that may be applied to reduce fugitive dust emissions during construction:

- Pave designated roads, construction parking areas, and site access points early on in the construction project.
- Compact or stabilize disturbed areas as quickly as practical.
- Phase earthmoving activities to reduce disturbed surface extent.
- Maintain original vegetative ground cover as long as practical.
- Establish a traffic control plan to decrease disturbance of soil and fugitive dust generated from unnecessary vehicle traffic by posting speed limit signs (generally less than 10 mph), erecting fencing and/or placing barriers to direct traffic, designating specific haul and/or access roads, designating offsite or limited access onsite parking for construction workers, and limiting public vehicle access.
- Reduce offsite hauling via balanced cut-and-fill operations.

**4.5.2.6 Physical Stabilization.** Physical stabilization methods, which involve covering a disturbed surface with a material that prevents the wind from entraining the surface particles, may be used during many phases of the construction project. Common physical stabilizing materials include rock, gravel, crushed or granulated slag, bark, wood chips, straw, or hay that are harrowed into the top few inches of the disturbed surface.

## **4.6 Impact on Human Populations**

JEA plans to construct two simple cycle units that will be ready for commercial use by June 2010. These units are proposed for conversion to a 2 x 1 combined cycle unit by June 2012. Upon the completion of this 18 month conversion, the net site capacity will be 522 MW. In this section, the impact on human populations arising from the conversion of the GEC unit from simple to combined cycle is evaluated. Potential areas of impact include those on land use, employment, income, housing, construction, and traffic. The ultimate site capacity of approximately 1,300 MW is also addressed.

### **4.6.1 Land Use Impacts**

The GEC will be located in Jacksonville approximately 1 mile north of the Bayard community. Bayard is approximately 17 miles south of downtown Jacksonville.

The proposed GEC site and access road corridor consist of approximately 152.5 acres. Prior to purchase by JEA, the site was a mixture of pine plantation and wetlands. The access road corridor was a golf driving range. The simple cycle and conversion projects will change the current land use patterns to an industrial/utility use. The plant design and proposed site perimeter buffer will help to minimize impacts on the community. (JEA 2008a)

The area immediately surrounding the GEC site consists of wetlands and some commercial and industrial development, with the nearest residence approximately 1,000 feet south of the site. There are no historically significant buildings in the vicinity.

### **4.6.2 Construction Employment**

The GEC's conversion from simple to combined cycle will require a substantial construction workforce, which will provide direct employment and wage benefits to the area. Figure 4.6-1 indicates the projected monthly workforce at the GEC site during the 18 month construction period to June 2012 time frame. Figure 4.6-2 indicates the number of direct craft expected at the site each month. During the 18 month construction period, an average of 127 direct craft construction workers per month and a total workforce average of 142 personnel per month are expected. These numbers include indirect craft workers, construction management, and local utility staff. The peak construction workforce is projected to occur during the eighth month of construction, when 231 direct craft workers, and a total of 246 workers are expected onsite. In terms of total man-months of construction during the conversion, direct craft labor is projected at 2,227 man-months of construction employment, and a total of 2,547 man-months of employment are expected, including all members of the project construction workforce.

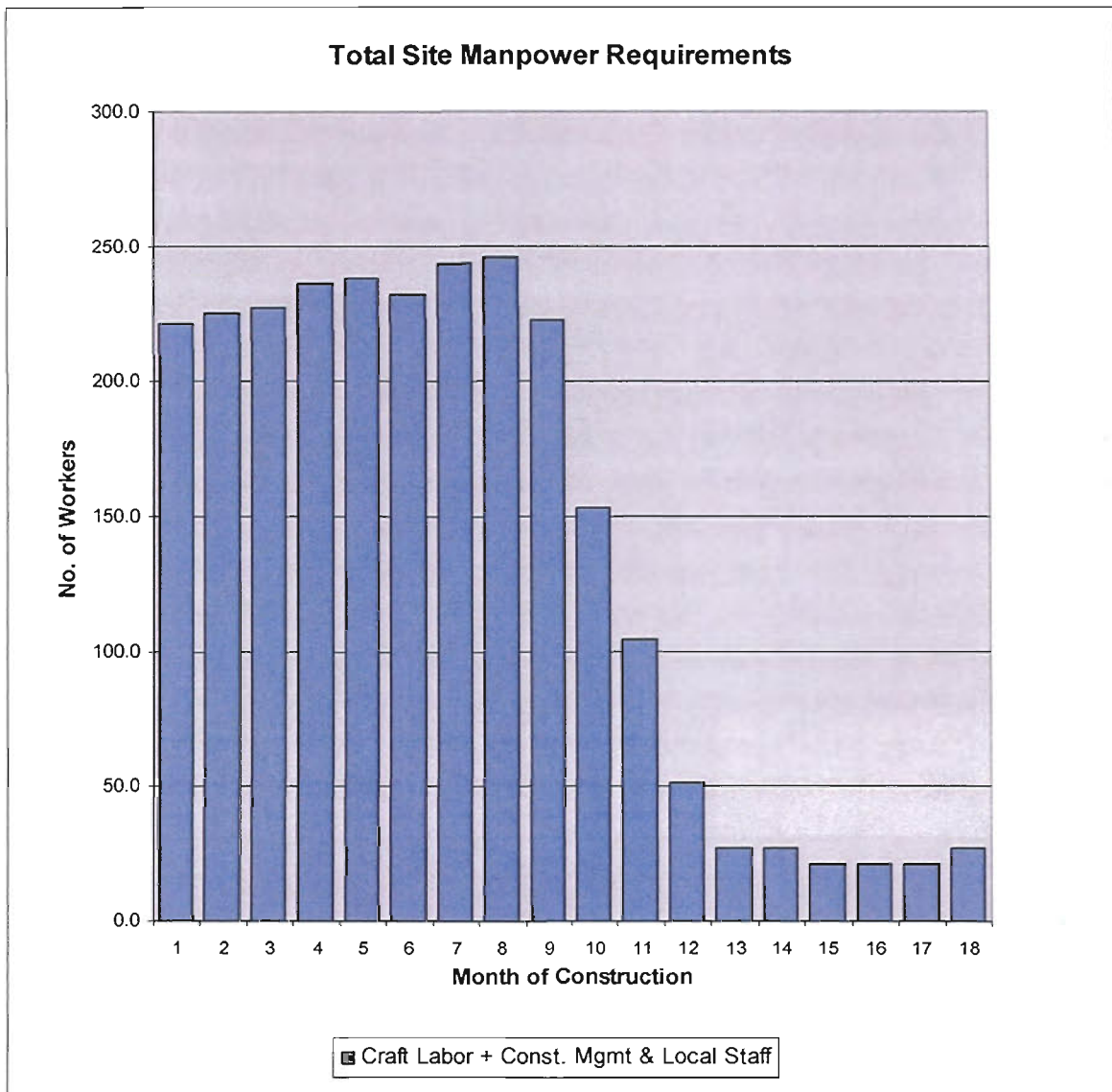


Figure 4.6-1  
Total Site Manpower by Month During Conversion



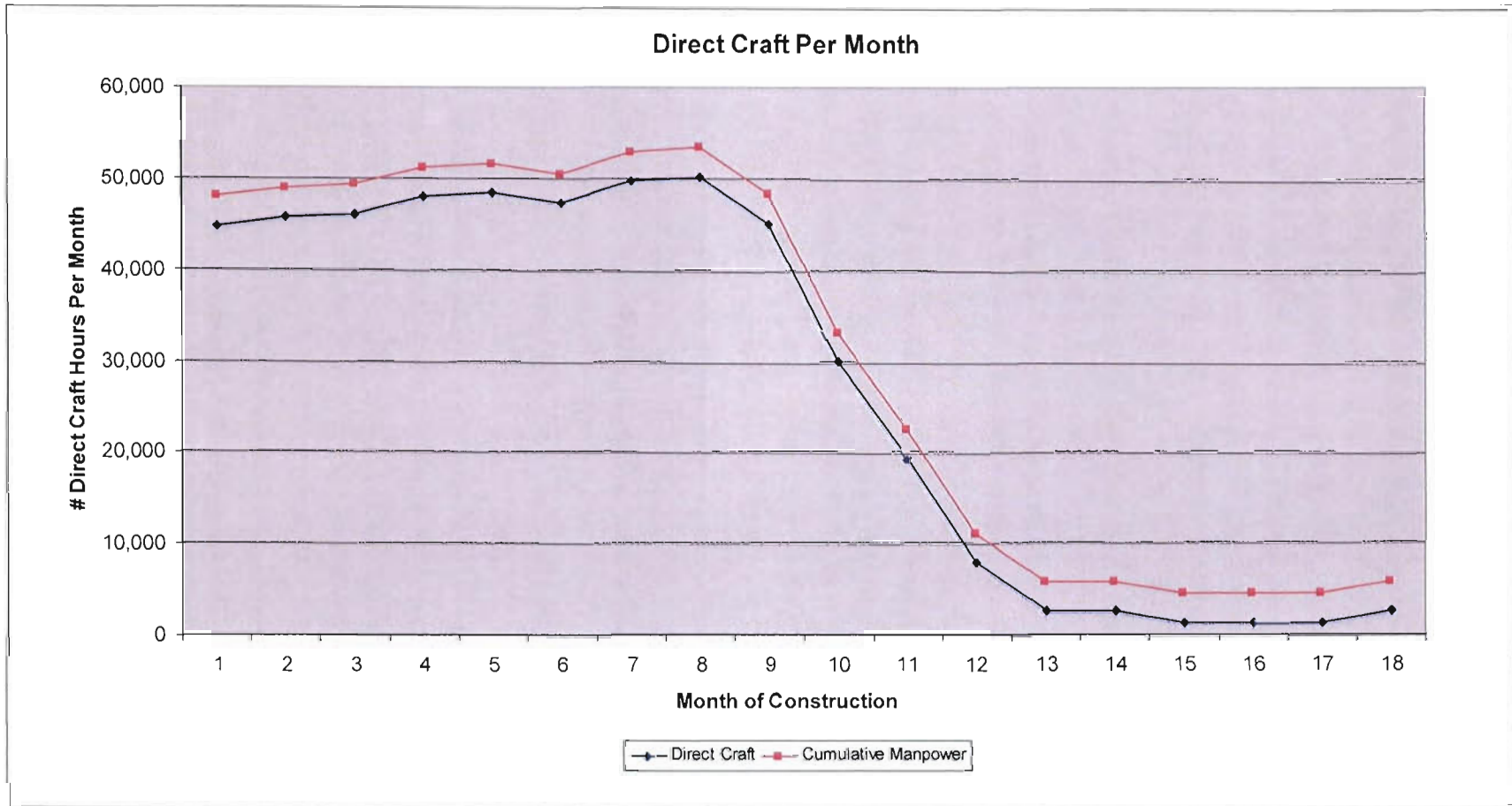


Figure 4.6-2  
Direct Craft and Cumulative Manpower per Month

If additional simple cycle units are built onsite in the future, the manpower loading pattern would be similar to that of the original construction of the simple cycle plant. The installation of a future combined cycle unit would require manpower approximately equal to the simple cycle plus conversion phases of the current GEC project. However, any subsequent units would be able to utilize slightly less than the original construction, because the cleared development area, access road, pipelines, and stormwater pond will be in-place and will have slightly lower manpower needs.

The wage benefits resulting from the conversion of the GEC facility will be substantial because of the 2,547 man-months of employment involved during construction and the high anticipated hourly wage rate of \$52.42 per hour for the total workforce. Wages of \$28.93 million are budgeted for the conversion, and direct craft labor is expected to account for \$25.67 million of this total. Section 7.2 discusses the multiplier impacts expected to result from these employment and income benefits.

If subsequent units are added to the GEC site, an income pattern similar to that for the initial GEC conversion will be repeated, providing substantial benefits to the local community. The total project income generated could be slightly less in real terms because of the possible modest reduction in workforce due to the existence of common facilities shared with the initial conversion unit.

#### **4.6.3 Construction Traffic**

The GEC site is located near I-95, I-295, State Road 9A, State Road 115, and Philips Highway. This highway transport network will facilitate easy and quick access to the site during the construction period. Figure 4.6-3 shows the projected number of round trips to the site anticipated during construction. The total round trips include those to be made by the construction workforce as well as those needed to deliver equipment and supplies to the lay-down area, which will be entirely onsite. It is anticipated that, during the peak month of construction (Month 8), a total of 5,420 round trips will be made to the site, an average of 258 trips per day assuming 21 workdays in a month. On average during the construction period, there will be 3,080 round trips per month made to and from the site, or an average of 147 round trips each workday. If subsequent units are added to the site, construction traffic patterns will be similar to those of the original plant.

Many of the trips at construction peak are assumed to be made along State Road 5 (Philips Highway), which had an average annual daily traffic (AADT) count of 36,000 southeast of State Road 115. Some of the trips are assumed to be made along I-295/State Road 9A, which had a 2007 AADT of 27,000 for I-295 north, west of I-95. (Florida Department of Transportation 2008)

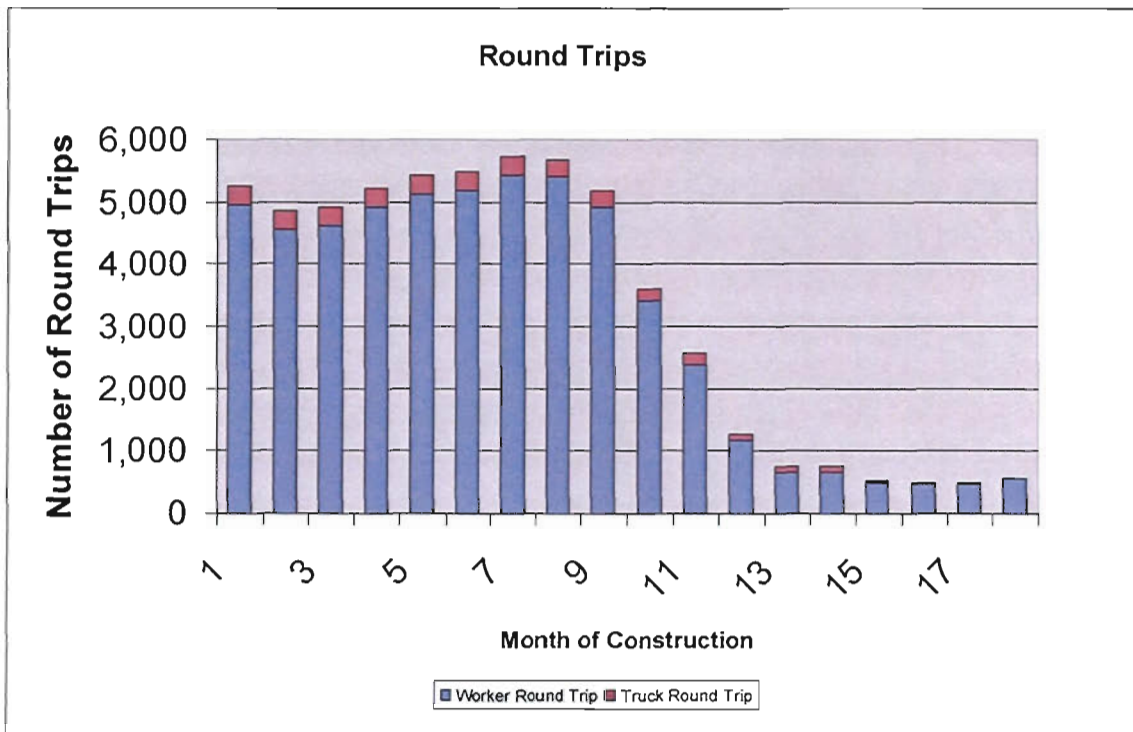


Figure 4.6-3  
Projected Round Trips to the Site During Conversion Construction

In practice, the impacts during peak commuter periods should be slightly less than implied by the increases in the AADT numbers above. This is because 50 hour workweeks (5 x 10 hour days) are anticipated for the construction staff, meaning that project traffic commuting patterns will not coincide exactly with other commuters working 8 hour days. Furthermore, truck deliveries will be dispersed throughout the day.

#### 4.6.4 Housing Impacts

Construction at a power facility has the potential to impact housing in a variety of ways. Impacts could include the direct removal of housing units, visual impacts due to the location of the project near residential areas, and a shortage of housing should there be an influx of workers requiring long-term lodging during construction.

The conversion of the GEC facility will not require the removal of any housing units at the site or access road route. As discussed in Subsection 4.6.1, because the site location is within an existing industrial corridor and because of design and land buffering, there will be minimal impact on the community.

The potential for housing shortages has historically been an issue for the construction of large coal plants in sparsely populated areas in the western United States. However, experience has also shown that smaller projects located in or near urban areas typically have little to no impact on the housing market. The reason is that impacts are primarily a function of the size of the construction workforce and the need for the workforce to relocate during construction. The need to relocate is a function of the available workforce within a reasonable commuting distance of the work site. Research by the Electric Power Research Institute (EPRI) has indicated that the construction workforce for a power plant project can reasonably be expected to commute without relocating during construction from a distance of more than 70 miles, with instances of a commuting distance of more than 100 miles found in each of the construction projects studied. When a 70 mile radius around the GEC site is considered, the large metropolitan area of Jacksonville is within easy commuting distance to the site, as are the cities of Gainesville and Daytona Beach to the south. A 100 mile radius also includes all or part of the towns of St. Augustine and Palm Coast to the south, and Brunswick and Waycross, Georgia, to the north. Based on the population of these areas as well as the size of the construction workforce in the primary impact area counties (the construction sector in these counties employed 9,434 workers in 2006), it is unlikely that a substantial number of the GEC construction workforce would choose to relocate during the 18 month construction period.

This conclusion is supported by the fact that during the 18 month period, most workers will be onsite for less than the total construction period, further reducing the likelihood that any sizable relocation would occur. Figure 4.6-4 indicates the limited duration of employment at the site by the major construction groups. To the degree that short-term or occasional lodging is needed by some of the workforce, Subsection 2.2.7.11 explained that Duval County has an abundance of hotel and other short-term lodging options because it is a destination for vacationers and recreational enthusiasts. Assuming a continuation of the vacancy pattern, there would be no noticeable impact on rental unit availability even if a portion of the workforce should choose to relocate during construction.

#### **4.6.5 Public Facilities and Services**

The conversion of the GEC facility has the potential to negatively impact local community public facilities and services, although no adverse impacts are anticipated due to the anticipated local workforce. Areas of potential impact include police and fire protection; hospital services; the demand for water, wastewater, electricity, and natural gas supplies; the demand for landfill and trash removal services; and impacts on school facilities. The potential for impacts in these areas is discussed below. Generally, construction practices will be designed to minimize or eliminate negative impacts on community facilities and services. In addition, the costs for services likely to be required are included as part of the construction budget and will be paid for on a user fee basis.

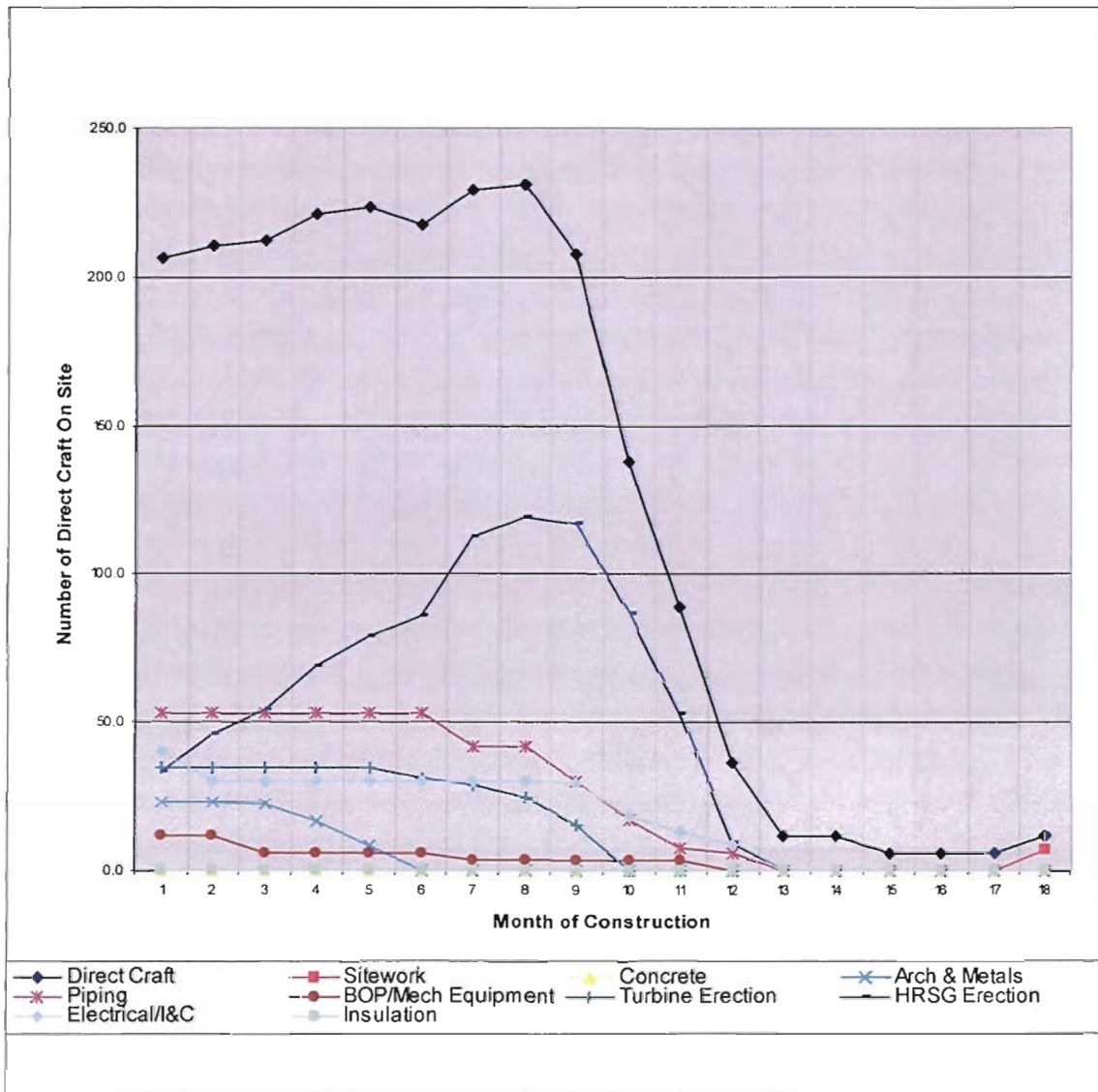


Figure 4.6-4  
Direct Craft Onsite by Discipline

A construction safety plan is to be developed for the site and will facilitate a safe working environment for the construction workforce. The safety plan will comply with all OSHA (Occupational Safety and Health Administration) requirements. All workers will undergo training to familiarize themselves with the safety plan, and every member of the construction workforce will be required to adhere to the requirements. Examples of proven safety measures include the required use of hard hats and safety glasses in construction areas and the required use of tie lines for those working at elevated heights.

In addition, the site will be surrounded by two fences that will provide increased overall safety: a site property fence and a power block/security fence. There will be limited access to the plant construction site, with a security guard posted onsite and a badge system to control personnel access. The site will include security lighting and fire suppression equipment. First aid stations will be established and maintained throughout the GEC site. First aid training will also be provided to selected individuals in the construction workforce. Standard procedures will be adopted for spill prevention and containment, injury response, and requests for assistance from local police, fire, and ambulance service.

JEA has also installed safety devices, established practices and procedures, and trained its employees to enhance safe conditions at JEA facilities. JEA has a solid safety record and has been recognized for its accomplishments in this area by the Florida Water Environment Association and the Florida Department of Labor & Employment Security (Division of Safety) (JEA 2008). With these practices in place, it is anticipated that the need for support services and facilities from police, fire, and hospital services will be minimal. Should hospitalization be required for a worker as the result of an onsite injury, the Jacksonville area, as discussed in Subsection 2.2.7.14, has complete care hospital facilities capable of handling virtually any type of medical situation. The Baptist Medical Center South and the JFRD Station 51 are both less than 2.5 miles from the site if immediate emergency response is needed (Baptist Medical Center South 2008).

Water requirements during construction will be modest and will be supplied by the water force main. The site will have portable restrooms for construction workers, thereby minimizing the burden on an interconnected wastewater system.

Construction waste will be placed in large industrial dumpsters that will be obtained from and serviced by either the City of Jacksonville or through an independent contractor. The dumpsters will be emptied on a schedule sufficient to avoid overfilling during the construction period. Fees will be paid to cover all disposal costs.

No impacts to the educational system are expected as a result of the conversion of the facility. Construction workers are expected to commute from their existing residence rather than relocate to the area, and enrollment in area schools should not increase to any significant degree due to construction during the GEC conversion.

As subsequent units are added to the GEC site, similar levels of impacts will be expected to occur. That is, relatively minor, temporary, and manageable impacts will be expected on the local community facilities and services, and construction management practices will be employed to avoid significant negative impacts.

#### **4.6.6 Impacts from Construction Noise**

Noise emissions attributable to construction activities are highly variable, depending on the location and operating load of the construction equipment and the construction phase activities. The following subsections discuss the methodology for estimating the construction activity noise emissions, the offsite noise levels associated with the project construction, and the evaluation of the noise levels and potential impacts to nearby receptors.

**4.6.6.1 Construction Activities.** Major construction phases will consist of site preparation, foundation construction, building and equipment erection, and site cleanup/facility startup. Noise emissions will vary with each phase of construction depending on the construction activity and the associated equipment required for each phase.

Site preparation will require the use of heavy diesel-powered earthmoving equipment. Examples of this equipment include bulldozers, scrapers, dump trucks, graders, and front-end loaders. Noise emissions during site preparation will be dominated by the diesel engine noise.

Foundation construction primarily will involve concrete handling equipment such as concrete trucks, mixers, vibrators, pumps, and pile driving (if necessary) equipment. Some earthmoving equipment will also be required to backfill the foundations. Foundation construction activities will primarily be centered at the power block and cooling tower equipment areas.

The equipment and building installation will involve diesel-powered earthmoving equipment, mobile cranes, equipment delivery, impact wrenches, saws, drills, and air compressors. Again, these activities will primarily be centered at the power block and cooling tower equipment areas.

Site cleanup and facility startup will generally result in lower noise emissions than the preceding construction phases with the exception of steam blowout of the HRSG and steam lines. At the end of construction, low-pressure steam is passed through the HRSG to remove any debris within the steam lines prior to connecting with the steam turbine. Noise is produced when the steam passes through the pipes and is vented to the atmosphere. The steam blows are expected to take place during daytime and nighttime hours over an 8 week period. While vent silencers will be employed, the steam blow noise may be discernable at offsite locations. However, noise emissions from steam blows are not expected to exceed the regulatory limits outlined below in Subsection 4.6.6.3. Local residents and businesses will be advised in advance of the steam blows.

**4.6.6.2 Equipment Noise Emissions.** The variable nature of construction noise is best represented by an average noise level. The average noise levels account for the type and quantity of equipment, the typical usage of each piece of equipment, and typical noise levels of the equipment used during each phase of construction. The typical types of equipment, equipment usage, and equipment noise emissions for each phase of construction are listed in Table 4.6-1. Estimates of the construction equipment usage and noise levels are based on information provided in the EPA Document PB-250 430, "Noise Emission Standards for Construction Equipment" (EPA 1975) and the "Power Plant Construction Noise Guide," Report No. 3321 (Bolt Beranek and Newman Inc. 1977).

**4.6.6.3 Applicable Regulations.** Section 4.208 of Rule 4 of the Jacksonville Environmental Protection Board (Rule 4) limits noise resulting from construction activities occurring between 7:00 a.m. and 10:00 p.m. to 75 dBA to Class C or D land and 65 dBA to Class A or B land. Rule 4 also limits noise resulting from construction activities occurring between 10:00 p.m. and 7:00 a.m. to 60 dBA at Class A, B, C, and D land.

In addition to the Rule 4 limits described above, Section 4.501 of Rule 4 states that construction activities resulting in offsite noise emissions exceeding 70 dBA at the site property line during construction activities would require approval from the Air Quality Division of the Jacksonville Environmental Protection Board. It should be noted that this is an action-level and is not the same as the construction noise limits discussed above. The expected conversion project and ultimate site capacity construction noise emissions are not expected to trigger this action.

**4.6.6.4 Conversion Project Compliance.** During conversion project construction, the distribution of construction activity is expected to vary throughout the project site. Heavy construction activity is expected to be centered near the power block and lighter activity for construction of the outlying equipment (i.e., cooling tower). The associated nearest property boundary and the nearest residential receptor are shown on Figure 4.6-5. As presented in Table 4.6-2, the construction sound levels at the property boundaries during both daytime and nighttime hours of the conversion project ("CP" column in Table 4.6-2) are anticipated to be in compliance with the Rule 4 limits.



Table 4.6-1 Typical Construction Equipment Noise Emissions							
Phase	Equipment	L <sub>p</sub> <sup>(a)</sup> (50 ft) (dBA)	Qty	Usage <sup>(b)</sup>	Usage Factor <sup>(b)</sup>	Acoustic Max Factor <sup>(b)</sup>	L <sub>av</sub> <sup>(c)</sup> (50 ft) (dBA)
Road Construction/ Site Preparation	Backhoe	81	1	0.04	-14	-5	62
	Concrete Vibrator	68	2	0.16	-8	-3	60
	Drill	83	1	0.16	-8	-3	72
	Grader	79	1	0.30	-5	-7	67
	Diesel Generator	71	1	0.16	-8	-3	60
	Trencher	86	1	0.21	-7	-3	76
	Mobile Crane	80	1	0.16	-8	-11	61
	Dozer	77	2	0.60	-2	-6	72
	Front-End Loader	77	2	0.33	-5	-6	69
	Compactor/Roller	79	1	0.50	-3	-4	72
	Truck, Large	81	3	0.16	-8	-10	68
	Water Truck	81	1	0.35	-5	-10	66
	Foundation	Mobile Crane	80	1	0.16	-8	-11
Front-End Loader		77	2	0.33	-5	-6	69
Concrete Vibrator		68	3	0.16	-8	-3	62
Pile Driver		81	2	0.04	-14	-3	67
Drill		83	1	0.16	-8	-3	72
Saw		66	2	0.21	-7	-3	59
Torque Wrench		78	2	0.05	-12	-3	66
Concrete Delivery Truck		81	3	0.25	-6	-10	70
Concrete Pump		74	1	0.08	-12	-3	59
Concrete Saw		88	1	0.04	-14	-3	71
Chop Saw		66	1	0.04	-14	-3	49
Bush Hammer		75	1	0.25	-6	-3	66
Dozer		77	1	0.50	-3	-6	68
Stationary Crane		79	2	0.33	-5	-15	62
Backhoe		81	2	0.40	-4	-5	75
Truck, Large		81	3	0.16	-8	-10	68
Diesel Generator		71	1	0.16	-8	-3	60
Compactor/Roller	79	2	0.35	-5	-4	73	
Air Compressor	76	1	0.25	-6	-9	61	

Table 4.6-1 (Continued)  
Typical Construction Equipment Noise Emissions

Phase	Equipment	L <sub>p</sub> <sup>(a)</sup> (50 ft) (dBA)	Qty	Usage <sup>(b)</sup>	Usage Factor <sup>(b)</sup>	Acoustic Max Factor <sup>(b)</sup>	L <sub>av</sub> <sup>(c)</sup> (50 ft) (dBA)
Equipment Erection	Mobile Crane	80	2	0.50	-3	-11	69
	Backhoe	81	1	0.20	-7	-5	69
	Truck, Large	81	2	0.16	-8	-10	66
	Stationary Crane	79	2	0.50	-3	-15	64
	Diesel Generator	71	1	0.33	-5	-3	63
	Welder, Diesel	81	1	0.65	-2	-3	76
	Grinder	79	1	0.25	-6	-3	70
	Chop Saw	66	1	1.00	0	-3	63
	Drill	83	1	0.16	-8	-3	72
	Torque Wrench	78	3	0.16	-8	-3	72
	Air Compressor	76	1	0.25	-6	-9	61
Startup	Grader	79	1	0.10	-10	-7	62
	Trencher	86	1	0.10	-10	-3	73
	Drill	83	1	0.16	-8	-3	72
	Torque Wrench	78	5	0.16	-8	-3	74
	Diesel Generator	71	1	0.16	-8	-3	60
	Truck, Large	81	4	0.05	-12	-10	65
	Mobile Crane	80	1	0.05	-12	-11	57
Air Compressor	76	1	0.25	-6	-9	61	

<sup>(a)</sup>Average sound pressure level at 50 feet (15 m) horizontal distance from the equipment.

<sup>(b)</sup>Based on information provided in the "Power Plant Construction Noise Guide" prepared by Bolt Beranek and Newman Inc. and information available from previous similar projects.

<sup>(c)</sup>Energy average sound pressure level at 50 feet (15 m) horizontal distance from the equipment for work shift of 7 to 10 hours.

Sources: (EPA 1975; Bolt Beranek and Newman Inc. 1977)

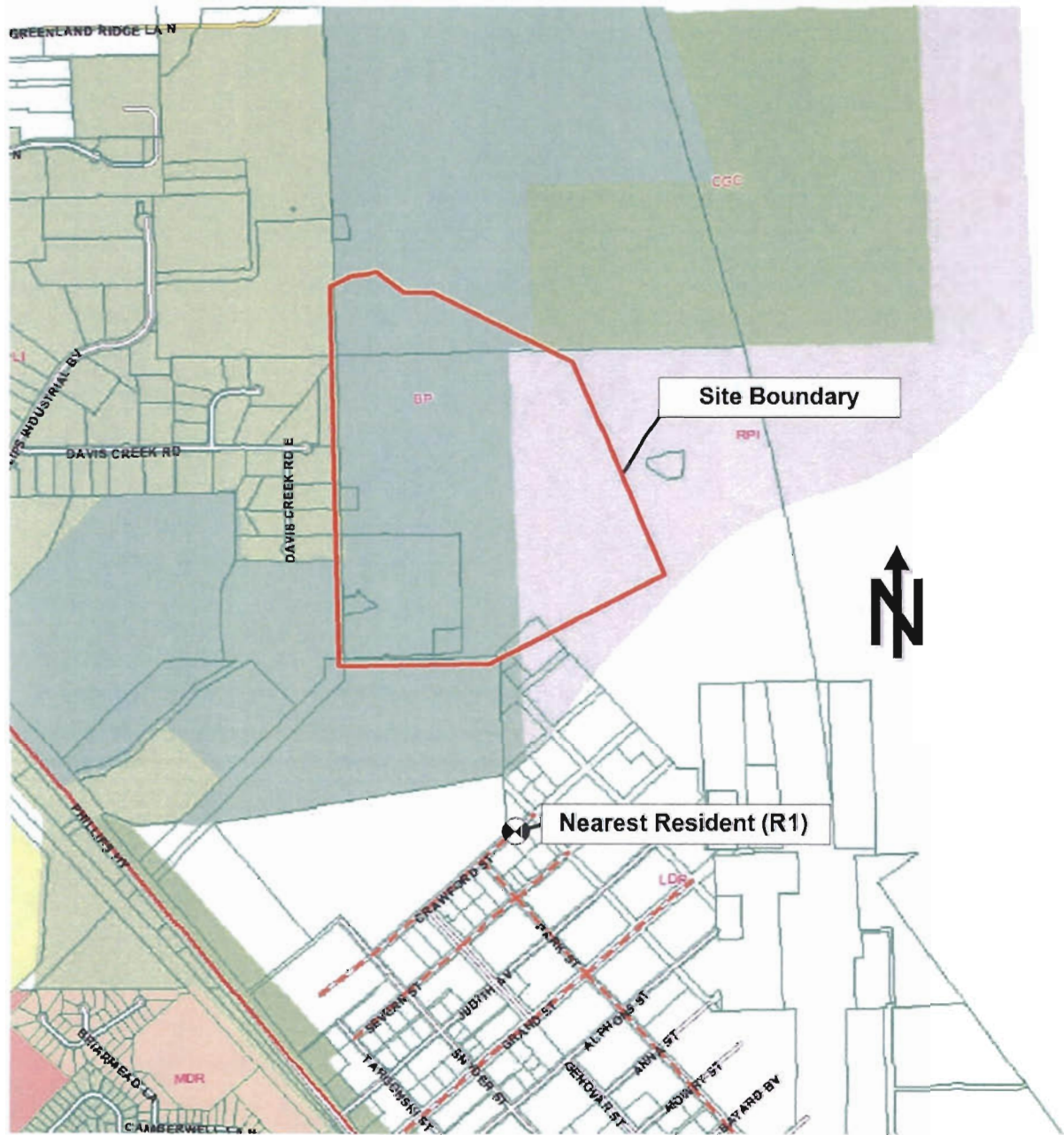


Figure 4.6-5  
Project Site Boundary and Nearest Noise Sensitive Receptor R1

Table 4.6-2  
Construction Equivalent Noise Levels at the  
Project Property Boundary for Each Construction Phase

Property Boundary	City of Jacksonville Land Use Classification	Rule 4 Land Use Classification	Construction Phase	Noise Level L <sub>eq</sub> (dBA)		Day/Night Limit (dBA)	Compliance Day/Night
				CP	USC		
North	(BP) Business Park & (CGC) Community/General Commercial	C	Site Preparation	54	50	75 / 60	Yes / Yes
			Foundation	55	51		Yes / Yes
			Equipment Erection	54	50		Yes / Yes
			Startup	52	48		Yes / Yes
East	(RPI) Residential-Professional-Institutional	B	Site Preparation	55	53	65 / 60	Yes / Yes
			Foundation	56	53		Yes / Yes
			Equipment Erection	55	52		Yes / Yes
			Startup	53	50		Yes / Yes
South	(BP) Business Park	C	Site Preparation	52	57	75 / 60	Yes / Yes
			Foundation	52	57		Yes / Yes
			Equipment Erection	51	56		Yes / Yes
			Startup	49	54		Yes / Yes
West	(LI) Light Industrial	D	Site Preparation	52	52	75 / 60	Yes / Yes
			Foundation	52	52		Yes / Yes
			Equipment Erection	51	51		Yes / Yes
			Startup	49	49		Yes / Yes

**4.6.6.5 Ultimate Site Capacity Compliance.** During ultimate site capacity construction, equipment noise emissions will be similar to the conversion project construction except for additional construction activity during the foundation and equipment erection stages due to the added construction of two combustion turbine packages. Additionally, ultimate site capacity construction activity will be situated closer to the south property boundary and, therefore, will be subject to the highest construction related sound levels. However, as shown in Table 4.6-2, the construction sound levels at the project property boundaries during both daytime and nighttime hours of ultimate site capacity (“USC” column in Table 4.6-2) are anticipated to be in compliance with the Rule 4 limits.

While the average noise level is representative of construction activities, certain activities will produce temporary elevations in the noise level. In contrasting, decreased noise emissions will occur during reduced construction activities. It should be noted that the construction phase noise estimates shown in Table 4.6-2 assume that all of the equipment for each construction phase listed in Table 4.6-1 are operating simultaneously.

**4.6.6.6 Evaluation of Construction Noise Impacts.** Table 4.6-3 lists the potential sound level increase due to the construction activities at the nearest noise sensitive location. In general, noise emissions associated with conversion project and ultimate site capacity construction of the project may cause short-term (temporary) increases in the daytime sound levels at the nearest noise-sensitive location of 2 to 3 dB. Sound level increases of this magnitude are typically considered “imperceptible”; therefore, the impacts are anticipated to be less than significant.

## **4.7 Impact on Landmarks and Sensitive Areas**

According to the Historic Preservation Program section of the Planning and Development Department of Jacksonville, and considering the resources previously listed in Subsection 2.2.5, there are no known landmarks or scenic areas in the project area; therefore, no adverse impacts are anticipated.

Table 4.6-3 Estimated Average Project Construction Noise at the Nearest Receptor Location for Each Construction Phase					
Nearest Receptor	Construction Phase	Estimated Construction Noise Level $L_{av}$ , dBA	Predicted Daytime Ambient Background Sound Level $L_{90}$ , dBA <sup>(a)</sup>	Estimated Future Background Sound Level During Construction, dBA <sup>(b)</sup>	Potential Temporary Sound Level Increase, dB
R1	Site Preparation	46	46	49	3
	Foundation	46	46	49	3
	Equipment Erection	46	46	49	3
	Start-up	44	46	48	2
<sup>(a)</sup> Based on the median sound level recorded between the hours of 7 a.m. and 10 p.m. and predicted SCCT sound levels. <sup>(b)</sup> Sound level estimates do not include the influence of steam blows.					

#### 4.8 Impact on Archaeological and Historic Sites

A Phase I cultural resources investigation was not required for development of the property. In a letter dated November 27, 2007, from the Florida Department of State Division of Historical Resources (DHR), the DHR indicated that no significant archaeological or historical sites are recorded or likely to be present within the project area. JEA submitted an additional letter to the DHR on April 18, 2008, requesting the review of approximately 125 acres of newly purchased property for the site. In a letter dated July 28, 2008, the DHR indicated that it is unlikely that significant historic resources will be encountered within the area of potential effect for the GEC new unit. Therefore, construction of the combined cycle unit is not expected to affect any known or recorded archaeological or historic resources. In the event that any such resources would be discovered during construction, work in that area would stop, and the DHR would be contacted within 24 hours for an appropriate plan of action.

## **4.9 Special Features**

Construction debris, trash, and garbage will be collected in appropriate containers and removed from the site by the City of Jacksonville or a contractor for disposal at an approved landfill or resource recovery facility.

## **4.10 Benefits from Construction**

The benefits associated with the conversion of the GEC facility will include increased employment for regional workers. Attendant to this employment will be the benefits of increased sales tax revenue for Duval and surrounding counties.

Increased income due to economic activity will also accrue to the region. Among these benefits are the increased revenues that will be enjoyed by the owners/operators of temporary housing facilities in the area. Although most of the construction employees are expected to commute daily from their established, permanent residences within the impact areas, some workers will be traveling into the impact areas from more distant residences. Though EPRI studies indicate that these workers travel without their families, their individual housing needs will have to be satisfied. They will predictably patronize the hotels and recreational vehicle campgrounds that already exist in the area. Although this theoretically could cause a shortage of short-term housing, this situation is more optimistically interpreted as meaning that the owners of short-term housing will enjoy an increase in business. Realistically, a shortage of short-term housing is not anticipated since the area has a large amount of short-term housing capacity.

A detailed and comprehensive analysis of the benefits created by the site preparation, plant construction, and operation of the proposed GEC conversion is contained in Section 7.0 of this application.

## **4.11 Variances**

No variances from applicable codes or standards are requested for or during construction of the GEC conversion project.

## **4.12 References**

1. Baptist Medical Center South, "About Us," July 24, 2008, <[http://www.baptisthealth.net/bhs/en/general\\_information/frontdoor/0,2488,3150\\_43043255,00.html](http://www.baptisthealth.net/bhs/en/general_information/frontdoor/0,2488,3150_43043255,00.html)> (July 24, 2008).
2. Bolt Beranek and Newman Inc., "Power Plant Construction Noise Guide," Report No. 3321, 1977.
3. Environmental Protection Agency, "Noise Emission Standards for Construction Equipment," EPA Document PB-250 430, 1975.

4. Florida Department of Transportation, "2007 Annual Average Daily Traffic Report," April 14, 2008, <<http://www.dot.state.fl.us/planning/statistics/trafficdata/AADT/72.pdf>> (July 24, 2008).
5. JEA, "Frequently Asked Questions about Risk Management Plans," July 24, 2008, <<http://www.jea.com/community/education/enviroissues/rmp.asp>> (July 24, 2008).
6. JEA, "Providing Clean Power," *JEA's Greenland Energy Center*, March 2008a, <<http://www.jea.com/about/pub/downloads/GEC-Factsheet.pdf>> (July 2008).



## 5.0 Effects of Plant Operation

### 5.1 Effects of the Operation of the Heat Dissipation System

The GEC conversion will use a mechanical draft cooling tower as the major heat dissipation/cooling method. Highly disinfected reclaimed water from the JEA reclaimed water system will be used as cooling tower makeup water. Cooling tower blowdown will be returned to the JEA reclaimed water system for additional reuse. The effects of a future combined cycle unit and cooling tower are expected to be similar to those described below for the proposed unit.

#### 5.1.1 *Temperature Effect on Receiving Body of Water*

Cooling towers are used to dissipate heat produced during power generation. There will be no direct discharge of GEC cooling waters from the heat dissipation system to surface waters. Blowdown from the heat dissipation system is discharged to the JEA reclaimed water system. Temperature of effluent from the GEC is not anticipated to affect downstream system uses.

#### 5.1.2 *Effect on Aquatic Life*

There will be no direct discharge of GEC cooling waters from the heat dissipation system to surface waters; therefore, no impacts to aquatic life are expected.

#### 5.1.3 *Biological Effects of Modified Circulation*

The GEC will use JEA water supplies for potable, service, and cooling water systems. Since modified circulation of a water body will not occur, there will be no biological effects.

#### 5.1.4 *Effects of Offstream Cooling*

The purpose of this section is to assess the potential environmental impacts associated with the operation of the 8-cell mechanical draft cooling tower. Potential impacts from the cooling tower include plume-induced fogging and icing, deposition from circulating water drift, and visible plume formation. The following subsections describe the new cooling tower, explain the methodology and assumptions used to quantify the magnitude and extent of the impacts, present the results of the modeling, and discuss the potential environmental effects.

**5.1.4.1 *Cooling Tower Description.*** The proposed combined cycle unit necessitates the construction and operation of a new cooling tower. The proposed cooling tower will be a mechanical draft, counterflow, wet design cooling tower incorporating plume abatement features. The preliminary design consists of one tower consisting of eight

cells arranged along a northeast/southwest axis. The reclaimed water in the JEA system is treated to the high level disinfection requirements of Chapter 62-600.440, FAC. In addition, the cooling tower(s) will be at least 300 feet from the site boundary (Chapter 62-610.668, FAC).

**5.1.4.2 Technical Approach.** A computer modeling analysis was performed to evaluate the magnitude and extent of the potential environmental impacts resulting from the operation of the new cooling tower. The Electric Power Research Institute (EPRI)-sponsored Seasonal/Annual Cooling Tower Plume Impact (SACTI, Version 11-1-90) model was used to quantify the cooling tower impacts. This computer code is an outgrowth of an earlier model evaluation study carried out by A. J. Policastro of the Argonne National Laboratory (ANL). Improved plume and drift models in the code have been calibrated with existing field and laboratory data and then subsequently verified with new data not included in the calibration process. The SACTI model has been widely used by electric utilities and their consultants to assess cooling tower plume impacts for incorporation into various types of environmental impact studies.

The methodology used in the SACTI model is based on the assumption that up to 35 distinct plume categories, based on the local ambient meteorological conditions and cooling tower design characteristics, can be identified at any given site. For mechanical draft cooling tower designs, the SACTI code assumes that 10 additional distinct plume categories may exist that are characteristic of plume-induced ground-level fogging and icing. In other words, depending on the type of cooling tower and the specific site conditions, a cooling tower plume may exhibit up to 45 distinctly different sets of plume characteristics (e.g., plume height, plume spread, plume downwash, and plume dispersion). In the case of mechanical draft cooling tower arrangements, the effects of the orientation of the tower with respect to merging cell plumes and structure induced downwash are simulated through the use of representative wind directions and the specific tower configuration.

The cooling tower plume in each of the aforementioned categories is produced by a different set of ambient meteorological conditions. Hourly meteorological data are used by the SACTI model to compute frequency distributions of the meteorological conditions responsible for each plume type within the assumed plume category. The SACTI model performs the following computational functions in a sequential manner to determine the representative plume categories and plume impacts:

- **Meteorological Data Preprocessor.** The meteorological data preprocessor performs three subtasks to delineate plume categories and calculate representative parameters for each category. In the first subtask, hourly surface meteorological data are read, and invalid or missing

parameters and hours are discarded. For each valid record, the model uses cooling tower parameters such as tower height, tower effective exit diameter, tower effective heat rejection, and tower effective airflow to calculate additional exit parameters including temperature and velocity, and some nondimensional parameters that characterize the buoyancy of the plume and the stability and saturation of the ambient air.

The second subtask generates frequency distribution tables for ranges of tower, meteorological, and nondimensional parameters as a function of the standard 16 wind directions. These meteorological variables represent the full range of atmospheric conditions affecting plume dispersion and drift deposition. For example, the SACTI model selects temperature ranges from  $-49^{\circ}$  F to  $113^{\circ}$  F in  $9^{\circ}$  F intervals. The frequency of actual dry-bulb temperatures occurring in each of those ranges for each of the standard 16 wind directions is tabulated. Likewise, the model tabulates relative humidity values falling between 0 and 100 percent in intervals of 10 percent.

Subtask three uses the frequency distributions from Subtask two to delineate the distinctly different plume categories that could occur from cooling tower operation. Categories are selected so that all categories are roughly equally populated. A single set of representative tower and ambient conditions is then calculated from the range of conditions in each category, and then reassigned to each category.

- **Plume Calculations.** Using the preprocessor's representative conditions and cooling tower design data (e.g., tower orientation, number of cells, drift droplet spectrum, and salt concentrations), the plume code calculates fogging/icing and the plume's dimensions and depositional characteristics for each plume category and each representative wind direction. For example, assuming 45 total drift and fogging categories and four representative wind directions, a total of 225 plume cases are simulated.

As previously stated, the representative wind directions are used to simulate tower-induced downwash. Therefore, specific output showing the nature and extent of the downwash is not generated by the program. Rather, output is generated for each representative wind direction, and the downwash effects can be inferred from the deposition/fogging/icing gradients.

- **Impact Calculations.** The various plume code prediction results are used in conjunction with the meteorological data preprocessor's frequency

distribution of plume categories and actual wind directions to calculate impacts. The resulting cumulative impacts from all plume categories are tabulated and plotted in the SACTI model output as a function of wind direction and distance from the cooling tower.

**5.1.4.2.1 Cooling tower plume model input.** The SACTI cooling tower model requires certain site-specific, tower-specific, and circulating water-specific data as input. The input data used in this SACTI cooling tower modeling analysis are discussed below and summarized in Table 5.1-1 with the documented source of the data:

- **Site-specific data** includes the site's latitude and longitude, time zone, surface roughness height, monthly clearness indices, daily solar insolation values, representative hourly recorded surface meteorological data, and seasonal average morning and afternoon mixing heights.
- **Tower-specific data** includes information pertaining to the type of cooling tower, dimensions of the tower housing, cell exhaust diameter, heat load, drift rate, design airflow rate, and orientation of the cooling tower cells with respect to the 16 representative wind directions.
- **Water-specific data** includes the circulating water salt concentration, salt density, and the size distribution of the water droplets in the cooling tower drift.

The latitude, longitude, time zone, and surface roughness height were either directly measured or estimated. The monthly clearness indices and solar insolation values were obtained from Appendix B of the User's Manual for the SACTI Computer Code for a representative location at approximately the same latitude (EPRI 1984).

Five years (2001-2005) of surface meteorological data from Jacksonville, Florida, collected by the NWS and distributed by the National Climatic Data Center (NCDC) were used in the SACTI modeling analysis. These data contained the complete set of surface meteorological parameters (originally in ISH format; subsequently converted to TD-1440 format) necessary to conduct the cooling tower modeling analysis, and are considered representative of the site.

The type of cooling tower, dimensions of the tower housing, cell exhaust diameter, heat load, drift rate, design airflow rate, and orientation of the cooling tower cells were all based on design data.

The size distribution of drift droplets from the cooling tower is required as input to the SACTI model. The size distribution of drift droplets depends on the details of the interior construction, air and water flow through the fill, and the efficiency of the drift eliminators. The cooling tower drift droplet size spectrum data used in this study are

Table 5.1-1 SACTI Cooling Tower Modeling Input Parameters		
		Data Source/Notes
<b>Site-Specific Data</b>		
Site Latitude	30.16 ° N	Measured
Site Longitude	81.51 ° E	Measured
Time Zone	5	Measured
Surface Roughness Height	10 cm	Estimated
Monthly Clearness Indices ( $K_T$ )	0.53, 0.57, 0.57, 0.59, 0.59, 0.54, 0.55, 0.53, 0.49, 0.51, 0.52, 0.49	SACTI User's Manual for Jacksonville, FL
Monthly Average Daily Total Solar Flux ( $MJ/m^2$ )	11.18, 14.49, 17.71, 21.52, 23.28, 21.98, 21.86, 19.93, 16.03, 13.86, 11.47, 9.63	SACTI User's Manual for Jacksonville, FL
Meteorological Data (hourly surface data)	Jacksonville (2001-2005)	NCDC
Seasonal Average Mixing Heights	403 m (Winter morning) 1,104 m (Winter afternoon) 477 m (Spring morning) 1,667 m (Spring afternoon) 583 m (Summer morning) 1,712 m (Summer afternoon) 458 m (Fall morning) 1,342 m (Fall afternoon)	SACTI User's Manual for Tampa, FL
Wind Instrument Reference Height	10 m (anemometer height)	NCDC
<b>Tower-Specific Data</b>		
Tower Type	Linear Mechanical Draft	Design Criteria
Number of Towers	1	Design Criteria
Total Number of Cells	8	Design Criteria
Effective Exhaust Diameter	24.14 m	Note 1
Tower Height	15.80 m	Design Criteria
Tower Width	29.47 m	Design Criteria
Tower Length	58.73 m	Design Criteria
Total Heat Dissipation Rate	520 MW	Design Criteria
Total Circulating Water	135,300 gpm	Note 2
Total Drift Loss Rate	42.65 g/s	Note 2, based on 0.0005% drift rate
Total Airflow Rate	5,338.20 kg/s	Note 2
<b>Water-Specific Data</b>		
Cooling Tower Salt Concentration	0.002875 g Salt/g Soln	Preliminary Design
Salt Density	2.17 g/cm <sup>3</sup>	Estimated
Drift Droplet Spectrum	Drop Size                      Mass ( $\mu m$ )                              Fraction	Estimated, based on EPRI Study <i>Calculating Realistic PM<sub>10</sub> from Cooling Towers</i>
	0-10                              0.0000	
	10-20                             0.0020	
	20-30                             0.0003	
	30-40                             0.0029	
	40-50                             0.0130	
	50-60                             0.0389	
	60-70                             0.1565	
	70-90                             0.2846	
	90-110                            0.2070	
	110-130                         0.1151	

Table 5.1-1 (Continued)  
 SACTI Cooling Tower Modeling Input Parameters

		Data Source/Notes
	Drop Size ( $\mu\text{m}$ )	Mass Fraction
	130-150	0.0599
	150-180	0.0302
	180-210	0.0144
	210-240	0.0162
	240-270	0.0060
	270-300	0.0160
	300-350	0.0072
	350-400	0.0133
	400-450	0.0073
	450-500	0.0000
	500-600	0.0093

Note 1: Effective exhaust diameter is calculated using an equation from the SACTI user's manual where the square root of the total number of cells is multiplied by the actual diameter of a single cell. The total number of cells is 8. The actual diameter of a single cell is 8.53 m.

Note 2: These values represent the total from the tower and not individual cells as required by the SACTI model.

based on representative data of other towers with similar drift eliminators. These drift droplet size data are representative of BACT currently utilized in cooling tower drift eliminator design. The concentration of total dissolved solids (TDS) in the cooling tower circulating water was based on using the reclaimed water from the JEA Water Department as the water supply with the cooling tower operating at four cycles of concentration.

**5.1.4.3 Cooling Tower Impact Modeling Results.** The SACTI cooling tower model was used to predict the magnitude of the cooling tower induced fogging and icing, deposition, and plume length frequency of occurrence, while conservatively assuming the cooling tower is operating the entire year under peak conditions. The cooling tower system will dissipate waste heat by evaporating water and releasing the water vapor into the atmosphere. If the ambient air is cold and/or moist, a portion of the emitted water vapor will condense to form small water droplets. This condition is seen as a visible white plume emanating from the cooling tower.

Potential environmental impacts such as fogging, icing, and deposition associated with the cooling tower plumes may arise depending on the meteorological conditions and the environmental setting.

**5.1.4.3.1 Plume fogging modeling results.** Ground-level fogging occurs when the visible plume from a cooling tower contacts the ground. Meteorological conditions favorable for ground-level fogging from a mechanical draft cooling tower are generally

associated with strong winds (generally greater than 20 mph) which bend the plume to intercept the ground, and high relative humidity (small dew point depression) for easy plume saturation. The cooling tower fogging results are calculated by the SACTI cooling tower model as the maximum number of hours plume-induced fogging from a cooling tower could occur for each wind direction. Table 5.1-2 presents the total hours (based on the 5 year meteorological database) of predicted plume fogging associated with the cooling tower. The 16 wind direction labels in the columns of the table represent the direction from the cooling towers that the plume is headed. The data represent the total hours (over the 5 year database) that the cooling tower plume could induce fogging conditions for a particular direction and distance from the cooling tower.

**Table 5.1-2  
Total Hours of Predicted Plume-Induced Fogging**

Distance From Tower (m)	Fogging in the Direction Plume is Headed (Hours)*																
	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE	AVG
100.	0.5	1.4	1.2	0.5	0.1	0.9	1.1	1.6	0.2	0.0	0.0	0.0	0.1	0.8	0.1	0.0	8.4
200.	0.0	0.9	0.9	0.0	0.0	0.9	1.0	1.7	0.1	0.0	0.0	0.0	0.0	0.8	0.0	0.0	6.6
300.	0.0	0.1	0.1	0.0	0.0	0.2	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.3
400.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
500.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
600.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
700.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
800.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
900.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1000.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1300.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1400.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1500.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1600.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

\*Total hours of fogging over 5 years. Average annual hours of cooling tower induced fogging is obtained by dividing the table value by 5.

Source: SACTI cooling tower model.

As the data in Table 5.1-2 indicate, the SACTI model predicts that, on average, fogging would occur approximately 2 hours per year regardless of wind direction and would not extend past 300 m (984 ft) in any direction from the cooling towers.

**5.1.4.3.2 Plume icing modeling results.** Ground-level plume icing (fog ice) is a semi-opaque coating of small granules of ice formed when small water droplets in the visible cooling tower fog freeze rapidly on the ground during conditions of high relative humidity and below freezing temperatures. The SACTI cooling tower model predicted no occurrences of cooling tower plume-induced icing based on the 5 year meteorological database. This is consistent with the climate of the area, as records indicate that freezing temperatures on average occur for only a small percentage of the year.





The SACTI model predicted that the maximum cooling tower water deposition will occur onsite approximately 100 m (328 ft) southwest of the cooling tower at a rate of 12,000 kg/km<sup>2</sup>/month. The average water deposition at a 100 m (328 ft) radius from the cooling tower (considering all directions of plume travel) is predicted to be 2,600 kg/km<sup>2</sup>/month. No adverse impacts are anticipated to future Highway 9B to be located approximately 1,000 feet east of the cooling tower.

**5.1.4.3.4 Salt deposition modeling results.** Salt deposition is primarily a function of the salt concentration in the circulating cooling water and the water deposition rate. Table 5.1-4 presents the SACTI model predicted average monthly (based on the 5 year meteorological database) salt deposition rate in units of kg/km<sup>2</sup>/month associated with the proposed cooling tower. The 16 wind direction labels in the columns of the table represent the direction from the proposed cooling tower that the salt deposition is predicted to occur.

The maximum salt deposition is predicted to occur onsite approximately 100 m (328 ft) southwest of the cooling tower at a rate of 35.72 kg/km<sup>2</sup>/month. The average salt deposition at a radius of 100 m (328 ft) from the cooling tower (considering all directions of plume travel) is predicted to be 7.50 kg/km<sup>2</sup>/month. Beyond 500 m (1,640 ft) from the cooling towers, the salt deposition significantly decreases. In fact, the average salt deposition beyond 500 m (1,640 ft) from the cooling towers in all directions is less than 2 kg/km<sup>2</sup>/month.

**5.1.4.3.5 Plume length modeling results.** The cooling tower plume lengths are calculated by the SACTI model as the frequency of occurrence of a given plume length from the cooling tower for each wind direction. Table 5.1-5 presents the average annual (based on the 5 year meteorological database) predicted plume length frequency of occurrence associated with the cooling tower. The 16 wind direction labels in the columns of the table represent the direction from the cooling tower that the plume is headed. The data represent the probability (by percent of the year) that the cooling tower plume will be as long or longer than the length defined in the table for a particular direction and distance from the cooling tower.

Table 5.1-4  
Average Monthly Predicted Cooling Tower Salt Deposition

Distance From Tower (m)	Salt Deposition in the Direction Plume is Headed (kg/Km <sup>2</sup> -month)															AVG	
	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE		SSE
100.	0.55	0.00	35.72	17.86	14.59	0.00	0.00	0.00	28.89	0.00	0.00	0.00	22.36	0.01	0.00	0.00	7.50
200.	0.66	0.18	12.23	6.24	15.36	1.28	1.19	0.56	30.37	0.20	0.17	0.29	23.61	10.19	0.53	0.37	6.46
300.	3.26	2.15	4.51	3.92	4.52	5.57	5.72	6.02	3.57	2.26	2.50	3.64	6.00	11.91	5.15	4.67	4.71
400.	5.82	4.37	7.44	6.90	9.00	5.80	6.13	6.78	6.10	4.38	4.83	6.93	10.56	7.88	5.94	5.63	6.53
500.	6.51	3.12	3.98	3.75	7.62	0.74	0.87	0.90	6.10	2.89	3.09	4.29	11.20	1.99	1.10	1.20	3.71
600.	3.10	0.92	1.07	1.11	2.23	1.39	1.47	1.19	2.45	0.88	0.87	1.39	5.56	1.36	0.89	0.77	1.67
700.	2.55	0.49	0.83	0.96	2.38	1.57	1.76	1.93	2.29	0.56	0.67	1.04	5.09	1.99	1.59	1.49	1.70
800.	2.41	0.87	1.27	1.30	2.67	1.16	1.28	1.53	2.40	0.87	0.97	1.41	4.60	1.62	1.34	1.29	1.69
900.	2.50	0.83	1.20	1.18	2.66	0.99	1.07	1.18	2.43	0.79	0.88	1.26	4.66	1.32	1.06	1.03	1.56
1000.	2.48	0.73	1.02	0.98	2.34	0.96	1.04	1.12	1.93	0.65	0.73	1.05	4.24	1.24	0.97	0.93	1.40
1100.	1.34	0.64	0.90	0.88	1.30	0.92	1.01	1.09	1.05	0.58	0.66	0.95	2.14	1.19	0.94	0.90	1.03
1200.	0.90	0.59	0.81	0.75	0.89	0.57	0.70	0.90	0.73	0.53	0.57	0.81	1.42	0.96	0.78	0.77	0.79
1300.	0.86	0.52	0.73	0.67	0.87	0.34	0.42	0.64	0.71	0.47	0.51	0.72	1.38	0.76	0.62	0.63	0.68
1400.	0.86	0.53	0.74	0.68	0.84	0.25	0.31	0.43	0.71	0.49	0.52	0.74	1.36	0.60	0.47	0.49	0.63
1500.	0.84	0.48	0.63	0.59	0.83	0.18	0.22	0.26	0.70	0.44	0.45	0.63	1.33	0.40	0.28	0.29	0.53
1600.	0.81	0.42	0.55	0.51	0.82	0.16	0.19	0.21	0.68	0.39	0.40	0.57	1.30	0.33	0.22	0.22	0.49
1700.	0.77	0.33	0.41	0.36	0.70	0.09	0.13	0.19	0.63	0.28	0.29	0.41	1.20	0.28	0.19	0.20	0.40
1800.	0.70	0.22	0.26	0.23	0.56	0.09	0.13	0.19	0.55	0.18	0.19	0.27	1.09	0.28	0.19	0.20	0.34
1900.	0.59	0.19	0.24	0.22	0.39	0.09	0.13	0.19	0.42	0.17	0.18	0.25	0.92	0.28	0.19	0.20	0.29
2000.	0.45	0.18	0.23	0.20	0.29	0.09	0.13	0.19	0.32	0.16	0.16	0.23	0.75	0.28	0.19	0.20	0.25
2100.	0.38	0.17	0.21	0.19	0.26	0.09	0.13	0.19	0.29	0.15	0.15	0.22	0.67	0.28	0.19	0.20	0.24
2200.	0.29	0.10	0.14	0.13	0.21	0.08	0.11	0.15	0.23	0.10	0.09	0.15	0.53	0.24	0.15	0.16	0.18
2300.	0.12	0.09	0.13	0.12	0.11	0.06	0.08	0.11	0.12	0.09	0.08	0.13	0.23	0.17	0.11	0.11	0.12
2400.	0.12	0.09	0.13	0.12	0.11	0.06	0.08	0.11	0.12	0.09	0.08	0.13	0.23	0.13	0.11	0.11	0.11
2500.	0.12	0.09	0.13	0.12	0.11	0.05	0.07	0.10	0.12	0.09	0.08	0.13	0.23	0.12	0.10	0.10	0.11
2600.	0.12	0.09	0.11	0.11	0.11	0.05	0.06	0.09	0.12	0.09	0.08	0.13	0.23	0.11	0.09	0.10	0.11
2700.	0.12	0.06	0.08	0.08	0.11	0.04	0.06	0.09	0.12	0.06	0.06	0.09	0.23	0.11	0.09	0.09	0.09
2800.	0.12	0.06	0.08	0.07	0.11	0.04	0.06	0.08	0.12	0.05	0.05	0.08	0.23	0.10	0.08	0.08	0.09
2900.	0.12	0.06	0.08	0.07	0.10	0.04	0.05	0.08	0.12	0.05	0.05	0.08	0.22	0.10	0.08	0.08	0.09
3000.	0.12	0.06	0.08	0.07	0.09	0.04	0.05	0.08	0.11	0.05	0.05	0.08	0.21	0.10	0.08	0.08	0.08
3100.	0.12	0.06	0.08	0.07	0.09	0.04	0.05	0.08	0.11	0.05	0.05	0.08	0.21	0.10	0.08	0.08	0.08
3200.	0.12	0.06	0.07	0.07	0.09	0.04	0.05	0.08	0.11	0.05	0.05	0.08	0.21	0.10	0.08	0.08	0.08
3300.	0.12	0.05	0.07	0.07	0.09	0.04	0.05	0.08	0.11	0.05	0.05	0.08	0.21	0.10	0.08	0.08	0.08
3400.	0.12	0.05	0.07	0.07	0.09	0.04	0.05	0.08	0.11	0.05	0.05	0.07	0.21	0.10	0.08	0.08	0.08
3500.	0.12	0.05	0.07	0.06	0.09	0.03	0.05	0.07	0.11	0.05	0.05	0.07	0.21	0.09	0.08	0.08	0.08
3600.	0.12	0.05	0.07	0.06	0.08	0.03	0.05	0.07	0.09	0.05	0.05	0.07	0.19	0.09	0.08	0.08	0.08
3700.	0.05	0.05	0.07	0.06	0.04	0.03	0.05	0.07	0.05	0.05	0.05	0.07	0.07	0.09	0.07	0.08	0.06
3800.	0.04	0.05	0.07	0.06	0.03	0.03	0.05	0.07	0.04	0.05	0.05	0.07	0.06	0.09	0.07	0.08	0.06
3900.	0.03	0.05	0.06	0.06	0.03	0.03	0.05	0.07	0.03	0.05	0.04	0.07	0.05	0.09	0.07	0.08	0.05
4000.	0.03	0.05	0.06	0.06	0.03	0.03	0.05	0.07	0.03	0.05	0.04	0.07	0.05	0.09	0.07	0.08	0.05
4100.	0.03	0.05	0.06	0.06	0.03	0.03	0.05	0.07	0.03	0.05	0.04	0.07	0.04	0.09	0.07	0.08	0.05
4200.	0.02	0.05	0.06	0.06	0.03	0.02	0.03	0.04	0.03	0.04	0.04	0.06	0.04	0.05	0.04	0.04	0.04
4300.	0.02	0.05	0.06	0.06	0.03	0.02	0.03	0.04	0.03	0.04	0.04	0.06	0.04	0.05	0.04	0.04	0.04
4400.	0.02	0.04	0.06	0.05	0.03	0.02	0.03	0.04	0.03	0.04	0.04	0.06	0.04	0.05	0.04	0.04	0.04
4500.	0.02	0.04	0.06	0.05	0.03	0.02	0.02	0.04	0.03	0.04	0.04	0.06	0.04	0.05	0.04	0.04	0.04
4600.	0.02	0.04	0.05	0.05	0.02	0.02	0.02	0.04	0.03	0.04	0.04	0.06	0.04	0.05	0.04	0.04	0.04
4700.	0.02	0.04	0.05	0.05	0.02	0.02	0.02	0.04	0.03	0.04	0.04	0.06	0.04	0.05	0.04	0.04	0.04
4800.	0.02	0.04	0.05	0.05	0.02	0.02	0.02	0.04	0.03	0.03	0.03	0.05	0.04	0.04	0.04	0.04	0.03
4900.	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.04	0.03	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.03
5000.	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.03	0.04	0.04	0.03	0.03	0.03

Source: SACTI cooling tower model.

As the data in Table 5.1-5 indicates, the SACTI model predicts the plume length to be less than 600 m (1,968 ft) 80 percent of the year considering all directions of plume travel. The median plume length, or that length which the plume is predicted to be longer or shorter than for 50 percent of the year considering all directions of plume travel, is less than 200 m (656 ft).

As indicated in Table 5.1-5, the percent frequency of occurrence of long cooling tower plumes in any particular direction is very small. The highest probability of a visible plume over a particular location is approximately 12 percent of the year in an area 100 m (328 ft) east of the cooling tower.

Table 5.1-5  
Average Annual Predicted Plume Length Frequency of Occurrence

Distance From Tower (m)	Probability the Plume is Longer in a Given Direction Than the Distance Indicated (percent)																
	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE	SUM
100.	6.60	4.70	7.00	6.52	9.90	4.50	4.64	5.02	7.65	4.49	4.93	6.94	11.96	6.44	4.47	4.24	100.00
200.	2.37	1.38	1.44	1.04	0.91	0.71	0.89	1.82	1.16	0.77	0.81	1.29	2.47	2.20	2.15	2.37	23.76
300.	2.37	1.38	1.43	1.02	0.91	0.58	0.75	1.42	1.16	0.77	0.80	1.25	2.47	1.88	1.87	2.08	22.14
400.	2.37	1.38	1.43	1.02	0.91	0.45	0.61	1.09	1.16	0.77	0.80	1.25	2.47	1.57	1.56	1.85	20.68
500.	2.37	1.38	1.43	1.02	0.91	0.42	0.56	0.98	1.16	0.77	0.80	1.25	2.47	1.43	1.47	1.70	20.12
600.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
700.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
800.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
900.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1000.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1100.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1200.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1300.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1400.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1500.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1600.	2.37	1.38	1.43	1.02	0.91	0.38	0.50	0.87	1.16	0.77	0.80	1.25	2.47	1.30	1.32	1.54	19.48
1700.	2.37	1.25	1.30	0.87	0.91	0.38	0.50	0.87	1.16	0.63	0.68	1.04	2.47	1.30	1.32	1.54	18.60
1800.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
1900.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2000.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2100.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2200.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2300.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2400.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2500.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2600.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2700.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2800.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
2900.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3000.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3100.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3200.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3300.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3400.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3500.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3600.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3700.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3800.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
3900.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4000.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4100.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4200.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4300.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4400.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4500.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4600.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4700.	2.37	1.25	1.30	0.87	0.91	0.32	0.40	0.72	1.16	0.63	0.68	1.04	2.47	1.11	1.17	1.39	17.80
4800.	1.68	0.80	0.84	0.55	0.70	0.32	0.40	0.72	0.85	0.43	0.49	0.72	1.87	1.11	1.17	1.39	14.04
4900.	0.35	0.32	0.40	0.22	0.13	0.14	0.18	0.38	0.15	0.08	0.13	0.19	0.36	0.63	0.61	0.69	4.97
5000.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: SACTI cooling tower model.

**5.1.4.4 Environmental Impact.** The following sections discuss the potential environmental impacts associated with the operation of the new cooling tower. The relative magnitudes of the impacts are based on the results of the numerical modeling studies presented in Subsection 5.1.4.3. The environmental impacts are assessed with respect to the transportation arteries, vegetation, aesthetics, and land use.

In addition to assessing the environmental impacts associated with each of the aforementioned categories, this section also discusses many naturally occurring meteorological and atmospheric phenomena such as fog, cloud cover, and precipitation that may tend to mitigate the actual or perceived environmental impacts resulting from the operation of the cooling towers.

**5.1.4.4.1 Impact on transportation arteries.** Cooling towers may, at times, produce plume-induced fogging and icing in the vicinity of the cooling tower structures, which may have an affect on nearby transportation arteries such as roads, highways, bridges, airports, or navigable waters. Several factors influence the cooling tower plume as it leaves the tower which, to varying degrees, determine the location and magnitude of these phenomena.

The cooling tower plume will have thermal buoyancy and momentum as it is exhausted from the cooling tower. Under calm conditions, the plume will ascend vertically because of these forces. However, prolonged periods of calm and stable conditions do not frequently occur in the atmosphere in Florida. In fact, winds in the vicinity of the project are calm for a small percentage of the year, and the subtropical humid climate is frequently unstable. As such, the cooling tower plume's trajectory becomes modified almost immediately as it leaves the cooling tower by persistent winds and atmospheric instability.

As the wind speed increases, the cooling tower plume begins to assume a trajectory that is sloped in the direction of the wind vector, bringing the plume closer to the ground. The plume will likely undergo further trajectory modification as the result of turbulent airflow over and around terrain features, buildings, or the cooling tower structure itself. This effect, known as structure or building induced downwash, occurs when the trajectory modification is such that the plume is forced to the ground in the vicinity of the cooling tower. If the plume becomes supersaturated during this process (i.e., becomes visible), then the result is a phenomenon known as cooling tower induced ground-level fogging (Ovard and Reisman).

Cooling tower induced fogging can occur at any time during the year, but it is most commonplace during periods of moderate wind speeds (that bend the plume to intercept the ground), high relative humidity, and cool temperatures. These meteorological conditions frequently occur during the late evening and early morning periods of the day (EPRI 1984).

A topographic map of the area was reviewed to determine the major transportation arteries in the vicinity of the site. The nearest major transportation arteries include portions of Philips Highway located to the southwest of the site's property boundary and Interstate 295 to the north. These arteries are each located approximately 1,554 m (5,100 ft) from the new cooling tower. As discussed in Subsection 5.1.4.3.1, on average, fogging is predicted to occur less than 2 hours per year and no amount of fogging is predicted to extend beyond a radius of 300 m (984 ft) from the new cooling tower.

Figure 5.1-1 illustrates the minimal extent and duration of the predicted cooling tower induced fogging. The outermost contour represents 0.1 hour per year of possible plume fogging, with increasing contours of fogging at 0.1 hour per year intervals. Based on the results of the modeling, the cooling tower plume-induced fogging is not predicted to extend much beyond the property boundary, and is not predicted to cause fogging conditions near the transportation corridors that lie to the west and north.

Many of the meteorological conditions that are favorable for the occurrence of cooling tower plume-induced fogging are conducive to natural fog. As such, the two events may occur simultaneously and thereby mitigate the relative impact potentially caused by cooling tower plume-induced events. Climatologically, natural fog (that which restricts visibility to less than 1/4 of a mile) occurs an average of 39 days a year based on meteorological data from Jacksonville (NCDC 2007). This means that there are, at a minimum, 39 hours of naturally occurring fog in the vicinity of the project location (conservatively assuming that reported fogging events last for only 1 hour per day). This indicates that the area sees more naturally occurring fog events than predicted to be initiated by the cooling tower. Therefore, if these events occur simultaneously because of the meteorological conditions conducive to fog, then no additional fogging over what the area experiences normally is expected because of operation of the cooling tower.

A secondary effect of cooling tower fogging is the formation of cooling tower induced ground-level icing. However, as temperatures rarely fall below freezing in the area, no cooling tower plume-induced icing is predicted to occur.

**5.1.4.4.2 Impact on vegetation.** The plume exhaust from cooling towers may affect the vegetation in the vicinity as the result of drift deposition. Drift deposition from a cooling tower occurs when airborne water droplets, caused by cooling tower drift, coalesce and precipitate in the vicinity of the cooling tower. The pattern of drift deposition and the distance from the cooling tower to the areas of maximum deposition concentrations are a function of many variables, which include: cooling tower type, prevailing wind direction and speed, orientation of the cooling tower, airflow rate, drift rate, water chemistry, and the physical size of the water droplets (drift droplet size spectrum) in the cooling tower drift. The potential effects associated with cooling tower drift deposition are primarily associated with water and salt deposition. The response of the vegetation to salt and water deposition will vary from year to year depending on the rate of deposit and precipitation patterns during the growing season.



Figure 5.1-1  
Predicted Cooling Tower Induced Fogging

An area map depicting the project location overlaid with an isopleth analysis of the SACTI predicted average monthly water deposition rate is presented on Figure 5.1-2. The predicted location of the maximum water deposition rate will occur onsite approximately 100 m (328 ft) southwest of the cooling tower at a deposition rate of 12,000 kg/km<sup>2</sup>/month.

A potential effect of water deposition on vegetation species is the increased threat of plant fungal diseases associated with the increased precipitation. Based on historical meteorological data for Jacksonville (NCDC 2007), the average monthly rainfalls for the driest month (November) and the wettest month (September) are 59 and 201 mm, respectively. If one conservatively assumes no evaporation of the falling cooling tower drift droplets, then the precipitation rate equivalent of the maximum SACTI model predicted water deposition rate (12,000 kg/km<sup>2</sup>/month) is approximately 0.012 mm per month. By comparison, this precipitation rate is approximately 0.02 percent of the average monthly rainfall of the driest month.

Dr. Walter Stevenson, a crop pathologist at the University of Wisconsin has experience with plant disease prediction models that consider precipitation and leaf wetness. Dr. Stevenson's research shows that a slight increase in disease occurrence is sometimes observed by US Midwestern potato growers when irrigation at a rate of approximately 50 mm per week is applied. A 50 mm per week irrigation rate is equivalent to a water deposition rate of approximately  $2 \times 10^8$  kg/km<sup>2</sup>/month, which is more than 16,000 times greater than the maximum water deposition rate predicted by the SACTI model. This suggests that the water deposition from the new cooling tower on vegetation and crops species is insignificant when compared to normal wetting associated with dew, precipitation, and irrigation. Furthermore, because water deposition will occur in conjunction with salt deposition, the additional deposition of salt may be toxic to any pathogenic microorganisms or fungi, and thus negate the effects of water deposition by itself.



Figure 5.1-2  
 SACTI Predicted Average Monthly Water Deposition Rate (kg/km<sup>2</sup>-mo)

An area map overlaid with an isopleth analysis of the SACTI predicted average monthly salt deposition rate is presented on Figure 5.1-3. The predicted location of the maximum salt deposition rate will occur onsite 100 m (328 ft) southwest of the cooling tower at a deposition rate of 35.72 kg/km<sup>2</sup>/month.

Research studies on salt deposition effects have been conducted in response to known or observed cases of vegetation damage. From these studies, it is known that the local climate plays a significant role in increasing or reducing the stress that such deposition can have on vegetation. For example, a species growing in an area with high rainfall during the growing season tends to be less stressed from salt deposition than the same species growing in an area with less rainfall due to the dilution of the deposited salt on the leaf surface. Additionally, vegetation species growing along coastal regions have a higher tolerance for salt deposition because of the relatively high airborne concentration of sea salts in the marine environment.



As salinity levels increase, growth of intolerant plants declines, and yields are reduced. Some plant families tend to show either high or low limits of salt survival. The limit is low in legumes, (pea, beans), medium in cereal grasses (rye, oats, wheat barley), and high in some forage and other crop plants (alfalfa, sunflower, sugar beet, forage beet) (Maianu et al. 1965). Growth suppression is sometimes accompanied by leaf injury. Leaves become smaller and deeper blue-green than normal, and leaf tips or margins become bleached, tan, or brownish in proportion to the degree of salt deposition. Bronzing and early defoliation may also be prominent. Leaf injury may be the most prominent symptom of salt deposition, but is not nearly important to yield reductions as the growth suppression (Treshow 1970).



Figure 5.1-3  
SACTI Predicted Average Monthly Salt Deposition Rate (kg/km<sup>2</sup>-mo)

Dr. Charles Mulchi of the University of Maryland at College Park has conducted extensive research on cooling tower salt deposition effects and toxicity levels in several vegetation species. According to Dr. Mulchi (1991), a salt deposition rate of 400 kg/km<sup>2</sup>/month or greater is sufficient to cause damage to vegetation. The amount and type of damage is dependent on the species involved. For example, one species of pine may show signs of damage while another species may show no signs of damage. The 400 kg/km<sup>2</sup>/month salt deposition rate is the threshold level for most vegetation species and has been used in many environmental assessments as a screening or trigger level of potentially significant salt deposition rates. Salt deposition rates less than 400 kg/km<sup>2</sup>/month are generally not considered to have a significant impact on vegetation. The maximum predicted salt deposition rate from the new cooling tower is 35.72 kg/km<sup>2</sup>/month. Therefore, salt deposition from the cooling tower is expected to have no adverse impact on vegetation.

**5.1.4.4.3 Impact on aesthetics and land use.** A cooling tower contributes to the impacts on the aesthetics of an area by forming a visible, at times completely opaque, vapor condensate plume emanating from the cooling tower exhaust. The presence of a visible plume and cooling tower structure can be perceived as a distraction to the otherwise scenic quality or functional use of an area. This is particularly true if the cooling tower plume and tower structure are in the background or foreground of a view with a particular scenic quality or land use type. Such areas are discussed in Section 2.2.5. The factors that affect visible cooling tower plume formation are discussed in the following paragraphs.

Cooling towers are simple fluid heat exchange systems that dissipate waste heat to the atmosphere through mass and convective heat transfer of water vapor. The exhaust from a cooling tower is essentially a saturated air-water vapor mixture that is warmer than the ambient air as it leaves the tower. Depending on the ambient air temperature and the wet-bulb temperature, a portion of the saturated air-water vapor mixture will become supersaturated and begin to condense into small water droplets as heat transfer with the atmosphere begins to cool the plume. With time, more small water droplets continue to form and grow through condensation and coalescence until the cooling tower exhaust becomes visible as a white plume emanating from the tower. The cooling tower plume will continue to be visible until it is dispersed and evaporated, or until meteorological conditions are no longer favorable for its formation. In the former case, the visible cooling tower plume is transported downwind until turbulent mixing in the atmosphere with the abundant and relatively dryer ambient air causes the small water droplets to disperse and evaporate. As the visible plume becomes thoroughly mixed with the

ambient air, the small water droplets completely disperse and evaporate until the plume is no longer visible and becomes transparent.

The frequency, persistence, and size of the visible cooling tower plume depends primarily on the cooling tower type, heat load, orientation of the cooling tower, and the prevailing meteorological conditions. Mechanical draft towers typically present less of a visual distraction because of the relatively low plume exhaust height and profile.

Visible plume formation from cooling towers is more frequent during the cooler seasons when ambient air conditions are capable of rapidly condensing the cooling tower exhaust and allowing only minimal evaporation of the condensed water droplets. Similar conditions exist on a diurnal scale that are also more suitable for visible plume formation. These periods occur during the early morning hours, shortly before and after sunrise, when relatively low ambient air temperatures and high relative humidity make the environment particularly conducive to visible plume formation.

Figure 5.1-4 illustrates the site location overlaid with an isopleth analysis of the average annual predicted plume length frequency of occurrence. The highest probability of a visible plume is predicted to occur in the area just east of the new cooling tower for approximately 12 percent of the year on average. Over the remaining portions of the site and the immediate vicinity, the frequency of occurrence of a visible plume for a particular location generally ranges from about 1 to 10 percent of the year. Based on these results, it is concluded that the presence of a visible plume from the cooling tower will only minimally contribute to the visible and aesthetic impacts in the area.

As given in the SACTI output presented in Table 5.1-5, the visible plume from the cooling tower is also predicted to periodically extend offsite. However, as shown on Figure 5.1-4, this is predicted to occur infrequently and in a direction that has little to no development, and therefore, will have little or no impact on nearby businesses, residences, or transportation facilities.

It should be noted that the probability of visible plume lengths predicted by the SACTI model are conservative overestimates of actual plume lengths. This is primarily because the SACTI model does not distinguish prevailing meteorological conditions such as haze, overcast skies, fog, and precipitation, which may render the cooling tower plume indiscernible. In certain cases, especially as the distance from the cooling tower increases, the model may predict saturation (thus a visible plume by modeling standards), but because of spreading of the plume, it may only be visible as a slight haze. If this is the case, then from an aesthetic perspective, the plume may not be discernible against the background haze that may already exist because of the high humidity, smog, or suspended particulate matter. In other cases, the plume may be dense, but it would not be discernable against the existing cloud deck.



Figure 5.1-4  
 SACTI Predicted Annual Plume Length Frequency

**5.1.5 Measurement Program**

Blowdown from the cooling tower is necessary to maintain water chemistry in the tower. Cooling tower water pH will be controlled and monitored, with blowdown returned to the reclaimed water system. Reclaimed water supply and blowdown return flow volumes will also be monitored.

**5.1.6 Ultimate Development and Impacts of the Operation of the Heat Dissipation System**

The ultimate development of the site may consist of an additional 2 x 1 combined cycle unit and cooling tower identical or very similar in design as the proposed conversion project, and an additional simple cycle unit. Makeup and blowdown streams will be very similar in concept and design to the systems proposed in this application. The ultimate development will have no adverse impact on receiving body of water, aquatic life, or effects of modified circulation as described in Subsections 5.1.1, 5.1.2, and 5.1.3.

## **5.2 Effects of Chemical and Biocide Discharges**

As shown on the water mass balances (Figures 3.5-1 and 3.5-2) in Section 3.0 and as described below, the major industrial wastewater discharge from operations at the plant will be cooling tower blowdown, which will be directed to the JEA reclaimed water system for additional reuse. Other industrial wastewaters will be pretreated as appropriate and discharged to the JEA sanitary wastewater collection system.

### **5.2.1 Industrial Wastewater Discharges**

Wastewaters potentially contaminated with grease or oil from the plant floor drain system and oil containment areas will be treated by an oil/water separator before discharging into the plant sanitary return system. Effluent from the oil/water separators will contain no more than 15 ppm oil/grease. Reject water from the makeup demineralization system RO treatment process will also be directed to the plant wastewater collection sump, prior to return to the JEA sanitary system.

### **5.2.2 Cooling Tower Blowdown**

Cooling tower blowdown will be directed to the JEA reclaimed water system, as described in Subsection 3.5.1. Estimated flow values are provided on the water mass balances, Figures 3.5-1 and 3.5-2. JEA will blend the GEC discharge flow with the reclaimed water source in a controlled manner so that the blended water meets all requirements of Section 62-610, FAC, for subsequent reuse in the JEA reclaimed water system. Discharges will also meet JEA's Industrial Pretreatment Program, which has been delegated to JEA by the FDEP. An estimated typical analysis of the cooling tower blowdown discharged to the JEA reclaimed water system is provided in Table 5.2-1, as well as an analysis of the JEA reclaimed water after blending with cooling tower blowdown.

### **5.2.3 Measurement Program**

Flows and water quality will be monitored as required by the JEA Industrial Pretreatment Program, which has been delegated by the FDEP.

Constituent	Estimated Quality *	Estimated Quality After Blending**
Calcium, mg/L as Calcium Carbonate (CaCO <sub>3</sub> )	740	264
Magnesium, mg/L as CaCO <sub>3</sub>	641	229
Sodium, mg/L as CaCO <sub>3</sub>	1,161	415
Potassium, mg/L as CaCO <sub>3</sub>	67	24
Alkalinity, mg/L as CaCO <sub>3</sub>	100	172
Sulfate, mg/L as CaCO <sub>3</sub>	1239	307
Chloride, mg/L as CaCO <sub>3</sub>	970	346
Silica, mg/L as SiO <sub>2</sub>	120	43
Fluoride, mg/l as F	2.6	0.9
Strontium, mg/l as Sr	11.6	4.1
Ammonia N, mg/l as N	16.2	5.8
Phosphate, mg/l as P	5.9	2.1
BOD <sub>5</sub> , mg/l	8	3
Total dissolved solids, mg/l	3,332	1,190
pH, pH units	7 to 8	7 to 8

\*Water quality estimate is based on quality of reclaimed water indicated in Table 3.5-1 and operation of the cooling tower at 4 cycles of concentration.  
 \*\*Based on blending cooling tower blowdown at a 1:6 ratio with reclaimed water source.

**5.2.4 Ultimate Development Impacts from Chemical and Biocide Discharge**

There will continue to be no discharge to a water body of chemicals or biocides from additional units at the GEC site. Wastewaters potentially contaminated with grease or oil from the plant floor drain system and secondary containment areas will be treated by an oil/water separator and directed to the JEA sanitary sewer system. Similar to the initial development, additional cooling tower blowdown will be conveyed to the JEA reclaimed water system, so there will be no impacts to a water body from cooling tower blowdown water. The estimated water quality of the cooling tower blowdown is not anticipated to impact the ability of the JEA reclaimed water system to meet all regulatory requirements.

Therefore, there will be no adverse impacts to a water body or aquatic life from the use and disposal of chemicals or biocides at the GEC.

## **5.3 Impacts on Water Supplies**

### **5.3.1 Surface Water**

GEC operations will not withdraw or have a direct discharge to surface waters; therefore, no adverse impacts to surface waters are expected as a result of plant operations.

The site stormwater management system will be designed to comply with all applicable federal, state, and local regulations regarding discharge into surface waters. Noncontact stormwater runoff from areas not disturbed by construction or operations will be directed to natural drainage systems within the area. Other site stormwater runoff will be collected and directed to the site stormwater management system.

Other noncontact stormwater runoff from uncontaminated areas will be directed through a detention basin for reduction of the suspended solids load and equalization of peak flows. At the property boundary, the post-development peak flow rate will not exceed the pre-development peak discharge rate during the applicable design storm event. A detailed description of the onsite drainage system is provided in Section 3.8.

GEC operations are not expected to affect surface water quality within the area. Undisturbed areas will remain in their existing state. Runoff water quality should at least remain unchanged and is expected to be improved as a result of detention in the stormwater pond.

### **5.3.2 Ground Water**

There will be no onsite groundwater withdrawals from the shallow aquifer or the Floridan Aquifer for GEC operations. Therefore, there will be no withdrawal impacts to the area groundwater users. No groundwater monitoring is proposed.

### **5.3.3 Drinking Water**

As discussed in Subsection 5.3.2, no wells will be installed onsite to withdraw groundwater for the plant operation. Potable water to the site will be provided by JEA. The effects of leachate and runoff are discussed in Section 5.3.5. There will be no impact to any existing legal users or to the resource by any of the activities associated with the GEC.

#### **5.3.4 Reclaimed Water**

The mechanical draft cooling towers will use reclaimed water from the JEA reclaimed water system. The 3.15 mgd and 4.34 mgd of water needed for cooling tower makeup operation, as described in Section 3.5, are currently available from the JEA reclaimed water system. The reclaimed water system will include onsite aboveground tanks for site use and reuse system reliability.

#### **5.3.5 Leachate and Runoff**

There is no source of contaminated leachate associated with the plant; therefore, there will be no impact on the underlying aquifers because of leachate.

#### **5.3.6 Measuring and Monitoring Program**

The general site runoff will be monitored during a rainfall event, which causes discharge from the site runoff collection system at the site runoff detention overflow weir. A grab sample will be collected during the event in the vicinity of the basin overflow in accordance with the requirements of the NPDES Multi-Sector, Section O permit for industrial discharges. The sample will be tested in accordance with applicable local, state, and federal requirements.

**5.3.6.1 Groundwater Monitoring.** No onsite groundwater appropriation is requested for GEC operation. No groundwater monitoring is proposed.

#### **5.3.7 Ultimate Development and Impacts on Water Supplies**

There will be no impacts to natural flowing surface water bodies onsite. The GEC will not have a direct discharge or withdrawal from any surface water body. The GEC will convey all wastewaters to the JEA systems for treatment and/or reuse.

The GEC will have no adverse effect on the surficial groundwater aquifer quality. No water will be withdrawn from this water table zone. The GEC will utilize cooling and irrigation water from the JEA reclaimed water system. Only treated stormwater will percolate to the surficial aquifer through the bottom of the stormwater detention pond.

Potable water for personnel and service/fire and steam cycle makeup water uses will be provided by JEA. The total number of personnel required to operate the ultimate GEC development is anticipated to be 34 shift workers.

For ultimate development, it is anticipated that the cooling towers will require approximately 6.3 mgd for long-term baseload conditions and 8.7 mgd for maximum conditions supplied from the JEA reclaimed water system. JEA has determined that the reclaimed water system will be capable of providing the treated effluent demand required for operating the units at full capacity for the life of the GEC project.



There is no source of contaminated leachate associated with plant operations. Therefore, there will be no impact on the underlying aquifers from leachate. The impacts from proposed and ultimate plant operations on surface runoff will be minimized using appropriate stormwater management protocols. For these reasons, no adverse impacts are anticipated to water supplies from ultimate development of the GEC.

## **5.4 Solid/Hazardous Waste Disposal Impacts**

Operation as a combustion turbine facility burning primarily natural gas will not generate solid or hazardous wastes through the combustion process. Consequently, there are no onsite landfills or disposal areas. However, other plant wastes are discussed below.

### **5.4.1 Solid Waste**

Miscellaneous office trash and maintenance wastes will be collected in dumpsters and removed from the site by a licensed contractor.

### **5.4.2 Hazardous Waste**

A licensed contractor will provide for the disposal of cleaning wastes collected in the combustion turbine drain tanks, any waste oil collected in the oil/water separator, spent SCR catalysts, and any other potentially hazardous wastes, such as cleaning chemicals.

JEA will register the GEC facility as a small quantity generator of hazardous waste with the FDEP prior to simple cycle facility construction. A partially completed draft of Form 62-730.900(1)(b) is included in Section 10.1.

### **5.4.3 Ultimate Development and Impacts from Solid/Hazardous Waste Disposal**

The small amounts of solid and hazardous wastes as described above will be appropriately stored until disposed offsite by permitted contractors. Consequently, the incremental increases in these wastes from ultimate GEC operations should have no adverse impacts on existing services or facilities, or generator status.

## **5.5 Sanitary and Other Waste Discharges**

Approximately 22 employees will be required for operation of the conversion unit at GEC. Sanitary wastewater will be discharged to the JEA sanitary wastewater collection system. The impact from this number of workers is considered negligible compared to the operating capacity of the JEA wastewater treatment system. Therefore,

no adverse impact resulting from the disposal of sanitary wastewater is anticipated. Other discharges are covered in Section 5.2.

**5.5.1 Ultimate Development and Impacts from Sanitary or Other Wastes**

The operation at ultimate development will result in a minor increase of staff at the site, which will result in a small increase of sanitary wastewater discharge to the JEA sanitary system. Approximately 34 employees will operate the ultimate development at GEC.

Ultimate impacts from industrial wastewaters generated from GEC plant operations are addressed in Subsections 5.1.6 and 5.2.4.

**5.6 Air Quality Impacts**

The air quality impacts associated with the operation of the GEC conversion and ancillary equipment are addressed in detail in the PSD Air Permit Application attached to this Site Certification Application as Volume 3 under separate cover. The estimated air quality impacts compared to the associated significant impact levels (SILs) and Florida Ambient Air Quality Standards (FAAQs) are shown in Table 5.6-1.

Furthermore, as discussed in the PSD application (Volume 3), the modeled air quality impacts are well below the monitoring de minimis concentrations. Therefore, no preconstruction or postconstruction air quality monitoring is required.

Pollutant	Averaging Period	Model-Predicted Impact* (µg/m <sup>3</sup> )	SILs (µg/m <sup>3</sup> )	FAAQs (µg/m <sup>3</sup> )	Predicted SIL Exceedance?
NO <sub>x</sub>	Annual	0.90	1	100	NO
SO <sub>2</sub>	Annual	0.09	1	60	NO
	24 Hour	0.91	5	260	NO
	3 Hour	3.07	25	1,300	NO
PM/PM <sub>10</sub>	Annual	0.34	1	50	NO
	24 Hour	4.03	5	150	NO
CO	8 Hour	47.75	500	10,000	NO
	1 Hour	81.68	2,000	40,000	NO

\*Impacts represent the highest first high model-predicted concentration from all 5 years of meteorological data modeled and includes the operation of the combustion turbines/HRSGs, cooling tower, safe shutdown generator, and emergency fire pump. Detailed results are given in the PSD Air Permit Application attached to this Site Certification Application as Volume 3.

**5.6.1 Ultimate Development and Impacts to Air Quality**

The air quality impacts associated with ultimate site build-out can be conservatively estimated by multiplying the combined cycle impacts by two, and including the impacts from an additional simple cycle combustion turbine. These estimated air quality impacts compared to the associated FAAQS are shown in Table 5.6-2. This table shows that estimated ultimate impacts are well below the associated FAAQS values.

Pollutant	Averaging Period	Model-Predicted Impact (µg/m <sup>3</sup> )	FAAQS** (µg/m <sup>3</sup> )	Predicted FAAQS Exceedance?
NO <sub>x</sub>	Annual	2.17	100	NO
SO <sub>2</sub>	Annual	0.19	60	NO
	24 Hour	1.93	260	NO
	3 Hour	6.45	1,300	NO
PM/PM <sub>10</sub>	Annual	0.71	50	NO
	24 Hour	10.08	150	NO
CO	8 Hour	103.97	10,000	NO
	1 Hour	177.14	40,000	NO

\*It is conservatively assumed that ultimate site build-out impacts are equal to two times the CCCT impacts plus 1/2 the SCCT impacts.  
 \*\* FAAQS.

**5.7 Environmental Noise Emissions**

This section describes the potential facility noise emissions associated with the normal operation of the conversion project. In addition, a discussion of the potential impacts and compliance with local noise regulations related to facility operation is included.

**5.7.1 Noise Impact Significance Thresholds**

The potential noise impacts have been evaluated based on the following significance thresholds. These thresholds are based on complying with applicable local regulations and minimizing the potential impacts to the neighboring residences.

**5.7.1.1 Applicable Noise Regulations.** The GEC is located in the City of Jacksonville, Duval County, and is subject to local regulations regarding noise emissions. This section summarizes the regulations and highlights their applicability to the Project.

Noise is regulated in *Rule 4 of the Jacksonville Environmental Protection Board (Rule 4)*. Noise emissions limits are outlined in Part II (Sound Emission Standards and Limitations for Property-Line-Noise-Sources) of *Rule 4*. The limits are provided as maximum allowable overall A-weighted sound pressure levels and maximum allowable octave-band sound pressure levels. The land use for the project is Class D. The maximum allowable sound levels emitted from Class D land to other land uses are summarized in Table 5.7-1.

Table 5.7-1 Maximum Allowable Sound Pressure Level (dB) from a Class D Land Use in accordance with <i>Rule 4 of the Jacksonville Environmental Protection Board</i>				
Octave Band	Land Use Time of Day			
	Class A <sup>(a)</sup> or B <sup>(b)</sup>		Class C <sup>(c)</sup>	Class D <sup>(d)</sup>
	Daytime <sup>(e)</sup>	Nighttime <sup>(f)</sup>	Anytime	Anytime
31.5	80	75	65	70
63	78	74	78	84
125	73	67	73	79
250	67	63	67	74
500	61	56	61	69
1000	56	51	56	64
2000	52	47	52	59
4000	48	45	48	56
8000	45	40	45	63
Overall (dBA)	65	60	65	70
Notes: Class A Land Use generally includes institutional land use such as hospitals, retirement communities, schools, churches, etc. Class B Land Use generally includes residences, hotels, parks, etc. Class C Land Use generally includes commercial land uses such as stores, shops, doctors' offices, etc. Class D Land Use generally includes industrial land uses such as utilities, manufacturing, etc. Daytime includes the hours from 7:00 a.m. to 10:00 p.m. Nighttime includes the hours from 10:00 p.m. to 7:00 a.m.				

The applicability of the sound level limits in Table 5.7-1 at the GEC property boundary is illustrated on Figure 5.7-1. A neighboring Class B land use area (residential) is located east and southeast of the site; neighboring Class C land use areas (commercial) are located north/northeast and south/southwest of the site; and, a neighboring Class D land use area is located west of the site.

**5.7.1.2 Increase in Future Background Sound Levels.** In addition to regulatory limits, potential impacts to nearby receptors can also be evaluated against the existing background sound levels measured during the ambient noise survey to qualify the relative increase in background sound levels. It is important to note that evaluating the potential

increase to background sound levels because of conversion project noise emissions is subjective in nature and therefore lacks the measurable regulatory criteria previously discussed. However, such an evaluation provides additional criteria that can identify potential impacts that may occur despite compliance with regulatory limits. For reference, an increase of less than 3 dB to the background sound level is generally considered “imperceptible,” a 3 dB increase to the background sound level is generally considered “just barely perceptible,” and a 5 dB increase to the background sound level is generally considered “clearly noticeable.” Similarly, a 10 dB change in the background sound level is generally considered to be a doubling (or halving) of the apparent loudness. Typically, an increase in the background sound level of 5 dB or less is considered to be a less than significant increase.

### **5.7.2 Noise Emissions Modeling**

The environmental noise emissions include the noise emitted by the conversion project to the surrounding community. The noise emissions have been estimated in order to evaluate both the potential future noise impacts on the neighboring noise sensitive receptors and compliance with the applicable regulations.

**5.7.2.1 Noise Modeling Methodology.** The conversion project environmental noise emissions were modeled in accordance with ISO 9613 using noise prediction software (Cadna/A version 3.7.123). The model simulated the outdoor propagation of sound from each noise source and accounted for sound wave divergence, atmospheric and ground sound absorption, sound directivity, and sound attenuation due to interceding barriers. A database was developed that specified the location, octave band sound levels, and sound directivity of each noise source. A receptor grid was specified which covered the entire area of interest. The model calculated the overall A-weighted sound pressure levels and the octave-band sound levels within the receptor grid based on the octave-band sound level contribution of each noise source. Finally, a noise contour plot was produced based on the overall sound pressure levels within the receptor grid, including specific receptor locations.

Noise modeling was conducted to predict the environmental noise emissions during normal facility operation, which excludes intermittent activities such as startup, shutdown, and any other abnormal or upset operating conditions.

**5.7.2.2 Equipment Noise Sources.** The conversion project will initially include the installation of a 2-on-1 combustion turbine combined cycle arrangement. Specifically, the major equipment for the conversion will include the two frame 7FA simple cycle CTG units, two new HRSGs, one new steam turbine generator STG, and one new 8-cell mechanical draft cooling tower; i.e., one block of 2-on-1 combined cycle unit. Ultimate

site capacity will include an identical block of 2-on-1 combined cycle equipment and an additional simple cycle combustion turbine located to the south of the proposed block. These major equipment components—CTGs, HRSGs, STGs, and cooling towers—are expected to be the primary noise contributors to the facility noise emissions during conversion and ultimate capacity operation. Secondary noise sources are expected to include generator step-up transformers, major pumps (e.g. boiler feedwater, circulating water, condensate, closed-cycle cooling water), and other associated equipment.

**5.7.2.3 Facility Noise Emissions.** The resulting noise emissions associated with all equipment installed and operating for the conversion project and ultimate site capacity are presented on Figures 5.7-2 and 5.7-3, respectively, as noise contours. The noise contours represent the overall A-weighted sound pressure levels at 5 dB intervals at an elevation of 5 feet. It is important to note that the predicted noise emissions only include noise resulting from the facility, and are exclusive of any other noise sources including background noise.

### **5.7.3 Conversion Project Compliance with Rule 4**

The predicted noise emissions to the nearest residential (Class B), commercial (Class C), and industrial (Class D) land uses from the operation of conversion project equipment, excluding all other sources of noise such as background noise, will not exceed the octave band limits set forth in *Rule 4*. Figures 5.7-4, 5.7-5, and 5.7-6 show the maximum expected (i.e., worst-case) property boundary octave-band sound levels compared to the project design criteria specified in *Rule 4* for the nearest Class B, Class C, and Class D property boundaries, respectively. Adjacent land uses with respect to the property boundary are shown on Figure 5.7-1.

### **5.7.4 Ultimate Site Capacity Compliance with Rule 4**

The predicted noise emissions to the nearest residential (Class B), commercial (Class C), and industrial (Class D) land uses from the operation of ultimate site capacity equipment, excluding all other sources of noise such as background noise, will not exceed the octave band limits set forth in *Rule 4*. Figures 5.7-7, 5.7-8, and 5.7-9 show the maximum expected (i.e., worst-case) property boundary octave-band sound levels compared to the project design criteria specified in *Rule 4* for the nearest Class B, Class C, and Class D property boundaries, respectively. Adjacent land uses with respect to the property boundary are shown on Figure 5.7-1.

### **5.7.5 Predicted Increase in Ambient Sound Levels**

**5.7.5.1 Conversion Project.** In order to evaluate the potential noise impact of the conversion project on the nearest noise-sensitive receptors, it is shown in Table 5.7-2 that

there is an increase in the existing background sound level at R1 (refer to Figure 5.7-2) because of operation of the conversion project. The ambient sound levels measured at NML-3 are considered representative of the current ambient sound levels at R1. Since the conversion project involves the conversion from existing simple-cycle to combined-cycle operation, acoustical modeling of simple-cycle operation was initially conducted and indicated a simple-cycle facility sound level of 44 dBA at R1. When this is combined with the measured median ambient sound level, the pre-conversion project ambient background sound level at R1 is expected to be 46 dBA, as shown in Table 5.7-2. The sound level at R1, because of the conversion project (i.e., after conversion to combined cycle), is predicted to be 43 dBA, which, when combined with the pre-conversion project ambient background sound level, results in a post-conversion project ambient background sound level of 48 dBA. This corresponds to a predicted ambient background sound level increase of 2 dB. As previously discussed, a 2 dB increase is typically considered “imperceptible.”

Table 5.7-2  
Increase in Ambient Sound Level Because of Conversion Project (CP) Operation

Nearest Noise Receptor Location (Figure 5.7-2)		Pre-CP Average Hourly Background Sound Level (L <sub>90</sub> ), dBA	Predicted Facility Sound Level (CP -only), dBA	Post-CP Background Sound Level with Project, dBA	Future Background Sound Level Increase because of CP operation, dB
Location	Description				
R1	Nearest Residential Receptor, south of the Project site.	46	43	48	2

**5.7.5.2 Ultimate Site Capacity.** The increase in the existing background sound level at the nearest noise-sensitive receptor, “R1” on Figure 5.7-3, because of ultimate site capacity operation of the site is provided in Table 5.7-3. The ambient sound level at R1 subsequent to conversion project operations (post-CP) is expected to be 48 dBA and is considered the pre-ultimate site capacity ambient background sound level, as shown in Table 5.7-2. The sound level at R1 due to ultimate site capacity operation is predicted to be 46 dBA, which, when combined with the pre-ultimate site capacity ambient

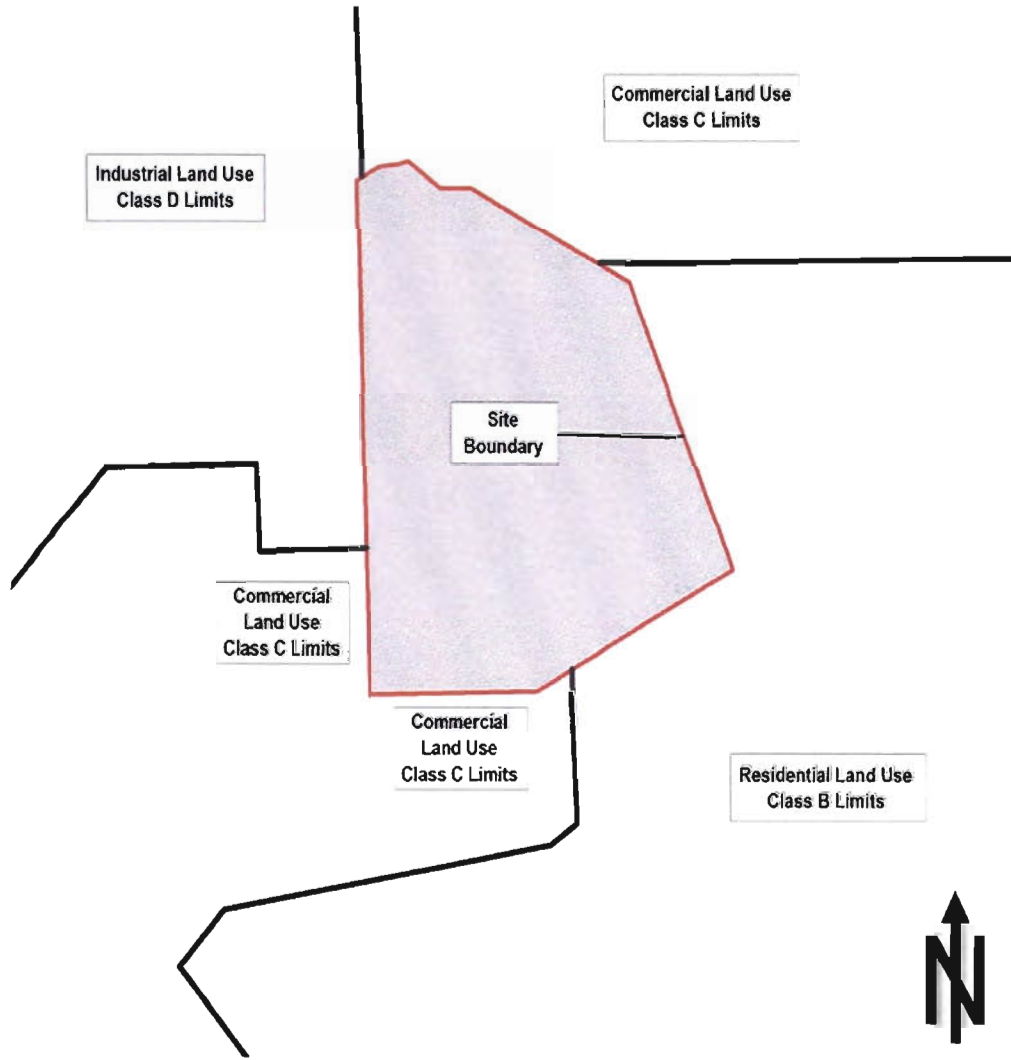


Figure 5.7-1  
Greenland Energy Center Neighboring Land Use Classifications for Determining Sound Level Limits



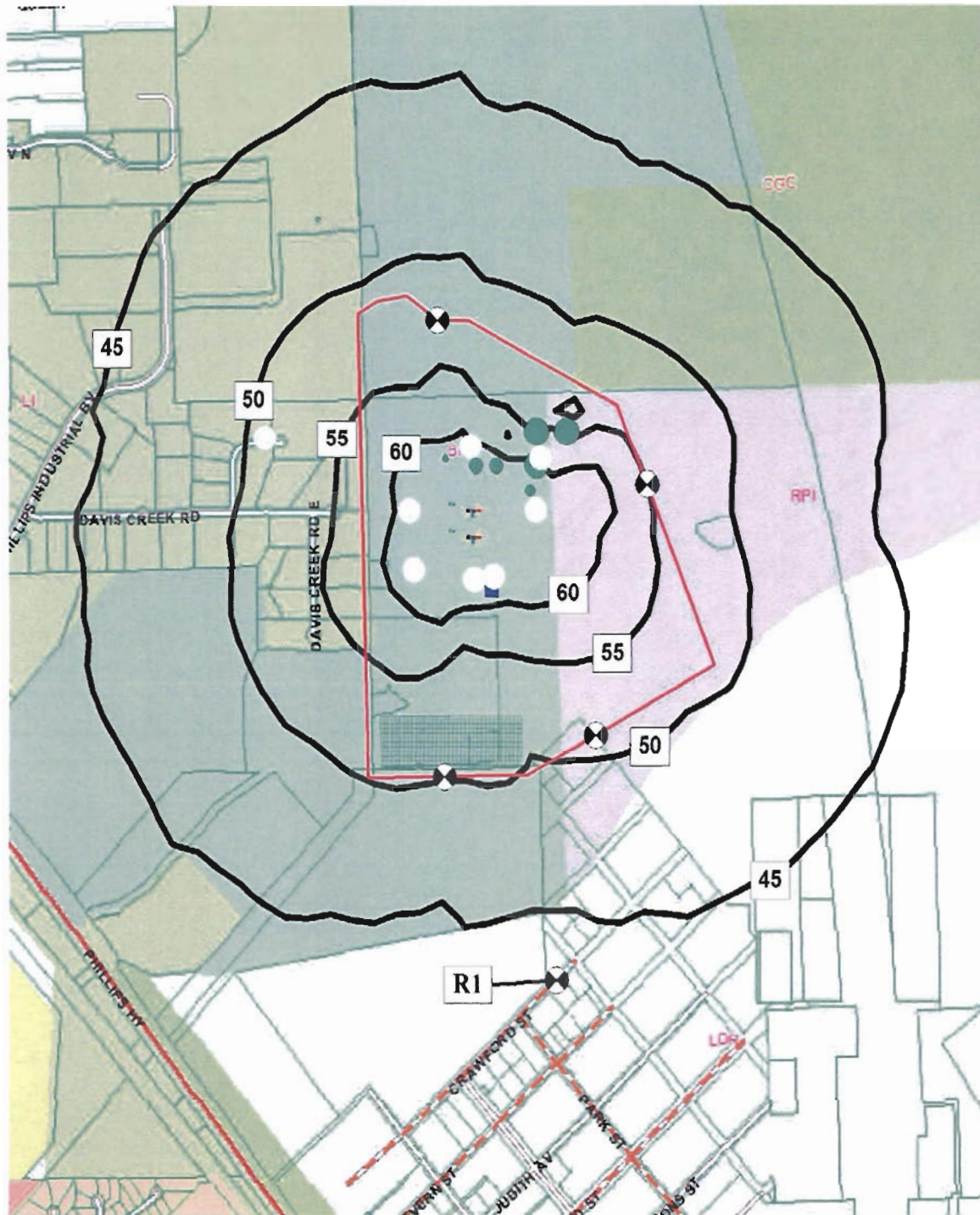


Figure 5.7-2

GEC Conversion Project Predicted Overall A-weighted Sound Pressure Levels  
(refer to Figures 5.7-4 thru 5.7-6 for corresponding octave band sound pressure levels)

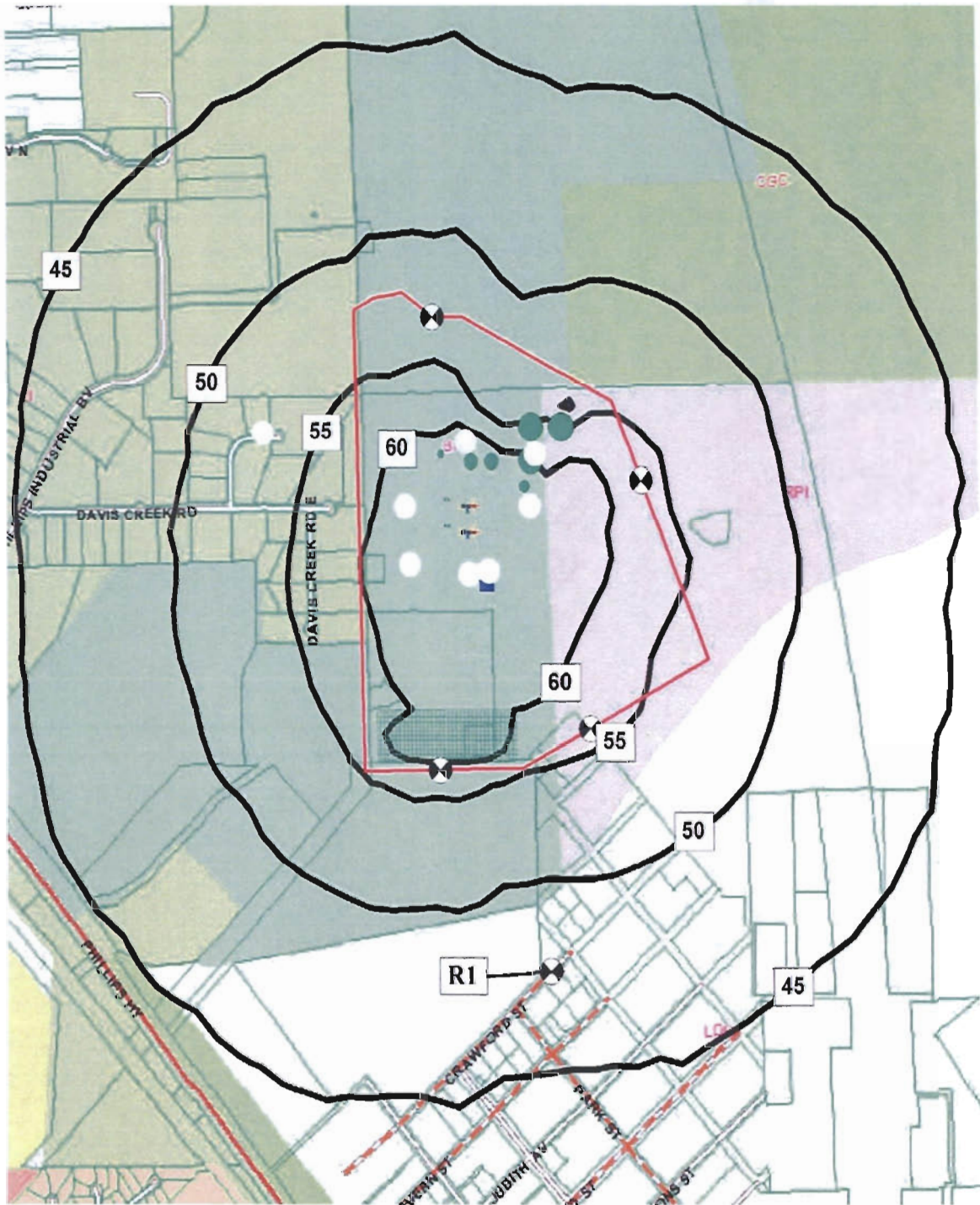


Figure 5.7-3  
GEC Ultimate Site Capacity Predicted Overall A-weighted Sound Pressure Levels  
(refer to Figures 5.7-7 thru 5.7-9 for corresponding octave band sound pressure levels)

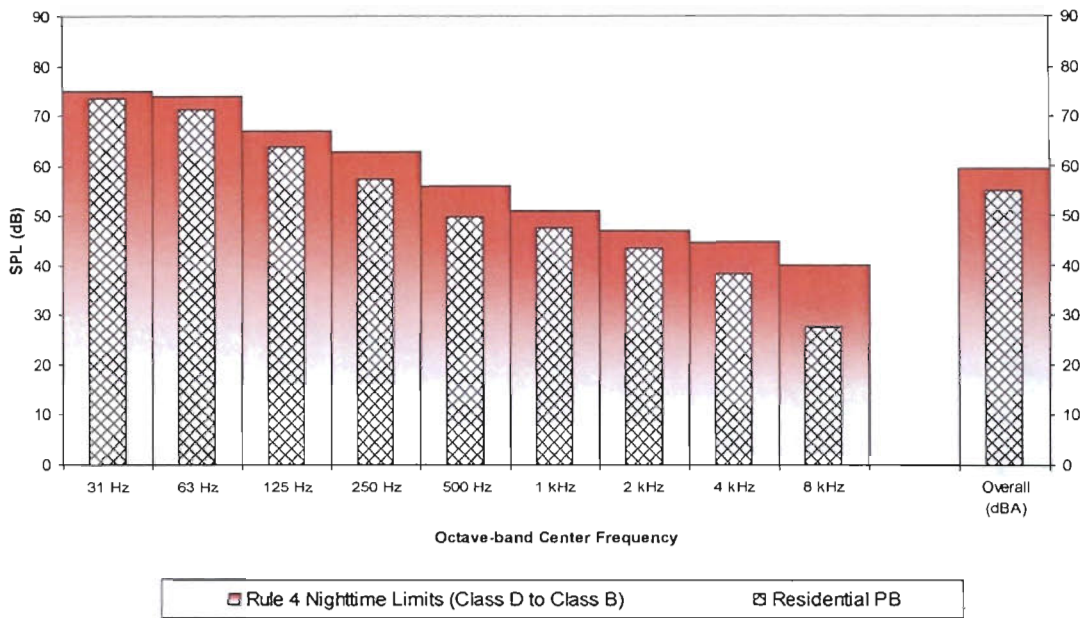


Figure 5.7-4  
GEC Predicted Conversion Project Noise Emissions at the Southeast Residential Property Boundary  
(Class B Limits – refer to Figure 5.7-1).

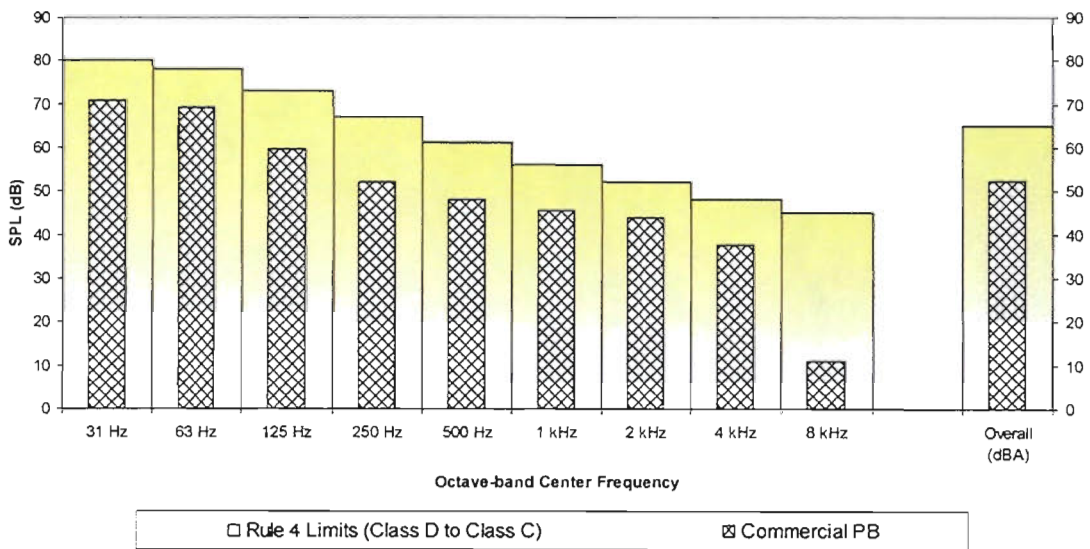


Figure 5.7-5  
GEC Predicted Conversion Project Noise Emissions at the North Commercial Property Boundary  
(Class C Limits – refer to Figure 5.7-1).

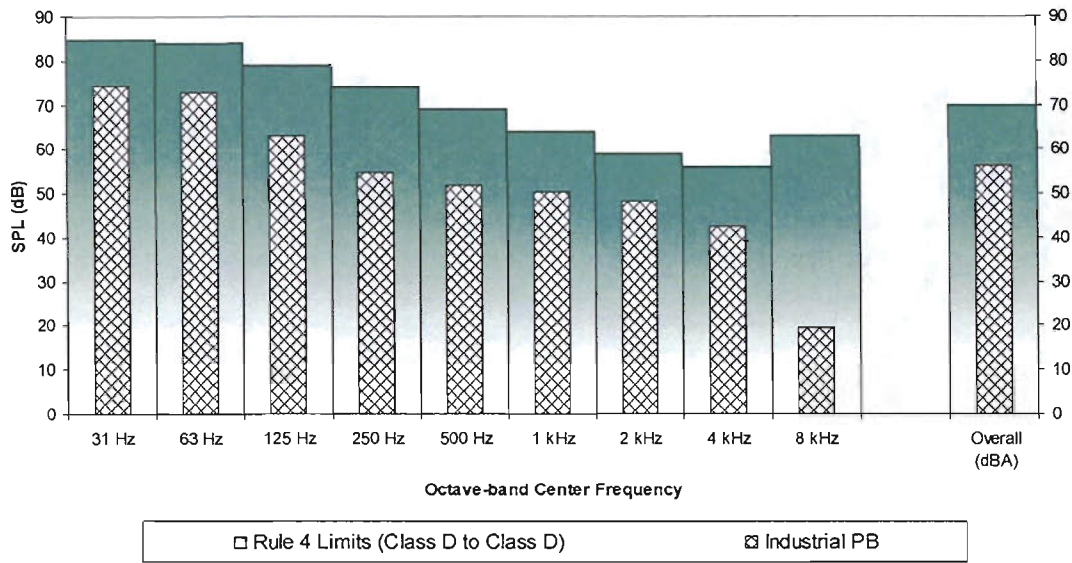


Figure 5.7-6  
GEC Predicted Conversion Project Noise Emissions at the West Industrial Property Boundary  
(Class D Limits – refer to Figure 5.7-1).

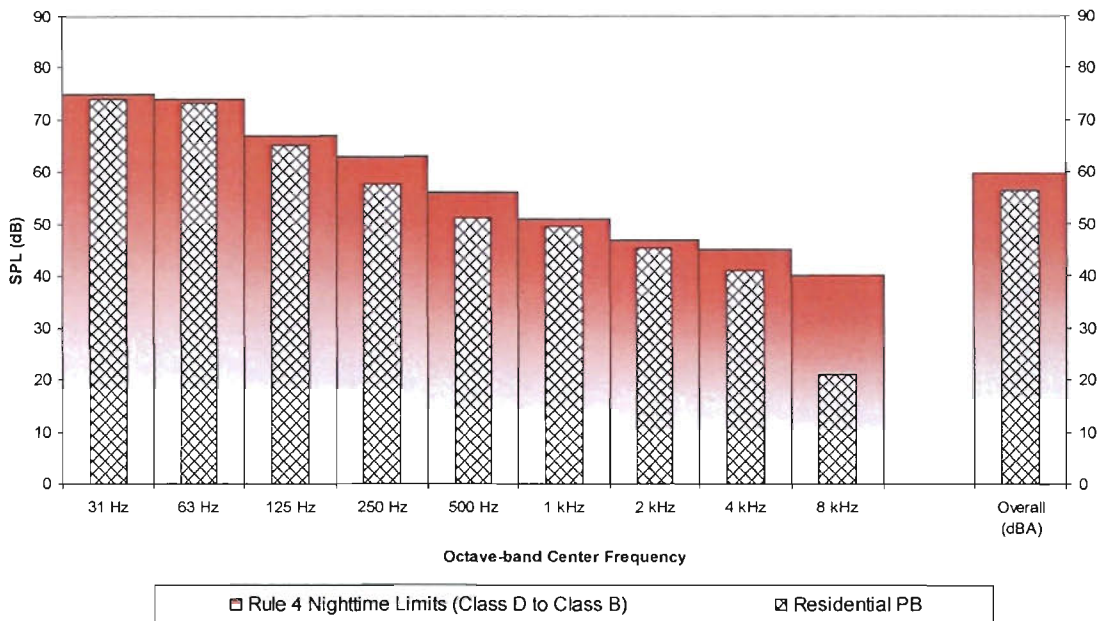


Figure 5.7-7  
GEC Predicted Ultimate Site Capacity Noise Emissions at the Southeast Residential Property Boundary  
(Class B Limits – refer to Figure 5.7-1).

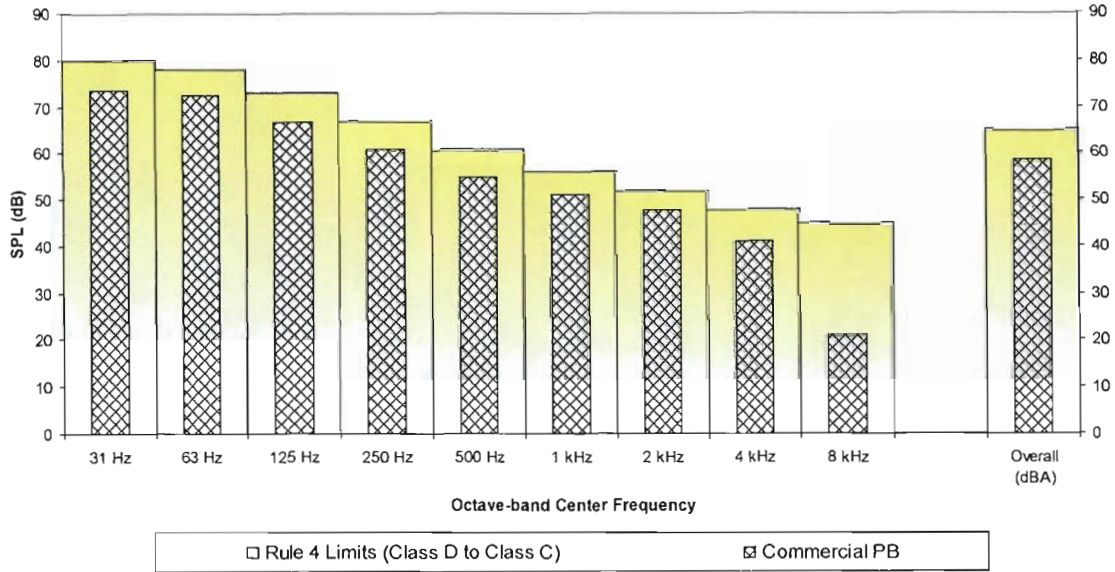


Figure 5.7-8  
GEC Predicted Ultimate Site Capacity Noise Emissions at the North Commercial Property Boundary  
(Class C Limits – refer to Figure 5.7-1).

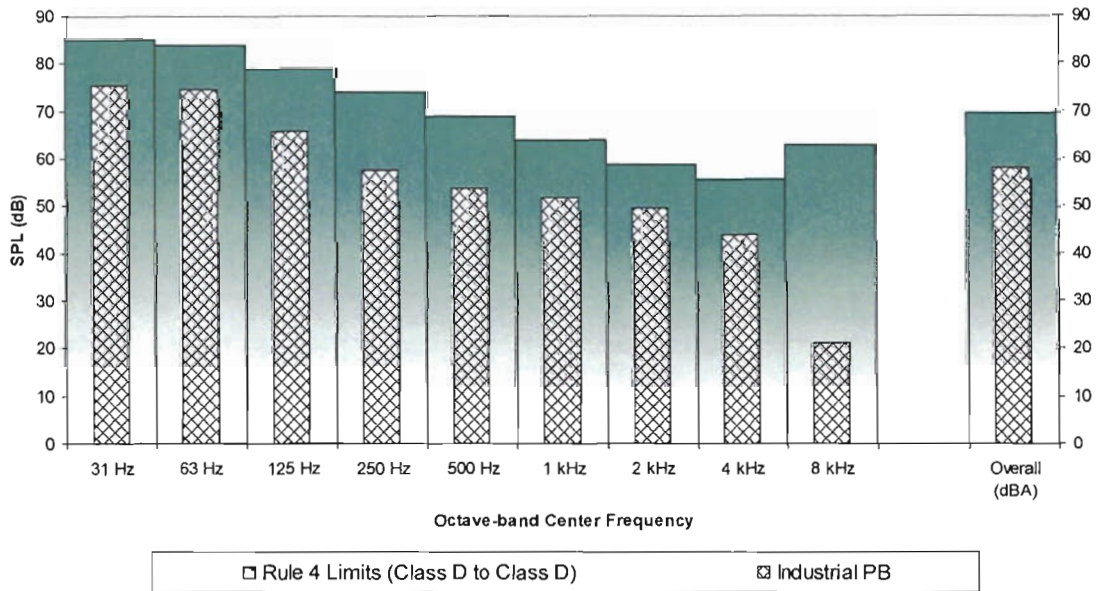


Figure 5.7-9  
GEC Predicted Ultimate Site Capacity Noise Emissions at the West Industrial Property Boundary  
(Class D Limits – refer to Figure 5.7-1).

background sound level, results in a post-ultimate site capacity ambient background sound level of 50 dBA. The ambient sound level increase is expected to be 2 dB. As previously discussed, a 2 dB increase is typically considered “imperceptible.”

**Table 5.7-3**  
**Increase in Ambient Sound Level Because of Ultimate Site Capacity (USC) Operation**

Nearest Noise Receptor Location (Figure 5.7-3)		Pre-USC Average Hourly Background Sound Level (L <sub>90</sub> ), dBA	Predicted Facility Sound Level (USC - only), dBA	Post-USC Background Sound Level with Project, dBA	Future Background Sound Level Increase because of USC operation, dB
Location	Description				
R1	Nearest Residential Receptor, south of the Project site	48	46	50	2

**5.7.6 Summary of Project Noise Impacts**

The increase in the future sound levels because of the conversion project at the nearest noise-sensitive receptor is expected to be 2 dB. It is important to note that the future background sound levels are based on median sound levels. The actual future sound levels will fluctuate throughout the day depending on variation in significant non-facility noise sources (e.g., road and air traffic, trains, etc.). A 2 dB increase is typically considered “imperceptible” and, as such, the impact is not expected to be adverse.

The increase in the future sound levels because of ultimate site capacity operation at the nearest noise-sensitive receptor is expected to be 2 dB. Again, a 2 dB increase is typically considered “imperceptible” and, as such, the impact is not expected to be adverse.

The *overall* increase in future sound levels because of the conversion project and ultimate site capacity operation will be 4 dB (2 dB after the conversion project + 2 dB after ultimate site capacity operation). A 4 dB increase is generally considered “barely perceptible.” Additionally, the sound levels subsequent to ultimate site capacity operation will be compliant will *Rule 4* limits.

**5.8 Changes in Nonaquatic Species Populations**

**5.8.1 Impacts**

Operation of the GEC is not expected to adversely decrease the presence of nonaquatic species in the vicinity of the facility. The location of the combined cycle unit will not remove any important or critical wildlife habitat.

### **5.8.2 Monitoring**

No new monitoring efforts are proposed. There will be no changes to the existing monitoring plan for the wetland creation site.

### **5.8.3 Ultimate Development and Impacts to Nonaquatic Species Populations**

Nonaquatic species are not common to the site as commercial and industrial development activities have occurred and are occurring in the area. Observations made during site visits and an evaluation of existing site conditions including vegetation types and surrounding land use correspond to a low quality habitat utilized infrequently by few nonaquatic species. The project boundaries will not be expanded for ultimate development. Therefore, ultimate site development should have no adverse impact on wildlife populations onsite or in the surrounding vicinity.

## **5.9 Other Plant Operation Effects**

The GEC plant conversion from two simple cycle units to a 2x1 combined cycle facility will increase JEA's overall generation capability. The conversion will also positively impact the community through the modest increase in stable, well-paying jobs that will be held by the plant operations staff. The converted GEC facility will require 18 operations and maintenance personnel, 3 administrators, and 1 manager for a total of 22 employees. The payroll associated with the nine conversion employees is expected to be approximately \$800,000 per year, plus overtime pay. Local operation and maintenance (O&M) purchases of certain site services and plant supplies will provide additional community employment and income benefits.

As discussed further below, the combined cycle facility should have no adverse impacts on traffic, water and wastewater requirements, housing, labor force, and community facilities and services.

### **5.9.1 Traffic Impacts**

Regular vehicular traffic to the site will be limited to a GEC operation staff of 22 persons (simple cycle and combined cycle staff total) that will be divided into shifts to provide around-the-clock operation, plus occasional deliveries of plant supplies and support services. Access to the plant site will occur through the access road off of Philips Highway and will not back up normal traffic flows. The primary fuel for the combined cycle unit will be natural gas. It will be delivered through an underground pipeline to be constructed to the site, and will not require truck or rail hauling as is needed for a coal plant.

Occasional truck deliveries will replenish the storage tanks holding the ULSFO. The frequency of delivery will depend on the hours of operation on fuel oil, but such operation is not as cost-effective as operation on natural gas, and should only occur on a limited basis that may be caused, for instance, by an interruption in adequate supplies of natural gas.

If a subsequent 2x1 combined cycle unit and possible small peaking unit are added, the total operational staff is anticipated to reach 34 personnel for an ultimate site capacity of 1,300 MW. Again, this staff would be divided into around-the-clock shifts and would not result in a noticeable impact on local roadways. Additional deliveries would also occur, but would be similarly manageable given their periodic nature and dispersion throughout the daytime hours of operation.

### **5.9.2 Water**

The proposed combined cycle facility will have average requirements of approximately 3.15 million gallons of cooling water per day (mgd) at baseload (and gas fired) conditions. Water for cooling tower makeup is expected to be reclaimed water (treated wastewater) which will be supplied through a JEA pipeline adjacent to the plant site. If needed, potable water can be used for backup cooling water makeup supply. Cooling water makeup water flow will vary depending upon the plant load and operating conditions. Under summer maximum load conditions (gas fired) makeup water requirements could be as high as 4.34 mgd. There could be short-term operating conditions (steam bypass operation) under which the reuse water makeup requirement could be required at a flow rate equivalent to 5.5 mgd.

A demineralizer system will be installed to provide demineralized water for steam cycle makeup and combustion turbine water injection for NO<sub>x</sub> control, when firing fuel oil. Two 800,000 gallon demineralized water storage tanks will be provided for a total capacity of approximately 40 hours storage/makeup capacity under maximum demineralized water demand conditions.

Service water, potable water, demineralizer water makeup, and fire water will all be supplied from the JEA potable water system. Water will be stored onsite in a fire water/service storage tank. It is also anticipated that most offsite facilities will be sized for ultimate build-out including the reclaimed water pipeline, wastewater return lines, and potable waterlines. Future GEC water requirements will be provided by JEA. The GEC will be the highest priority reclaimed water use on the JEA reclaimed system.

An average of 97 percent of the total GEC conversion project water requirements will be met with JEA's reclaimed water supply and approximately 3 percent will be



provided by JEA's potable water supply; minimizing the impacts of the GEC facility on groundwater supplies.

In addition, JEA has included water conservation measures in the LEED certification plan for the Administration/Control/Maintenance Building. These measures are expected to reduce potable water use by 50 percent in this building through water-conserving fixtures (water closets, urinals) and use of reclaimed water for non-potable and irrigation uses.

### **5.9.3 Wastewater**

The major source of wastewater from the GEC site will be cooling tower blowdown. Minor sources include oil/water separator effluent and sanitary wastewater. Under full load conditions, an average of 0.78 mgd of cooling tower blowdown will be returned to the JEA reclaimed water system. Approximately 0.052 mgd of sanitary wastewater and other process wastewaters will be conveyed to the JEA sanitary sewer system.

The GEC reclaimed water system will be managed to ensure that there will be no adverse impacts of the cooling tower blowdown water to the quality of water in the JEA reclaimed water system and that the JEA reclaimed water system will continue to meet all requirements of Chapter 62.610, FAC.

If additional simple cycle and combined cycle capacity are added to the GEC site, similar methods for wastewater disposal will be utilized.

### **5.9.4 Power**

Operation and future expansion of the GEC facility will contribute to the safe, adequate, and reliable supply of electricity at the lowest reasonable cost in an acceptable environmental manner. This will be achieved with minimal negative impacts on the surrounding land use or community, and will help preserve or create employment in Duval County.

### **5.9.5 Landfill**

During operation, a negligible amount of offsite landfill waste will be generated. This waste will consist of typical waste generated as part of office operation, such as supply and material packaging. The total amount of offsite landfill waste is not expected to be significant because of the minimal number of staff and the limited amount of materials and supplies consumed during operations. It is anticipated that two or three industrial-sized dumpsters located onsite emptied on a routine schedule will be sufficient most of the time, except when subsequent units are under construction. JEA will pay

user fees for this and all site services, and will not cause external costs to the surrounding community.

Only a modest increase in offsite landfill waste removal and offsite disposal would be anticipated with the addition of other units to the GEC site. It is expected that no more than five industrial sized dumpsters would be required for the full-capacity staff of 34.

#### **5.9.6 *Ultimate Development and Impacts from Other Plant Operations***

Ultimate site development would result in an increase in plant operational staff, but is expected to reach only approximately 34 persons. The staff would be divided into around-the-clock shifts, with the majority of employees on the day shift, 5 days a week and the rest covering evening, night, and weekend shifts. Given the small number of employees working staggered shifts, there will be no noticeable impact on local roadways. Further, vendor deliveries will also occur, but will be manageable given the periodic nature and dispersion throughout the daytime hours of operations.

### **5.10 Landmarks, Sensitive Areas, and Archeological Sites**

No landmark, sensitive area, or archaeological site will be adversely impacted by operation of the GEC facility.

According to a letter to JEA from the DHR dated November 27, 2007, no significant archaeological or historical sites are recorded for or likely to be present within the GEC site area. On April 18, 2008, a new letter was submitted to the DHR, requesting the review of newly purchased additional site acreage. Both response letters indicated there were no known or expected significant resources onsite, and essentially approved the site for development.

### **5.11 Resources Committed**

The plant site and access corridor include approximately 152.5 acres. Of this area, approximately 45 acres will remain as wetlands or buffer zone. Plant and associated onsite facilities include 80 acres planned for power development. The developed lands may be mostly returned to their original use after the plant ceases operations.

The materials used to construct GEC facilities are dedicated resources. It is possible that some of the materials may be reclaimed after plant closure.

The pipeline gas and distillate fuel oil burned as fuel will be a permanent commitment of resources. It is estimated that approximately 11 billion cubic feet of

natural gas<sup>(1)</sup> and 15 million gallons of ultra-low sulfur distillate fuel oil<sup>(2)</sup> will be consumed annually over the year operating period.

### **5.11.1 Ultimate Development and Impacts to Resources Committed**

Significant efforts have been employed by JEA to avoid and minimize environmental and wetland impacts by selecting an appropriate site, using previously disturbed and/or appropriate areas and existing corridors for project development. Impacts to wetlands at GEC will be mitigated. The simple cycle project will impact 0.73 acre of wetlands onsite and in the construction access road (Wetland 2). The conversion project will impact an additional 0.23 acre of wetlands because of improvements at the existing entrance (Wetland 1) and the new/permanent access road (Wetland 2). JEA will compensate for unavoidable impacts from mitigation of the simple cycle project impacts by enhancing Wetland 1, creating additional forested wetland in the Big Davis Creek floodplain adjacent to Wetland 1, and placing a conservation easement over Wetland 9, Wetland 1, and the created wetland. These efforts will create excess mitigation available for future JEA projects, such as the GEC conversion. The conversion project impacts will be compensated from the excess mitigation credit associated with the simple cycle permitting. There are no additional impacts to wetlands or ecological resources anticipated from ultimate GEC site development. If such wetlands impacts are required, the excess mitigation will be applied to future impacts.

Resources committed to construct ultimate GEC development may be reclaimed after plant closure. The natural gas and ULSFO burned as fuel will be a permanent commitment of those resources.

However, the overall benefits of the GEC will result in positive impacts. Operation of the GEC facility will contribute to the safe, adequate, and reliable supply of electricity at the lowest reasonable cost and in an acceptable environmental manner. This will be achieved with minimal negative impacts on the surrounding land use and community, and will help preserve or create employment in Duval County.

## **5.12 Variances**

No variances from applicable codes or standards will be required for the operation of the GEC.

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<sup>1</sup> Based on approximate values for Gross Output Factor 80%, 3,500 hours/year operation, 2.5% heat rate degradation at average annual ambient conditions, pipeline gas gross heating value (HHV) 1,000 BTU/scf.

<sup>2</sup> Based on approximate values for full load output and heat rate, 500 hours/year operation, 2.5% heat rate degradation at ISO conditions, ultra low sulfur distillate fuel oil gross heating value (HHV) 138,000 BTU/gal.

## 5.13 References

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8. Dennis E. Reece, Roger Belles, and Michael Brown, "Hydrogeologic Data Collected From the Kissimmee Planning Area, South Florida Water Management," Ground Water Division, South Florida Water Management, Technical Publication 84-2, 1984.
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10. Jonathan E. Shaw and Sharon M. Trost, "Hydrogeology of the Kissimmee Planning Area, South Florida Water Management District" Ground Water Division, South Florida Water Management District, Technical Publication 84-1, Part 1 and Part 2, 1984.
11. Herbert G. Stewart, Jr., "Ground-Water Resources of Polk County," Florida Geological Survey, Report of Investigations No. 44, 1966.

12. J. W. Stewart, "Areas of Natural Recharge to the Floridan Aquifer in Florida," U. S. Geological Survey, Map Series 98, 1980.
13. M., Treshow, *Environment and Plant Response*, McGraw-Hill Book Co., New York, 1970, p. 422.
14. *User's Manual: Cooling-Tower-Plume Prediction Code*, Electric Power Research Institute (EPRI), Argonne National Laboratory, April 1984.

## **6.0 Transmission Lines and Other Linear Facilities**

### **6.1 Transmission Lines**

No new offsite transmission facilities will be required for construction or operation of the proposed conversion project. The combined cycle unit will be interconnected to the existing onsite switching station immediately adjacent to an existing JEA transmission corridor. The electrical power will be transmitted from the switching center to the adjacent JEA 230 kV transmission lines.

### **6.2 Associated Linear Facilities**

One new linear facility will be installed with the conversion project. A new access road will be constructed from the existing entrance off Philips Highway to the site, a distance of approximately 0.5 mile. The road traverses the driving range area (JEA property), then crosses and follows the JEA transmission line corridor to the site. This will be an asphalt surfaced road with required stormwater management facilities. The Environmental Resource Permit application provided in Subsection 10.4.1 addresses the design and impacts of this access road. Because of the short length and minimal impacts of the road, this facility is described in greater detail in conjunction with the main site throughout this document.

No new offsite gas transmission facilities will be required for operation of the conversion project. The distribution lateral that will serve the site is being permitted and installed by TECO Peoples Gas in association with JEA's proposed simple cycle project, which is also currently being permitted. The lateral will be of adequate size to serve the ultimate build-out of the GEC.

### **6.3 Future Transmission and Linear Facilities**

As additional units are installed at the site, future transmission line facilities may be required. Any such facilities are not part of this SCA, but if required, they will be addressed in future applications.

## **7.0 Economic and Social Effects of Plant Construction and Operation**

### **7.1 Socioeconomic Benefits**

#### **7.1.1 Creation of Temporary and Permanent Jobs**

The GEC will create jobs for Duval County and the surrounding area during construction and operation. As outlined in Subsection 4.6.3, benefits during the conversion of the two simple cycle combustion turbines to a 2x1 combined cycle configuration include an estimated 2,547 man-months (212 man-years) of employment, and \$28.93 million in total wage benefits.

Duval County and the surrounding region will benefit not only from direct project labor, but also from the purchase of materials and supplies used in construction. Local purchases associated with power plant construction typically include lumber, concrete and gravel, fuel for onsite motors and vehicles, office supplies, and site services such as security and trash hauling. In addition, the construction workforce will purchase supplemental fuel, food, and other consumables as they commute during plant construction. The overall impacts of these indirect benefits are estimated as part of the multiplier impact analysis in Subsection 7.1.2.

The conversion of the facility will also have a longer-term direct employment impact, because the facility will employ 9 to 10 additional operational staff members for the combined cycle plant. The annual anticipated payroll for the combined cycle facility personnel is estimated at a total of \$800,000 inclusive of all benefits, overtime, and operations, and these are part of the fixed operations and maintenance (fixed O&M) costs of the converted facility. Other benefits will be generated when contract maintenance workers are brought into the area to maintain the unit, and operation of the facility will generate further advantages in the form of continued purchases of consumables for onsite use. These variable O&M purchases include expenditures for water, wastewater, contract maintenance, various site services, as well as office supplies and consumables. Total fixed O&M for the facility is estimated to be about \$4.12 million per year (2008 dollars), and variable nonfuel O&M is estimated to be approximately \$12.53 million (2008 dollars), based on an assumed 51 percent capacity factor.

#### **7.1.2 Additional Job Creation/Stimulation of Local Economies**

A multiplier effect will be created in the local economy as a result of the additional employment, income, and output associated with the conversion of the facility from a simple to combined cycle facility. The Jacksonville area will experience the majority of the impact because it will supply most of the personnel for construction and

operation of the plant. One way to estimate the multiplier impact of a new investment in a region is through the use of a regional input-output model, which can estimate an expected industry multiplier to be applied to the direct impact estimates. Input-output models typically use an accounting matrix that shows the change in output, earnings, or employment in all industries due to a change in investment in one industry. To estimate the impact of the GEC conversion, the Regional Input-Output Modeling System (RIMS II model), developed and maintained by the US Bureau of Economic Analysis, was used. The RIMS II model also includes multipliers for roughly 500 industry classifications and, as a static equilibrium model, can predict the total impact associated with an initial investment, although it does not predict the timing of impacts.

The RIMS II model requires the user to select a geographical area of study for which multipliers will be estimated. Typically, this will consist of contiguous counties near the investment location, sometimes referred to as the “primary impact area.” For the GEC analysis, the primary impact area was defined to include the counties of Baker, Clay, Duval, Nassau, and St. Johns.

After the primary impact area was selected, the RIMS II model simulation produced direct-effect multipliers for earnings and employment. The resulting multipliers can be applied to the direct employment and earnings associated with the construction and operational phases, and the result will produce a projection of the total regional impact arising from the two phases.

The multiplier results are summarized in Table 7.1-1. Listed within the table are the direct earnings and employment figures associated with GEC’s conversion, the projected indirect effects on earnings and employment, and the total estimated impact on regional earnings and employment. In total, the \$25.67 million in direct construction earnings is projected to generate \$49.30 million in regional earnings, and the direct man-years of employment will help generate a total of 434 man-years of regional employment. During operation, if the yearly fixed O&M costs of \$4.12 million occur locally, total indirect earnings would equal approximately \$3.79 million, bringing the total impact to \$7.91 million annually. An increased operational staff of 10 persons would also be expected to annually produce 10 indirect additional jobs for a total of 20 jobs.

The indirect economic effect of a new, large investment is always difficult to project with certainty. However, it can be safely concluded that the construction and operation associated with the conversion of the GEC facility will create substantial economic benefits to the primary impact area in the form of added earnings and employment. A majority of these benefits will impact those not directly involved with the plant’s construction and operation. This is an important factor when weighing the overall costs and benefits from the project to the region. The projected regional



economic benefits outlined above are in addition to the already stated benefit that the GEC facility has been determined as the best option for JEA. The attractiveness of the GEC as a plant site is based on its prime ability to provide a safe and reliable electricity supply for JEA at the lowest reasonable cost and in an environmentally acceptable manner.

**Table 7.1-1**  
**Projected Multiplier Impacts Associated with GEC Combined Cycle Facility**

Period	Impact Category	Earnings (\$ millions)	Employment (job-years)
Construction	Direct	\$25.67	212
	Indirect	\$23.63	222
	Total	\$49.30	434
Operation (annual earnings impacts based on fixed O&M expenditures)	Direct	\$4.12	10 (annual)
	Indirect	\$3.79	10 (annual)
	Total	\$7.91	20 (annual)

**7.1.3 Revenue Generation for State and Local Governments**

The facility will be owned and operated by JEA for the benefit of JEA customers. As a public/municipal tax exempt agency, JEA will not be required to pay property taxes. The local economy and public agency revenues will gain from the additional well-paying jobs and project purchases within the community.

**7.1.4 Creation or Improvement of Local Roads, Waterways, or Other Local Transportation Facilities**

No public roadway improvements or other transportation facilities are needed for the conversion of the facility, given the site’s location and minimal need for heavy, long-term traffic. The conversion will not create significant disruptions to the transportation network offsite.

**7.1.5 Increased Knowledge of the Environment**

The GEC plant site is not expected to have an impact on an increased knowledge of the environment. The overall positive impact of the GEC will be due both to proven technology and a site location that does not include sensitive areas with unique environmental attributes.

### **7.1.6 Increased Land Use Efficiency**

The GEC site increases the efficiency of area land use. The increased productivity from a given parcel of land is especially beneficial in areas of high economic growth, such as the impact area, because this allows other parcels of land to remain available for other, more lucrative uses.

## **7.2 Socioeconomic Costs**

### **7.2.1 Temporary External Costs**

Section 4.6 outlined the possibility of short-term external costs during the period of construction. This section summarizes key points of that discussion.

**7.2.1.1 Housing.** There are no anticipated negative housing impacts during the conversion construction or operation periods. The primary factor in determining the level of impact is the proximity of the construction workforce. Since there is a sizable construction workforce able to commute from Jacksonville, it is safe to conclude that most craft workforce requirements will be met through workers living within reasonable commuting distance for power plant construction. The potential for negative external impacts on many community facilities and services is considered minimal because the construction workforce will likely commute from existing residences.

**7.2.1.2 Traffic.** Traffic flow will temporarily increase near the site during the conversion construction. There will also be a minor, but insignificant, increase in traffic through the operational period. These impacts should be manageable since the concentration of commuting vehicles at the site occurs in a low density rural area.

**7.2.1.3 Aesthetic Disturbances.** The GEC conversion will not result in noticeable aesthetic disturbances to the Jacksonville community. This site is located in an area near a commercial/industrial corridor. The area is in the process of being redesignated as PBF and is, therefore, currently the subject of a Comprehensive Plan amendment. Other than the temporary elevation in traffic during construction, there should be very minimal aesthetic impacts. Stack heights are less than 200 feet; facilities are anticipated to only be visible from the industrial park immediately west of the site and through the transmission corridor from Philips Highway. Noise control equipment is included in project design to comply with City ordinances.

**7.2.1.4 Use of Water and Sewage Treatment Facilities.** The new GEC facility will use JEA-supplied reclaimed water for cooling tower makeup. A maximum of approximately 4.34 mgd may be required, with an average makeup amount of 3.15 mgd.

Wastewaters will be created from sanitary uses, oil/water separator effluent, cooling tower blowdown, and treated chemical wastewaters. Sanitary wastewaters, demineralizer wastewater, and oil/water separator effluent (clean water) will be routed to

an existing JEA sanitary system pipeline; cooling tower blowdown will be returned to the JEA reclaimed pipeline after blending.

**7.2.1.5 Use of Public Facilities and Services.** The construction workforce for the plant's conversion is expected to already live within reasonable commuting distances of the site. Consequently, there are no expected adverse effects on local schools or other public facilities as a result of the additional influx from the worker population.

Hospital and emergency service needs are also expected to be minimal because a safety plan will be developed for the construction and operation phase. Duval County and the Jacksonville area have several hospitals and health care facilities capable of treating all levels of medical needs, should there become a need for these services. The combined cycle unit is not expected to otherwise demand a significant increase in the area's services and facilities but, instead, will add needed power infrastructure.

### **7.2.2 Long-Term External Costs**

Despite JEA's acquisition of the driving range, the GEC is not anticipated to create long-term external impairments to recreational values, restrictions of access to land or water areas preferred for recreational use; deterioration of aesthetic and scenic values; restrictions on access to areas of scenic, historic, cultural, natural, or archeological value; the removal of land from present or contemplated alternative uses. The conversion of the GEC from a simple cycle to a combined cycle facility will not create adverse local meteorological conditions; reduction of regional products due to displacement of persons from the land proposed from the site; lost income from reduced tourism, commercial fishing, and real estate values in the adjacent to the proposed facility; or increased costs to local government for services required by the permanently employed workers and their families.

## 8.0 Site and Plant Design Alternatives

This optional chapter of this SCA will not be submitted as part of this application. An alternatives analysis is not anticipated because an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) is not required for the conversion project. An Environmental Information Document addressing alternatives will be provided to the US Army Corps of Engineers to support Section 404 Permit Application No. SAJ-2008-2310(SP-NBF) currently under review for the GEC simple cycle project.

The GEC is a proposed power plant site with area available and planned for expansion. The combined cycle unit will use several of the simple cycle facilities and systems.

## 9.0 Coordination

The following is a list of individuals within federal, state, regional, and local government agencies contacted for guidance or information concerning the conversion project.

### 9.1 Federal

**US Army Corps of Engineers, Jacksonville**  
Mr. Mark Evans, Jacksonville District

**US Fish & Wildlife Service, Jacksonville**  
Mr. Jay Herrington, South Florida Ecological Services Office

### 9.2 State

**Department of Environmental Protection**  
**Power Plant Siting Coordination, Tallahassee**  
Mr. Michael Halpin, Administrator  
Ms. Cindy Mulkey

**Air Resources Management Division, Bureau of Air Regulation, Tallahassee**  
Ms. Trina Vielhauer, Bureau Chief    Mr. Cleve Holladay  
Mr. Jeff Koerner                            Mr. Syed Arif

**Northeast District Office, Jacksonville**  
Mr. Jim Maher, SLERP Program Administrator

**Department of Community Affairs, Tallahassee**  
Mr. Joseph Addae-Mensa                Mr. Richard Deadman  
Ms. Kelly Martinson                    Ms. Brenda Winningham  
Mr. Craig Diamond                      Ms. Lynette Norr

**Department of Transportation, Jacksonville**  
Mr. Mark Kuhn  
Mr. David Lynch

**Florida Fish and Wildlife Conservation Commission, Tallahassee**  
Ms. Mary Ann Poole, Director, Office of Policy and Stakeholder  
Involvement

**St. Johns River Water Management District, Jacksonville**  
Ms. Caroline Silvers  
Mr. Jim Jett

**Florida Division of Historical Preservation, Tallahassee**

Ms. Laura Kammerer, State Historic Preservation Office

**Florida Natural Areas Inventory, Tallahassee**

Mr. Jonathan Oetting, Conservation Information Coordinator

**Northeast Florida Regional Council, Jacksonville**

Mr. Brian Teeple, CEO

Mr. Ed Lehman, Director, Planning & Development

Mr. Guy Parola, Administrator, Planning & Development

**9.3 Local**

**City of Jacksonville**

Mr. Ebenezer Gujjarlapudi, Director, Environmental & Compliance  
Department

Mr. Brad Thoburn, Director, Planning & Development Department

Mr. Richard Robinson

Mr. Vince Siebold

## 10.0 Permit Applications

This section identifies the permits and approvals required to construct and operate the GEC conversion project. The permit applications for state and local approvals are included for informational purposes and to support agency review of the project. The site certification application and the final site certification order and conditions of certification constitute the sole license of the state and any regional or state agency for the construction and operation of the project in accordance with Section 403.511(1), Florida Statutes. The exceptions to this are the Duval County Comprehensive Plan Amendment and Land Use Amendment applications, which have been submitted separately to the Department of Community Affairs and City of Jacksonville, respectively.

## 10.1 Federal Permit Applications and Approvals

### 10.1.1 316 Demonstrations

Not required.

### 10.1.2 NPDES Applications

Florida has been delegated authority by the EPA to administer the NPDES wastewater and stormwater programs in the state. These programs will be applicable to the project as provided below.

**10.1.2.1 Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities.** JEA holds a valid construction stormwater discharge permit for the GEC site, Permit No. FLR10GY43, issued in May 2008. A copy is included at the end of Section 10.1.

The existing *Stormwater Pollution Prevention Plan for Stormwater Discharges from Construction Activities* will be revised to address conversion project construction activities. A Notice of Termination will be submitted at the end of construction.

**10.1.2.2 Notice of Intent to Use Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity.** The FDEP requires a Notice of Intent for stormwater discharges associated with industrial activity (the operating combined cycle facility). A partially completed Notice of Intent is included at the end of Section 10.1. JEA will submit a completed Notice of Intent and the permit fee to the NPDES Stormwater Notices Center prior to operational discharges from the stormwater system. An operational Stormwater Pollution Prevention Plan will be prepared and implemented onsite at operation.

**10.1.2.3 Industrial User Discharge Permit Application.** JEA will comply with the Industrial Pretreatment Regulations. The draft application included at the end of Section 10.1 has been prepared to the extent possible based on conceptual system design. JEA will provide detailed engineering and design information in compliance with the anticipated Conditions of Certification.

### 10.1.3 Hazardous Waste Disposal Application

The GEC facility will generate small amounts of hazardous waste and must register the facility with the FDEP. A partially completed draft of Form 62-730.900(1)(b) is included at the end of Section 10.1. JEA will complete and submit this form prior to simple cycle facility construction. No change in generator status is anticipated during combined cycle operation.



#### **10.1.4 Joint Environmental Resource/Section 404 Permit Application**

The US Army Corps of Engineers (USACE) and the US Fish & Wildlife Service (USFWS) are reviewing (submitted to USACE on June 19, 2008) the potential environmental and wetlands impacts associated with the construction and operation of the simple cycle project. The USACE issued Public Notice No. SAJ-2008-2310 (SP-NBF) for the project on June 27, 2008. A copy of the Public Notice is included at the end of Section 10.1.

A Joint Environmental Resource Permit (ERP) Modification Application will be prepared and submitted to the USACE-Jacksonville District to address construction of the proposed new access road from Philips Highway to the site. This Modification Application will be similar to the application provided in Subsection 10.4.1.

#### **10.1.5 Prevention of Significant Deterioration (PSD) Permit Application**

The construction and operation of GEC in combined cycle mode will require a prevention of significant deterioration (PSD) air construction permit. The FDEP will review the PSD application in coordination with the EPA. The PSD Air Permit Application is attached under separate cover as Volume 3 of this SCA.

#### **10.1.6 Title IV Acid Rain Permit Application**

A completed Acid Rain application for GEC was filed with the FDEP in June 2008, and a copy is included at the end of Section 10.1.

#### **10.1.7 Coastal Zone Management Certification**

The Coastal Management Act of 1978 (Section 380.21-380.25, FS) requires that the Coastal Zone Management Section of FDEP be responsible for certification of consistency with the Florida Coastal Management Program for all federal licenses, permits, activities, and projects listed in Section 380.23 (3)(c), FS, when such activities are subject to federal consistency review and affect land or water use, are seaward of the jurisdiction of the state, or there is no state agency with sole jurisdiction for such consistency review. The requirements related to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act are addressed in Section 10.1.4. Initial review and issue of the ERP for the simple cycle project will demonstrate consistency with the Coastal Zone Management Act.

#### **10.1.8 Department of Energy Self-Certification**

The primary fuel for the conversion project is natural gas. ULSFO is the backup fuel. JEA will also use LNG as a fuel for the conversion project and future units when feasibly available.

The Power Plant and Industrial Fuel Use Act requires JEA to certify that, with the installation of additional equipment, the conversion project would be capable of firing an alternate fuel such as syngas from gasified coal as the primary energy source. A draft of the Self-Certification to be submitted is included at the end of Section 10.1.

#### **10.1.9 Federal Aviation Administration - Determination of No Hazard to Air Navigation**

The FAA requires that structures over 200 feet in height or within a specified distance of an airport be marked and lighted in accordance with the standards of the FAA Obstruction Marking and Lighting Advisory Circular 70/7460-1F. Although the conversion stacks will be less than 200 feet in height, a construction crane, likely 200 feet or greater in height, will be onsite during construction. The application will be completed on-line prior to construction using FAA Form 7460-1.

#### **10.1.10 US Fish & Wildlife Service Review**

The USFWS is reviewing (as submitted to USACE on June 19, 2008) the potential environmental and wetlands impacts associated with construction and operation of the simple cycle project. A Joint ERP Modification Application will be prepared to address the construction of the proposed new access road from Philips Highway to the site. That application will be reviewed by the USFWS in consultation with the USACE-Jacksonville District office.

#### **10.1.11 Oil Pollution Prevention**

The amount of reserve fuel oil and equipment oil storage onsite during construction and operation of the simple cycle facility will require JEA to comply with the EPA oil pollution prevention regulations. JEA will prepare an amendment to the SPCC Plan prepared for the simple cycle facility to address conversion construction activities, and revise the operations aspects of the plan to address the conversion facilities and activities.

**10.1.2.1 Greenland Energy Center FLR10GY43  
Notice of Intent (NOI) to Use Generic Permit for Stormwater Discharge  
from Large and Small Construction Activities**



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

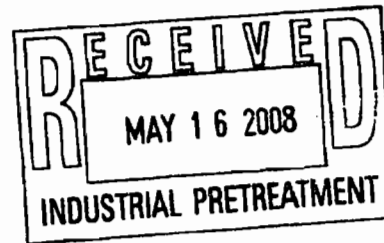
Charlie Crist  
Governor

Jill Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

May 8, 2008

Jay A Worley  
JEA  
21 W Church St  
Jacksonville, FL 32202



RE: **Facility ID: FLR10GY43**  
Greenland Energy Center  
County: Duval

Dear Permittee:

The Florida Department of Environmental Protection has received and processed your *Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities* (NOI) and the accompanying processing fee. This letter acknowledges that:

- your NOI is complete;
- your processing fee is paid-in-full; and
- you are covered under the *Generic Permit for Stormwater Discharge from Large and Small Construction Activities* (CGP), DEP Document No. 62-621.300(4)(a).

Your project identification number is **FLR10GY43**. Please include this number on all future correspondence to the Department regarding this permit.

This letter is not your permit. A copy of your permit, i.e., the CGP, is available online at [www.dep.state.fl.us/water/stormwater/npdes/docs/cgp.pdf](http://www.dep.state.fl.us/water/stormwater/npdes/docs/cgp.pdf) or by contacting the NPDES Stormwater Notices Center.

Your permit coverage became effective **May 4, 2008** and will expire **May 3, 2013**. To terminate your coverage prior to this expiration date, you must file a *National Pollutant Discharge Elimination System (NPDES) Stormwater Notice of Termination*, DEP Form 62-621.300(6) (NOT). An NOT must be filed within 14 days of either (a) your final stabilization of the site or (b) your relinquishment of control of the construction activities to a new operator. To renew your coverage beyond the expiration date, you

Facility ID: FLR10GY43  
Page 2  
May 8, 2008

must submit a new NOI and processing fee to the Department no later than two days before coverage expires.

Until your permit coverage is terminated, modified, or revoked, you are authorized to discharge stormwater from the construction site referenced in your NOI to surface waters in accordance with the terms and conditions of the CGP. Some key conditions of the CGP are:

- implementation of your stormwater pollution prevention plan (SWPPP);
- conducting and documenting routine inspections; and
- retaining the records required by the permit (including your SWPPP) at the construction site or the alternate location specified in your NOI.

If you have any questions concerning this acknowledgment letter, please contact the NPDES Stormwater Notices Center at (866) 336-6312 or (850) 297-1232.

#### CERTIFICATE OF SERVICE

THE UNDERSIGNED HEREBY CERTIFIES that the foregoing acknowledgment of coverage under the Construction Generic Permit Rule 62-621.300(4), F.A.C., was mailed by Science Applications International Corporation, working under FDEP Contract Number WM908, on behalf of the Florida Department of Environmental Protection, on the date indicated below via the United States Postal Service.

Name: Robin L. Collins Date: 5/8/2008

***10.1.2.2 Notice of Intent to Use Multi-Sector Generic Permit for Stormwater  
Discharge Associated with Industrial Activity***



# NOTICE OF INTENT TO USE MULTI-SECTOR GENERIC PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY (RULE 62-621.300(5), F.A.C.)

This form is to be completed and submitted to the Department before use of the Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity (MSGP) provided in Rule 62-621.300(5), F.A.C. The type of facility or activity that qualifies for use of this generic permit, the conditions of the permit, and additional requirements to request coverage are specified in Rule 62-621.300(5)(a), F.A.C. Note that additional requirements for requesting coverage include submittal of the applicable generic permit fee pursuant to Rule 62-4.050, F.A.C. You should familiarize yourself with the generic permit and the attached instructions before completing this form. **Please print or type information in the appropriate areas below.**

**I. IDENTIFICATION NUMBER:** Facility ID \_\_\_\_\_

**II. APPLICANT INFORMATION:**

A. Operator Name: JEA		
B. Address: 21 W. Church Street		
C. City: Jacksonville	D. State: FL	E. Zip Code: 32202
F. Operator Status: M	G. Responsible Authority:	
	H. Phone No.: 904-665-	

**III. FACILITY LOCATION INFORMATION:**

A. Facility Name: Greenland Energy Center		
B. Street Address: 12121 Philips Highway		
C. City: Jacksonville	D. State: FL	E. Zip Code: 32256
F. County: Duval	G. Latitude: 30° 15' 45"	Longitude: 81° 51' 88"
H. Is the facility located on Indian lands? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	I. Water Management District: SJRWMD	
J. Facility Contact: Mike Lawson	K. Phone No.: 904-665-4837	

**IV. FACILITY ACTIVITY INFORMATION:**

A. SIC or Designated Activity Code(s)		Primary: SE	Secondary:
B. Monitoring code (1, 2, 3, or 4): 2		C. Will construction be conducted for stormwater controls? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
D. Other Existing Permits		ERP No.: 16-289373-001-EI	Wastewater Permit No.: Other (specify): SCA Order #

**V. DISCHARGE INFORMATION**

A. MS4 Operator Name:							
<b>B. Discharge Location(s):</b>							
Outfall No.	Latitude			Longitude			Receiving Water Name
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
1							Big Davis Creek via overland flow.

**VI. CERTIFICATION<sup>1</sup>:**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title (Type or Print):
--

Signature: \_\_\_\_\_

Date Signed: \_\_\_\_\_

<sup>1</sup> Signatory requirements are contained in Rule 62-620.305, F.A.C.



**10.1.2.3 JEA Industrial Pretreatment  
Industrial User Discharge Permit (IUDP) Application**



INDUSTRIAL PRETREATMENT

INDUSTRIAL USER DISCHARGE PERMIT (IUDP) APPLICATION

Note: Please read and follow all attached instructions prior to completing this application.

SECTION A. GENERAL INFORMATION

1. Facility Name: Greenland Energy Center

2. Facility Address: 12121 Philips Highway

City: Jacksonville State: Florida Zip: 32258

3. Mailing Address: 12121 Philips Highway

City: Jacksonville State: Florida Zip: 32258

4. Designated authorized representative(s) of the facility (attach similar information for each authorized representative):

Name: Athena Mann

Title: VP Environmental Services, JEA

Address: 21 W. Church Street  
(if different from above)

City: Jacksonville State: Florida Zip: 32202-3139

Phone #: 904 665-6252

Fax #: 904 665-7376

E-Mail: mannat@jea.com

5. Designated Facility Contact (must be locally based):

Name: Mike Lawson

Title: Project/Plant Manager, JEA

Phone #: 904 665-4837

Fax #: 904 665-7376

E-Mail: lawsmn@jea.com

6. Year facility was established at present location: 2009

7. Please check one of the following:

Existing Industrial Discharger.  
 Proposed Industrial Discharger. Anticipated start date of first discharge: June 2010

8. Is this application submittal for a permit renewal?

Yes  
 No

SECTION B. PRODUCT OR SERVICE INFORMATION

1. If your facility employs (or will be employing) processes in any of the industrial categories or business activities listed below (regardless of whether they generate wastewater, waste sludge, or hazardous waste), place a check beside the category or business activity (check all that apply). Please note, a facility with processes listed below may be covered by Federal pretreatment standards. These facilities are known as "Categorical Users". If the categories or activities are not listed below, please check "Other" and fill in the blank(s).

- |   |  |
|---|--|
| <input type="checkbox"/> Aluminum Forming                       | <input type="checkbox"/> Battery Manufacturer        |
| <input type="checkbox"/> Builders Paper/Board Mills             | <input type="checkbox"/> Canned/Preserved Fruit/Veg. |
| <input type="checkbox"/> Canned/Preserved Seafood               | <input type="checkbox"/> Cement                      |
| <input checked="" type="checkbox"/> Centralized Waste Treatment | <input type="checkbox"/> Coil Coating                |
| <input type="checkbox"/> Copper Forming                         | <input type="checkbox"/> Dairy Products              |
| <input type="checkbox"/> Electronics/Semi-conductors            | <input type="checkbox"/> Electroplating/Metal        |
| <input type="checkbox"/> Equipment/Transportation               | <input type="checkbox"/> Finishing                   |
| <input type="checkbox"/> Cleaning                               | <input type="checkbox"/> Equipment/Transportation    |
| <input type="checkbox"/> Feed Lots/Grain Mills                  | <input type="checkbox"/> Repair                      |
| <input type="checkbox"/> Ferroalloys                            | <input type="checkbox"/> Fertilizer/Pesticides       |
| <input type="checkbox"/> Food/Beverage Products                 | <input type="checkbox"/> Glass Making                |
| <input type="checkbox"/> Hospital/Medical Care                  | <input type="checkbox"/> Inorganic Chemicals         |
| <input type="checkbox"/> Iron & Steel                           | <input type="checkbox"/> Laboratory (medical)        |
| <input checked="" type="checkbox"/> Laboratory (non-medical)    | <input type="checkbox"/> Laundries (commercial)      |
| <input type="checkbox"/> Laundries (industrial)                 | <input type="checkbox"/> Leather Tanning & Finishing |
| <input type="checkbox"/> Meat Products                          | <input type="checkbox"/> Metal Molding & Casting     |
| <input type="checkbox"/> Misc. Chemicals                        | <input type="checkbox"/> Nonferrous Metals           |
| <input type="checkbox"/> Organic Chemicals                      | <input type="checkbox"/> Paint/Ink Formulation       |
| <input type="checkbox"/> Paving & Roofing Materials             | <input type="checkbox"/> Petroleum                   |
| <input type="checkbox"/> Pharmaceuticals                        | <input type="checkbox"/> Phosphates                  |
| <input type="checkbox"/> Photographics/Printing                 | <input type="checkbox"/> Plastics Molding/Forming    |
| <input type="checkbox"/> Plastics/Synthetic Fibers              | <input type="checkbox"/> Pulp/Paper/Paperboard       |
| <input type="checkbox"/> Rubber Products                        | <input type="checkbox"/> Soap/Detergents             |
| <input checked="" type="checkbox"/> Steam Electric              | <input type="checkbox"/> Sugar Processing            |
| <input type="checkbox"/> Textiles                               | <input type="checkbox"/> Timber                      |
| <input type="checkbox"/> Warehouse/Distribution                 |  |

Other \_\_\_\_\_

2. On a separate sheet, please describe (in detail) all industrial processes, including those that generate wastewater.

3. Indicate the applicable North American Industry Classification System (NAICS) code(s) for all processes. If more than one applies, list in descending order of importance.

a) 221112                      b) 221121                      c) \_\_\_\_\_

SECTION C. FACILITY OPERATIONAL CHARACTERISTICS

1. What is the average number of employees per shift?

	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
1st Shift	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>	<u>16</u>
2nd Shift	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>

3rd Shift    3       3       3       3       3       3       3

2. What are the start and end times for each shift (military time only):

1st 0700-1500                      2nd 1500-2300                      3rd 2300-0700

3. Indicate date(s) and reason(s) for any scheduled shutdowns (Vacation, Holiday, Maintenance, etc.):

Date(s)	Reason(s)
<u>N/A</u>	<u>N/A</u>
_____	_____

4. Are there any peak periods associated with production?

  X   Yes: Indicate when: See Site Certification Application (SCA)  
       No

5. a) Please indicate if major processes/operations are:  
Batch \_\_\_\_\_ Continuous   X   or Both \_\_\_\_\_

b) If both, please indicate the approximate percentage of each:  
Batch \_\_\_\_\_ Continuous \_\_\_\_\_

6. On a separate sheet, please list ALL chemicals used and/or stored on site. Include ALL hazardous, corrosive, explosive, flammable, or toxic materials. Indicate storage location(s) and approximate quantity of each chemical. If trade names are used, list the chemical constituents and indicate if Material Safety Data Sheets are available for these products.

7. Please submit a detailed facility diagram showing the water into and out of the facility. Show map orientation and include location of water meters, sewer lines, floor drains, sinks, and lavatories. Number each unit process and specify where operating, cooling, or rinse waters (contact/non-contact) are used at this facility. Mark point(s) of discharge into the sewer system. NOTE: A blueprint of the facility showing the above listed items may be submitted in lieu of a drawing.

SECTION D. WATER USAGE

1. Describe water supply source(s). Include account numbers where applicable. Do not include information on irrigation meters or fire protection meters.

SOURCE	QUANTITY (gal/month)	ACCOUNT # (if applicable)
<u>  X  </u> Municipal water supply	<u>3,893,000 (E)</u>	<u>  N/A  </u>
_____ Private well	_____	<u>  N/A  </u>
_____ Surface water	_____	_____
<u>  X  </u> Reclaimed water	<u>132,130,000 (E)</u>	<u>  N/A  </u>

2. Provide the following information for each water meter:

#	MAKE	MODEL #	SIZE
<u>Later</u>	_____	_____	_____
_____	_____	_____	_____

The location of each meter should also be indicated by number on the facility diagram required in Section C (7).

3. List average water usage at this facility.

TYPE	AVERAGE WATER USAGE (gal/day)	SPECIFY ESTIMATED (E) OR MEASURED (M)
Contact Cooling Water	<u>See Figures 3.5-1 and 3.5-2 of SCA</u>	
Non-contact Cooling Water	<u>See Figures 3.5-1 and 3.5-2 of SCA</u>	
Boiler Feed	<u>See Figures 3.5-1 and 3.5-2 of SCA</u>	
Process/Operation	<u>See Figures 3.5-1 and 3.5-2 of SCA</u>	
Sanitary	<u>See Figures 3.5-1 and 3.5-2 of SCA</u>	
Plant/Equipment Cleaning	<u>See Figures 3.5-1 and 3.5-2 of SCA</u>	
Contained in Product	<u>N/A</u>	
Other(s) (specify):	<u>See Figures 3.5-1 and 3.5-2 of SCA</u>	
_____	_____	_____
_____	_____	_____
Total Usage		

4. Describe any water treatment or conditioning processes applied to incoming water ONLY. (Use additional sheets if necessary.)

See Figures 3.5-1 and 3.5-2 of SCA

\_\_\_\_\_

5. a) Is any water recycled?  Yes  No

b) If yes, please describe each recycling process. (Use additional sheets if necessary.)

See Section 3.5 of SCA

\_\_\_\_\_

SECTION E. WASTEWATER DISCHARGE

1. Does (or will) this facility discharge any wastewater other than from restrooms to the JEA's sewer system?

Yes: Please complete remainder of this Section.  
 No: Please skip to SECTION F.

2. Does this facility have a "Sewer Only" account?

\_\_\_ Yes: Provide the following information:

#	ACCOUNT	MAKE/MODEL #	SIZE
_____	_____	_____	_____

The location of each meter should also be indicated by number on the facility diagram required in Section C (7).

X No

3. Please indicate if process wastewater discharge (i.e. do not include wastewater from restrooms) is: Batch \_\_\_, Continuous X, or Both \_\_\_ (if both, complete (a) & (b) below).

a) If wastewater discharge is batch, please provide the following information:

- 1) Frequency: \_\_\_\_\_ times per day.
- 2) Average volume: \_\_\_\_\_ gallons per day.
- 3) Flow rate: \_\_\_\_\_ gallons/minute.
- 4) Percent of total discharge: \_\_\_\_\_.
- 5) Time of discharge(s): \_\_\_\_\_ at \_\_\_\_\_  
(days of week) (hours of day)

b) If wastewater discharge is continuous, please provide the following information (new facilities may estimate).

1) Hours of discharge (ex: 0700-1500, 0700-0700):

Sun.	Mon.	Tues.	Wed.
<u>0000-2400</u>	<u>0000-2400</u>	<u>0000-2400</u>	<u>0000-2400</u>
Thur.	Fri.	Sat.	
<u>0000-2400</u>	<u>0000-2400</u>	<u>0000-2400</u>	

- 2) a. Peak hourly flow rate (gph): 4,200 (E)
- b. Maximum daily flow rate (gpd): 100,000 (E)
- c. Annual daily average (gpd): 52,000 (E)

d. For facilities subject to Federal Categorical production based standards, please attach long term production and flow data for this facility, for the fiscal year preceding this application. (New facilities in operation less than 1 year must comply with this requirement by the 14th month of operation.)

N/A

4. Please submit a process flow diagram for each major activity in which wastewater is (or will be) generated. These diagrams should depict the flow of materials, products, water, and wastewater from the start of each activity to its completion, showing all unit processes. Indicate which processes use water and which generate waste streams. Include the average daily and maximum daily volume of each waste stream. (New facilities may estimate). If estimates are used for flow data, this MUST be indicated by an "E". Number each unit process having wastewater discharges to the sewer system. Use these numbers when showing unit processes in the facility diagram in SECTION C.
5. **CATEGORICAL USERS ONLY:** List the average and maximum discharge flows, and type of discharge for each process or proposed process. Include the reference number from the process flow diagram that corresponds to each process. New facilities may estimate each discharge. (Use additional sheets if necessary.)

#	REGULATED PROCESS	AVERAGE FLOW (gpd)	MAXIMUM FLOW (gpd)	TYPE OF DISCHARGE (batch, continuous, none)
_____	<u>Cooling Tower Blowdown</u>	<u>780,000</u>	<u>1,079,000</u>	<u>Continuous</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
#	UNREGULATED PROCESS	AVERAGE FLOW (gpd)	MAXIMUM FLOW (gpd)	TYPE OF DISCHARGE (batch, continuous, none)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
#	DILUTION	AVERAGE FLOW (gpd)	MAXIMUM FLOW (gpd)	TYPE OF DISCHARGE (batch, continuous, none)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. **CATEGORICAL USERS ONLY:** Please provide the following information if you are subject to Total Toxic Organic (TTO) requirements:
- a) Does (or will) this facility use any of the organics listed under the TTO standards of the applicable categorical pretreatment standards published in the Code of Federal Regulations? \_\_\_\_\_ Yes  X  No
- b) Is a Baseline Monitoring Report (BMR) on file? \_\_\_\_\_ Yes  X  No
- c) Has a Toxic Organic Management Plan (TOMP) been developed?  
 \_\_\_\_\_ Yes: Copy is on file with Industrial Pretreatment.  
 X  No

7. **NON-CATEGORICAL USERS ONLY:** List the average and maximum discharge flows, and type of discharge for each process or proposed process. Include the reference number from the process flow diagram that corresponds to each process. New facilities may estimate each discharge. Indicate estimates with an "E".

#	PROCESS DESCRIPTION	AVERAGE FLOW (gpd)	MAXIMUM FLOW (gpd)	TYPE OF DISCHARGE (batch, continuous, none)
_____	N/A	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

8. a) Do you have (or plan to have) the following equipment at this facility's sample point?

Present:	Sampling Equipment	_____	Yes	_____	No	<u>X</u>	N/A
	pH monitor	_____	Yes	_____	No	<u>X</u>	N/A
	Flow Meter	_____	Yes	_____	No	<u>X</u>	N/A
Planned:	Sampling Equipment	_____	Yes	<u>X</u>	No	_____	N/A
	pH monitor	_____	Yes	<u>X</u>	No	_____	N/A
	Flow Meter	<u>X</u>	Yes	_____	No	_____	N/A

b) If you answered YES to any of the above, please indicate the present and/or planned location of the equipment on the facility diagram (Section C, 7), and describe the equipment below:

Later

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9. a) Are any process changes or expansions planned during the next year that would change volume or flow characteristics? (Consider all processes: production, recovery, etc.) N/A \_\_\_\_\_ Yes \_\_\_\_\_ No

b) If yes, describe these changes and their effects on present volume and flow characteristics. (Use additional sheets if necessary).

---



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10. a) Does this facility currently reuse or plan to reuse materials, and/or use or plan to use a water reclamation system?

X Yes: Please complete the remainder of this Section.  
 \_\_\_\_\_ No: Skip to Section F.

b) If yes, on a separate sheet, please describe the recovery process(es), substance(s) recovered, percent recovered and the concentration in the spent solution(s). Use the reference number from the process flow diagram that corresponds to the process(es) being described.

See SCA Section 3.5

---



SECTION F. CHARACTERISTICS OF WASTEWATER DISCHARGE

1. All Existing & New Industrial Users are to complete the list below by indicating what pollutants will be present or are suspected to be present in the waste streams. Please place a **P** (expected to be present), **S** (may be present), or **O** (will not, be present) in the column across from each parameter. DO NOT LEAVE ANY BLANKS.

Acenaphthene	O
Acenaphthylene	O
Acrolein	O
Acrylonitrile	O
Aldrin	O
Anthracene	O
Benzene	O
Benzidine	O
Benzo (a) anthracene	O
Benzo (a) pyrene	O
Benzo (b) fluoranthene	O
Benzo (g,h,i) perylene	O
Benzo (k) fluoranthene	O
a-BHC (alpha)	O
b-BHC (beta)	O
d-BHC (delta)	O
g-BHC (gamma)	O
Bis (2-chloroethyl) ether	O
Bis (2-chloroethoxy) methane	O
Bis (2-chloroisopropyl) ether	O
Bis (chloromethyl) ether	O
Bis (2-ethylhexyl) phthalate	O
Bromodichloromethane	O
Bromoform	O
Bromomethane	O
4-bromophenylphenyl ether	O
Butylbenzylphthalate	O
Carbon tetrachloride	O
Chlordane	O
4-chloro-3-methylphenol	O
Chlorobenzene	O
Chloroethane	O
2-chloroethylvinyl ether	O
Chloroform	O
Chloromethane	O
2-chloronaphthalene	O
2-chlorophenol	O
4-chlorophenylphenyl ether	O
Chrysene	O
4,4'-DDD	O
4,4'-DDE	O
4,4'-DDT	O
Dibenzo (a,h) anthracene	O
1,2-dichlorobenzene	O
1,3-dichlorobenzene	O
1,4-dichlorobenzene	O
3,3-dichlorobenzidine	O
Dichlorodifluoromethane	O
1,1-dichloroethane	O
1,2-dichloroethane	O
1,1-dichloroethene	O
trans-1,2-dichloroethene	O
2,4-dichlorophenol	O
1,2-dichloropropane	O

1,3-dichloropropene (cis & trans)	0
Dieldrin	0
Diethyl phthalate	0
2,4-dimethylphenol	0
Dimethyl phthalate	0
Di-n-butyl phthalate	0
Di-n-octyl phthalate	0
4,6-dinitro-2-methylphenol	0
2,4-dinitrophenol	0
2,4-dinitrotoluene	0
2,6-dinitrotoluene	0
1,2-diphenylhydrazine	0
Endosulfan I	0
Endosulfan II	0
Endosulfan sulfate	0
Endrin	0
Endrin aldehyde	0
Ethylbenzene	0
Fluoranthene	0
Heptachlor	0
Heptachlor epoxide	0
Hexachlorobenzene	0
Hexachlorobutadiene	0
Hexachlorocyclopentadiene	0
Hexachloroethane	0
Indeno (1,2,3-cd) pyrene	0
Isophorone	0
Methylene chloride	0
Napthalene	0
Nitrobenzene	0
2-nitrophenol	0
4-nitrophenol	0
N-nitrosodimethylamine	0
N-nitrosodi-n-propylamine	0
N-nitrosodiphenylamine	0
PCB-1016	0
PCB-1221	0
PCB-1232	0
PCB-1242	0
PCB-1248	0
PCB-1254	0
PCB-1260	0
Pentachlorophenol	0
Phenanthrene	0
Phenol	0
Pyrene	0
2,3,7,8-tetrachlorodibenzo- p-dioxin (TCDD)	0
1,1,2,2-tetrachloroethane	0
Tetrachloroethene	0
Toluene	0
Toxaphene	0
1,2,4-trichlorobenzene	0
1,1,1-trichloroethane	0
1,1,2-trichloroethane	0
Trichloroethylene	0
Trichlorofluoromethane	0
2,4,6-trichlorophenol	0
Vinyl chloride	0

Antimony (Total) 0  
 Arsenic (Total) 0  
 Beryllium (Total) 0  
 Cadmium (Total) 0  
 Chromium (Total) 0  
 Copper (Total) 0  
 Lead (Total) 0  
 Mercury (Total) 0  
 Nickel (Total) 0  
 Selenium (Total) 0  
 Silver (Total) 0  
 Thallium (Total) 0  
 Zinc (Total) 0

Oil/Grease (Petroleum) P(<15 mg/L)  
 Cyanide (Total) 0

Acid/Alkaline Solutions (specify):  
 \_\_\_\_\_ 0  
 \_\_\_\_\_  
 \_\_\_\_\_

Radioactive Material /Other (specify):  
 \_\_\_\_\_ 0  
 \_\_\_\_\_  
 \_\_\_\_\_

2. a) Are samples collected by this facility \_\_\_\_\_, by an outside laboratory \_\_\_\_\_, or by both X?
- b) Are sample analyses performed at this facility \_\_\_\_\_, by an outside laboratory \_\_\_\_\_, or by both X?
- c) Please complete the following if an outside laboratory is used for any monitoring activities:

Name: Later

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone #: \_\_\_\_\_

Parameter(s) collected and/or analyzed: \_\_\_\_\_

3. Indicate method(s) used to collect wastewater discharge sample(s) (composite or grab) and describe where sample(s) is(are) collected (end of pipe, end of process, dedicated sample point, sump, etc.). The sample collection point should be indicated by number on the facility diagram required in Section C (7). Use additional sheets if necessary.

SAMPLE METHOD	SAMPLE COLLECTION POINT
<u>Later</u>	_____
_____	_____

SECTION G. WASTEWATER TREATMENT

1. a) Is any form of wastewater treatment used prior to discharge?

Yes: Complete remainder of this Section.  
 No: Skip to SECTION H.

b) If yes, check the appropriate type of treatment used for each waste stream treated prior to discharge.

<input type="checkbox"/> Air Flotation	<input type="checkbox"/> Biological Treatment
<input type="checkbox"/> Centrifuge	<input type="checkbox"/> Chemical Precipitation
<input type="checkbox"/> Chlorination	<input type="checkbox"/> Cyclone Separator
<input type="checkbox"/> Filtration	<input type="checkbox"/> Flow Equalization
<input checked="" type="checkbox"/> Oil/Water Separation	<input type="checkbox"/> Grease Trap
<input type="checkbox"/> Ion Exchange	<input type="checkbox"/> Neutralization
<input type="checkbox"/> Ozonation	<input type="checkbox"/> Reverse Osmosis
<input type="checkbox"/> Sedimentation	<input type="checkbox"/> Solvent Separation
<input type="checkbox"/> Spill Protection	<input type="checkbox"/> Other (specify):

\_\_\_\_\_

\_\_\_\_\_

2. On a separate sheet, briefly describe the operation of the wastewater treatment system(s). Include chemicals used and what they are used for.

3. a) Please indicate if wastewater treatment is Batch , Continuous  or Both .

b) If batch, specify frequency, duration and volume of each discharge:

\_\_\_\_\_

4. Please submit a detailed process flow diagram of the wastewater treatment system. Include process equipment, by-product disposal method, waste/by-product volumes, design and operating conditions, etc. Mark point(s) of discharge into the sewer system.

See SCA Figures 3.5-1 and 3.5-2

5. a) Do you have a treatment operator?  Yes  No

b) If yes, please fill in the following for each operator:

Name: Later

Title: \_\_\_\_\_

Phone #: \_\_\_\_\_

Full Time: \_\_\_\_\_ (specify hours)

Part Time: \_\_\_\_\_ (specify hours)

6. Do you have a standard operation/maintenance (O&M) manual on the correct operation of your treatment equipment?

Yes: (If yes, submit a copy with this application)  
 No

SECTION H. SPILL PREVENTION

1. a) Does this facility have floor drains in the manufacturing, chemical storage or pretreatment area(s)?  Yes  No

b) If yes, where do these floor drains discharge to:

Floor drains are collected and treated in an oil water separator before discharge to the sewer system.

2. Does this facility have an Accidental Discharge & Slug Control Plan (ADSCP) designed to prevent or minimize the potential of spills or slug discharges from entering the sewer system?

Furnished Later

Yes  
 No

SECTION I. NON-DISCHARGED WASTE

1. Are any liquid or solid wastes generated that are NOT discharged to the sanitary sewer system?

Yes: Complete the remainder of this Section.  
 No: Skip to SECTION J.

2. Check the appropriate waste generated, and indicate the quantity and disposal method used (hauled off-site, recycled/reused, incinerated, etc.).

TYPE OF WASTE GENERATED	ESTIMATED QUANTITY (gal/year)	DISPOSAL METHOD USED
<input type="checkbox"/> Acids, Alkalies	_____	_____
<input type="checkbox"/> Dyes, Inks	_____	_____
<input type="checkbox"/> Heavy Metals	_____	_____
<input type="checkbox"/> Inorganic Compounds	_____	_____
<input checked="" type="checkbox"/> Oil/Grease	<u>&lt; 150</u>	<u>Licensed Disposal Facility</u>
<input checked="" type="checkbox"/> Organics (Solvents)	<u>&lt; 50</u>	<u>Licensed Disposal Facility</u>
<input checked="" type="checkbox"/> Paints	<u>&lt; 50</u>	<u>Licensed Disposal Facility</u>
<input type="checkbox"/> Pesticides	_____	_____
<input type="checkbox"/> Petroleum Waste	_____	_____
<input type="checkbox"/> Sludge	_____	_____
<input type="checkbox"/> Other (specify _____)	_____	_____

3. On a separate sheet, list the following information for each hauling firm that is used to dispose of the above listed wastes: Company Name, Address, Applicable Permit #, type waste handled, and final disposal site.

SECTION J. AUTHORIZED REPRESENTATIVE STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

---

Name

---

Signature

(Seal)

---

Title

---

Date

## INSTRUCTIONS FOR THE IU DP APPLICATION

The applicant is required to supply information regarding ALL processes at this facility. All questions MUST be answered. If a question is not applicable, please clearly indicate so by placing N/A next to the question. Each attachment should be clearly marked as to the Section and question # that it pertains to; please do not insert attachments between application pages.

The application may be typed or neatly printed. If the application is incomplete or not legible, it will be returned to the applicant upon noting the deficiency. In accordance with JEA's *Rules and Regulations for Water and Sewer Service*, the applicant shall be given thirty (30) days to correct the deficiency. If the applicant does not correct the application within that period of time, the application will be submitted to the Vice President, Environmental Group, with a recommendation that it be denied. The applicant will be notified of this action in writing. Upon receipt of such notice, the applicant has ten (10) days to submit a written request for an administrative hearing to discuss this action.

### SECTION A. GENERAL INFORMATION

1. Enter the facility's legal name. Do not use an informal name.
2. This is the physical location of the facility to be permitted.
3. Provide the mailing address where correspondence from the Office of Industrial Pretreatment may be sent.
4. Please refer to the handout on "Signatory Requirements for Industrial Users" for completing this question. Provide all the names of the authorized representatives for this facility. All permit-related correspondence submitted to the Office of Industrial Pretreatment must be signed by one of these representatives.
5. Provide the name of a person who is thoroughly familiar with the operations of this facility. This person should be a local representative of the company (i.e.: Plant Manager, Environmental Safety Officer, etc.).

### SECTION B. PRODUCT AND SERVICE INFORMATION

1. If you have any questions about how to categorize your business activity, contact the Office of Industrial Pretreatment for technical guidance.
3. Indicate the North American Industry Classification System (NAICS) code number for all applicable processes. Refer to most recent Edition of the NAICS *United States* manual. Note: NAICS(1997) replaces SIC(1987).

### SECTION C. FACILITY OPERATIONAL CHARACTERISTICS

7. An arrow showing north, as well as the map scale must be shown. The location of each existing and proposed sampling location and facility sewer lines must be clearly identified, as well as all sanitary and wastewater discharge lines. Number each unit process discharging wastewater to the JEA's sewer system.

#### SECTION D. WATER USAGE

3. Contact cooling water is water that comes into contact with process materials, thereby becoming contaminated. Non-contact cooling water does not come into contact with process materials. Sanitary only includes water used for hygiene purposes. Plant and equipment wash down includes water specifically used for cleaning the facility. If sanitary flow is not metered, provide an estimate based on 15 gallons per day (gpd) for each employee. Indicate estimates of usage with an "E".

#### SECTION E. WASTEWATER DISCHARGE

3. (b) Please use the following abbreviations for the days of the week: Sunday (U), Monday (M), Tuesday (T), Wednesday (W), Thursday (R), Friday (F), and Saturday (S).
4. Assign a sequential reference number to each process starting with #1. To determine your average daily volume and maximum daily volume of wastewater flow, you may have to read water meters, sewer meters, or make estimates of volumes that are not directly measurable. Indicate estimates of flow with an "E".
5. Categorical Users are to report average daily and maximum daily wastewater flows from every regulated, unregulated, and dilution process. Regulated waste stream - wastewater from an industrial process that is regulated for a particular pollutant by a categorical pretreatment standard. Unregulated waste stream - wastewater from an industrial process that is not regulated by a categorical pretreatment standard and is not defined as a dilution waste stream. Dilution waste streams - include sanitary wastewater, boiler blow down, non-contact cooling water, stormwater streams, demineralizer backwash streams, and process waste streams from certain industrial subcategories exempted by EPA from categorical pretreatment standards.
6. The individual organic compounds that make up the Total Toxic Organic (TTO) value and the minimum reportable quantities differ according to the particular industrial category. For additional information, refer to 40 CFR 405-471 for your specific pretreatment requirements.
8. Indicate the equipment used or planned to be used to monitor the facility's final effluent. Do not list equipment internal to the pretreatment system.

#### SECTION J. AUTHORIZED SIGNATURES

The application must be signed by one of the representatives listed in Section A(4) and in accordance with the handout on "Signatory requirements for Industrial Users". Please print your proper name and title in the appropriate spaces. If you have a company seal, please attach in the area designated "Seal". Please make sure the application is signed and dated before returning to our office.



***10.1.3 Hazardous Waste Disposal Application***



**8700-12FL - FLORIDA NOTIFICATION OF REGULATED WASTE ACTIVITY**  
 DEP Waste Management Division-HWRS, MS4560  
 2600 Blair Stone Rd. Tallahassee, FL 32399-2400  
 (850) 245-8760

Date Received  
 (for FDEP Official Use Only)

EPA ID \_\_\_\_\_ MTS \_\_\_\_\_ RCRA Info \_\_\_\_\_

**1. Reason for Submittal**

Check correct box:

To provide **initial notification** (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities).

To provide **subsequent notification** (to update status and facility identification information).

**2. Facility or Business Name** Greenland Energy Center

**3. Facility Operator** (List additional Operators in the comments section).

Name of Operator: JEA  New Operator  
 Date became Operator: \_\_\_/\_\_\_/\_\_\_  
 mm dd yyyy

Street or P.O. Box: 21 W. Church Street Phone Number: \_\_\_\_\_

City or Town: Jacksonville State: FL Zip Code: 32202

Operator Type:  Private  Federal  Municipal  State  Other \_\_\_\_\_

**4. Facility Physical Location Information**

Physical Street Address: 12121 Philips Highway

City or Town: Jacksonville State: FL Zip Code: \_\_\_\_\_

County: Duval Land Type:  Private  Federal  Municipal  
 State  Other \_\_\_\_\_

Latitude: 3 0 | 1 5 | 4 5 Longitude: 8 1 | 5 1 | 8 8 Method: \_\_\_\_\_  
 d d m m s s . ssss d d m m s s . ssss Datum: \_\_\_\_\_

**5. Facility North American Industry Classification System (NAICS) Code(s)**

A. 221112 B. \_\_\_\_\_  
 C. \_\_\_\_\_ D. \_\_\_\_\_

**6. Facility Mailing Address**

Street Address or P.O. Box: 12121 Philips Highway

City or Town: Jacksonville State: FL Zip Code: 32256

**7. Facility Contact Person**

First Name: Mike Last Name: Lawson Title: Plant Mgr

Phone Number: 904-665-4837 Extension: \_\_\_\_\_ E-Mail: \_\_\_\_\_

Street or P.O. Box: 12121 Philips Highway

City or Town: Jacksonville State: FL Zip Code: 32256

**8. Real Property Owner of the Facility's Physical Location** (List additional real property owners in the comments section.)

Name of Real Property Owner: JEA  New Owner  
 Date became Owner: 09 / 05 / 2008  
 mm dd yyyy

Street or P.O. Box: 21 W. Church Street Phone Number: \_\_\_\_\_

City or Town: Jacksonville State: FL Zip Code: 32202

Owner Type:  Private  Federal  Municipal  State  Other \_\_\_\_\_

**9. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes):**

**A. Hazardous Waste Activities:**

For Items 2 through 7, check all that apply.

**1. Generator of Hazardous Waste**

(Choose only one of the following three categories.)

- a. Large Quantity Generator (LQG):  
Generates in any calendar month 1,000 kilograms or greater per month (kg/mo) (2,200 lbs.) of *non-acute* hazardous waste; or Greater than 1 kg (2.2 lbs) of *acute* hazardous waste
- b. Small Quantity Generator (SQG):  
Generates in any calendar month greater than 100kg/mo but less than 1,000 kg/mo (>220 to <2,200 lbs.) of *non-acute* hazardous waste and/or 1 kg (2.2 lbs) or less of *acute* hazardous waste
- c. Conditionally Exempt SQG (CESQG):  
Generates in any calendar month 100 kg/mo or less (220 lbs.) of *non-acute* hazardous waste and/or 1 kg (2.2 lbs) or less of *acute* hazardous waste

In addition, indicate other generator activities (that apply).

- d. United States Importer of hazardous waste
- e. Mixed Waste (hazardous and radioactive) Generator

2.  **Treater, Storer, or Disposer of Hazardous Waste** (at your facility) Note: A hazardous waste permit may be required for this activity.

3.  **Recycler of Hazardous Waste** (at your facility)  
Specify:  Commercial;  Non-Commercial.  
Note: A hazardous waste permit may be required for this activity.

4.  **Exempt Boiler and/or Industrial Furnace**  
 a. Small Quantity On-site Burner Exemption  
 b. Smelting, Melting, and Refining Furnace Exemption

5.  **Person Authorized to Manage Conditionally Exempt Waste generated at other facilities** - Check this management activity ONLY if you attach EITHER a copy of your application for such authorization OR the authorization you received from FDEP.

6.  **Underground Injection Control**

7.  **Transporter of Hazardous Waste** Note: A Certificate of Liability Insurance is required along with this registration. Registration must be renewed annually.  a. For own waste only;  b. For Commercial Purposes

**c. Hazardous Waste Transporter Insurance Information:**

Insurance Company \_\_\_\_\_  
Address \_\_\_\_\_

Contact: \_\_\_\_\_ Telephone: \_\_\_\_\_

Policy Number: \_\_\_\_\_ Expiration date: \_\_\_\_\_

d. Transportation Mode:  Air;  Rail;  Highway;  Water;  Other - specify \_\_\_\_\_

e.  **Hazardous Waste Transfer Facility:** Storage Volume \_\_\_\_\_

**B. Universal Waste (UW) Activities:**

**1. Indicate types of UW generated and/or accumulated at your facility (includes destination facilities). (check all boxes that apply)**

	<u>Generate/ Accumulate</u>	<u>Transport</u>
a. Batteries	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Pesticides	<input type="checkbox"/>	<input type="checkbox"/>
c. Mercury Containing Thermostats	<input type="checkbox"/>	<input type="checkbox"/>
d. Mercury Containing Lamps	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Mercury Containing Devices	<input type="checkbox"/>	<input type="checkbox"/>
f. Pharmaceuticals	<input type="checkbox"/>	<input type="checkbox"/>
g. Other (specify) <u>aerosol spray</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**2. Maximum quantity of UW handled/transported at any time**

- a. 5,000 kg or more; Large Quantity Handler (LQH)
- b. More than 1 kg of acutely hazardous pharmaceutical waste ("P-listed") (LQH)
- c. Less than 5,000 kg (11,000 lbs); Small Quantity Handler (SQH)

3.  **Destination Facility for UW**

Note: For this activity, a facility must treat, dispose or recycle a UW. A facility must either have a hazardous waste permit or recycle the UW without storing it.

4.  **Transporter of UW**

**9. Type of Regulated Waste Activity - continued (Mark 'X' in the appropriate boxes):**

**C. Used Oil Activities:**

- 1. **Used Oil Transporter - Indicate type(s) of activity(ies)**
  - a. Transporter
  - b. Transfer Facility
- 2. **Used Oil Processor and/or Re-refiner - Indicate type(s) of activity(ies)**
  - a. Processor
  - b. Re-refiner
- 3.  **Off-Specification Used Oil Burner**
- 4. **Used Oil Fuel Marketer - Indicate type(s) of activity(ies)**
  - a. Marketer who directs shipment of off-specification used oil to off-specification used oil burner
  - b. Marketer who first claims the used oil meets the specifications
- 5.  **Used Oil Generator**

- D. Other State Regulated Waste Activities:**      1.  **Used Oil Filter Handler**      2.  **PCW Handler**  
 These activities may require additional submissions.

**10. Waste Codes for Federally Regulated Hazardous Wastes:** List the waste codes of the Federal hazardous wastes handled at your facility. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Hazardous waste transporters list codes **routinely** or **usually** transported. Use an additional page if more spaces are needed.

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

**11. Other Status Changes (Mark 'X' in the appropriate boxes):**

**A. Non-Handler of Regulated Waste at this facility**

- 1. Business no longer generates, transports, treats, stores, or disposes of hazardous waste.
- 2. Waste generated by business has been delisted.
- 3. Other (explain) \_\_\_\_\_

**B. Facility Closed**

- 1. Closed at this location and **moved or moving** to another - submit a new 8700-12FL for the new location if you will be handling regulated waste there.
- 2. Out of Business - Business closed on \_\_\_\_\_ (Date). Please provide a contact person, mailing address, and phone number where you can be reached after closing.  
 Contact \_\_\_\_\_ Phone \_\_\_\_\_  
 Address \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_

**C. Property Tax Default**

**D. Petition for Bankruptcy Protection**

**12. Comments:**

The Greenland Energy Center is a combustion turbine power plant owned and operated by JEA.

EPA ID No.

**13. Certification:** I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of owner, operator, or an authorized representative	Name and official title (type or print) of owner, operator, or an authorized representative	Date Signed (mm-dd-yyyy)

**14. Additional Comments**  
or optionally, include a map or sketch of the facility boundaries to aid in establishing an accurate Latitude/Longitude for your facility:

***10.1.4 Joint Environmental Resource/Section 404 Permit Application  
(Copy of Public Notice)***



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
POST OFFICE BOX 4970  
JACKSONVILLE, FLORIDA 32232-0019

Regulatory Division  
North Permits Branch  
Jacksonville Permits Section

June 27, 2008

## ***PUBLIC NOTICE***

Permit Application No. SAJ-2008-2310(SP-NBF)

TO WHOM IT MAY CONCERN: This district has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403) as described below:

APPLICANT: Jay Worley  
Jacksonville Electric Authority  
21 West Church Street  
Jacksonville, Florida 32202-3139

WATERWAY & LOCATION: The project is located at 12121 Phillips Highway, in Sections 8, 17 and 37, Township 4 South, Range 28 East, Jacksonville, Duval County, Florida

Directions to the site are as follows: From downtown Jacksonville take I-95 south 10 miles. Exit onto US 1/Phillips Highway and head south for approximately 3 miles to 12121 Phillips Highway.

LATITUDE & LONGITUDE: Latitude 30.150391 North  
Longitude -81.524298 West

PROJECT PURPOSE:

Basic: To construct a new electric generating facility.

Overall: To construct and operate a new electric generating facility south of Jacksonville in Duval County to meet the growing electrical demand in this area of Duval County.

PROPOSED WORK: The applicant proposes to impact 0.73 acre of waters of the United States (wetlands) associated with the

proposed electric generating facility know as the Greenland Energy Center.

Avoidance and Minimization Information: The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

Significant efforts have been employed by JEA to avoid and minimize wetland impacts by selecting an appropriate site, using previously disturbed and/or appropriate areas and existing corridors for project development. Higher quality wetlands have been avoided by selectively locating the facilities. A development plan with less or no wetland impact is not feasible considering the need for the proposed development access road corridor.

Compensatory Mitigation: The applicant has offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment:

The applicant is offering mitigation by enhancing wetland 1, creating additional forested and herbaceous wetlands in the Big Davis Creek floodplain adjacent to Wetland #1, and placing a conservation easement over wetland area #9.

EXISTING CONDITIONS: The 139.5 acre site consists of 29.1 acres of forested and herbaceous wetland systems. The onsite forested wetland areas are dominated by sweetgum, black gum, red maple, swamp laurel oak, loblolly bay and pond cypress. The groundcover includes lyonia, wax myrtle cinnamon fern, netted chain fern and pennywort. The majority of the site has been severely disturbed by logging with the exception of the wetlands areas in the northwest and southwest portion of the site which are of relatively high quality. The existing area surrounding the project area consists of a transmission corridor and commercial businesses.

ENDANGERED SPECIES: The project site provides potential habitat for the Eastern Indigo Snake. The U.S Army Corps of Engineers (Corps) has determined that with the inclusion of the "Standard Protection Measures for the Eastern Indigo Snake" the proposal may affect, not adversely affect the Eastern Indigo Snake (*Drymarchon corais couperi*) or its designated critical habitat. The Corps will request the Fish and Wildlife Service's concurrence with this determination pursuant to Section 7 of the Endangered Species Act by separate letter.



ESSENTIAL FISH HABITAT (EFH): This notice initiates consultation with the National Marine Fisheries Service on EFH as required by the Magnuson-Stevens Fishery Conservation and Management Act 1996. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries in Big Davis Creek. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The jurisdictional line has not been verified by Corps personnel.

AUTHORIZATION FROM OTHER AGENCIES: Water Quality Certification may be required from the Florida Department of Environmental Protection and/or one of the state Water Management Districts.

Comments regarding the application should be submitted in writing to the District Engineer at the above address within 21 days from the date of this notice.

If you have any questions concerning this application, you may contact Norma Fouraker at the letterhead address, by electronic mail at [norma.b.fouraker@usace.army.mil](mailto:norma.b.fouraker@usace.army.mil), by fax at 904-232-1904, or by telephone at 904-232-1679.

The decision whether to issue or deny this permit application will be based on the information received from this public notice and the evaluation of the probable impact to the associated wetlands. This is based on an analysis of the applicant's avoidance and minimization efforts for the project, as well as the compensatory mitigation proposed.

**IMPACT ON NATURAL RESOURCES:** Preliminary review of this application indicates that an Environmental Impact Statement will not be required. Coordination with US Fish and Wildlife Service, Environmental Protection Agency (EPA), the National Marine Fisheries Services, and other Federal, State, and local agencies, environmental groups, and concerned citizens generally yields pertinent environmental information that is instrumental in determining the impact the proposed action will have on the natural resources of the area. By means of this notice, we are soliciting comments on the potential effects of the project on threatened or endangered species or their habitat.

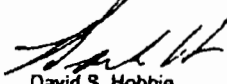
**IMPACT ON CULTURAL RESOURCES:** Review of the latest published version of the National Register of Historic Places indicates that no registered properties, or properties listed as eligible for inclusion therein, are located at the site of the proposed work. Presently, unknown archeological, scientific, prehistorical, or historical data may be lost or destroyed by the work to be accomplished.

**EVALUATION:** The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act of the criteria established under authority of Section 102(a) of the Marine, Protection, Research, and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

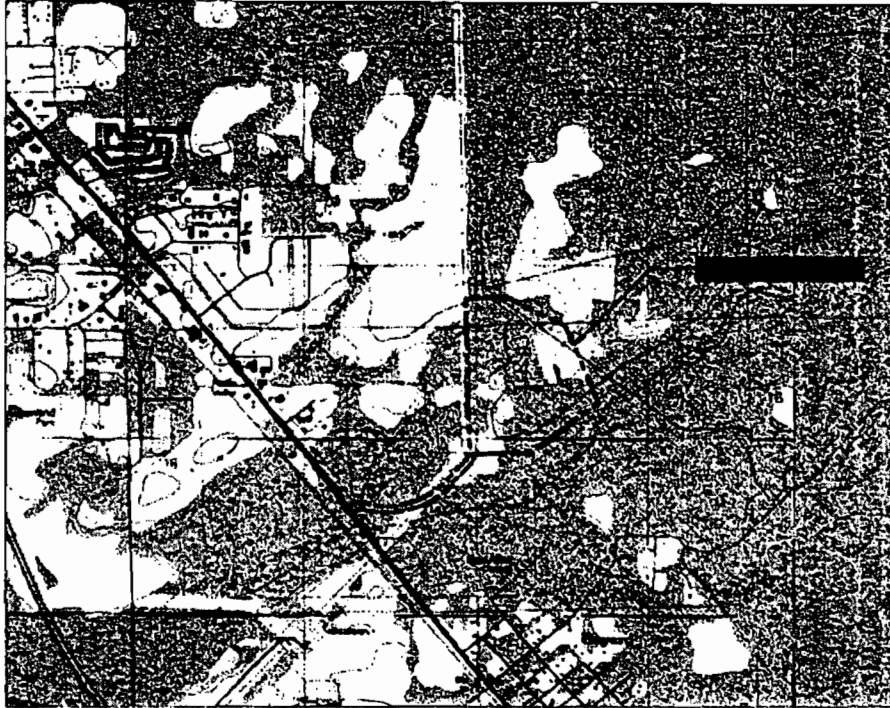
The US Army Corps of Engineers (Corps) is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make or deny this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

**COASTAL ZONE MANAGEMENT CONSISTENCY:** In Florida, the State approval constitutes compliance with the approved Coastal Zone Management Plan. In Puerto Rico, a Coastal Zone Management Consistency Concurrence is required from the Puerto Rico Planning Board. In the Virgin Islands, the Department of Planning and Natural Resources permit constitutes compliance with approved Coastal Zone Management Plan.

**REQUEST FOR PUBLIC HEARING:** Any person may request a public hearing. The request must be submitted in writing to the District Engineer within the designated comment period of the notice and must state the specific reasons for requesting the public hearing.

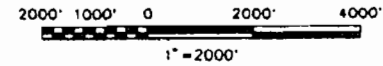
  
David S. Hobbie  
Regulatory Division

US ARMY CORPS OF ENGINEERS  
 APPLICATION NUMBER SAJ-2008-2310(S P--NBF)  
 DATE 6/27/08  
 DRAWING SHEET 1 OF 5



Duval County, FL

SB, T4S, R28E  
 S17, T4S, R28E  
 S37, T4S, R28E



MCR44608 ACAD (6.1s (LMS Tech)  
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 04/11/08 13:11:21

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP

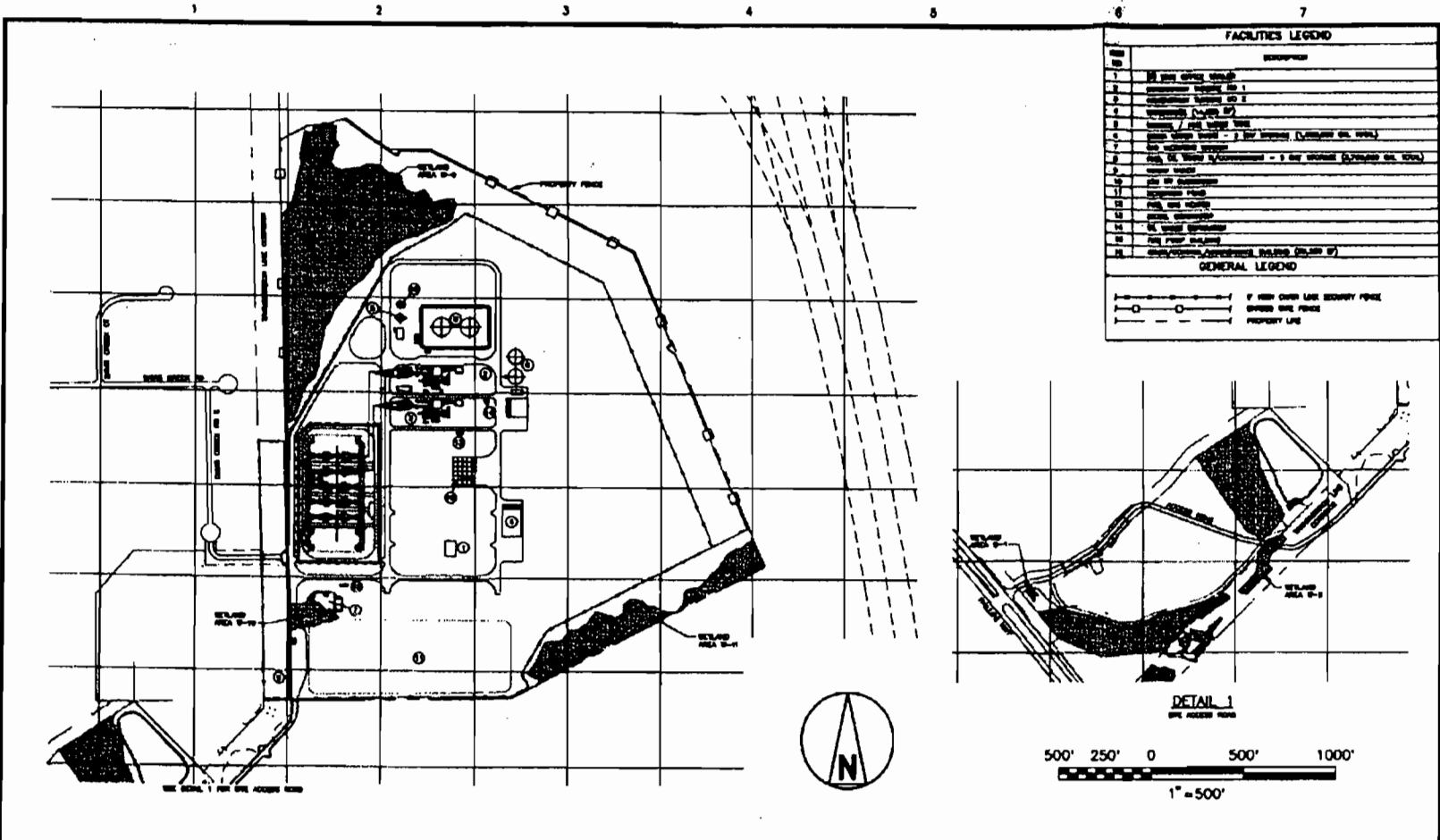
**BLACK & VEATCH CORPORATION**

ENGINEER	MJT	DRAWN	JKM
CHECKED	DATE		

JEA  
 GREENLAND ENERGY CENTER

SITE LOCATION MAP

PROJECT	DRAWING NUMBER	REV
148570-SS-0007		A
CODE	Attachment A	
AREA		



FACILITIES LEGEND	
1	ENTRANCE ROAD
2	PROPERTY LINE
3	ASPHALT DRIVEWAY
4	CONCRETE DRIVEWAY
5	GRAVEL DRIVEWAY
6	GRAVEL DRIVEWAY - 3' WIDE (CONCRETE ON TOP)
7	GRAVEL DRIVEWAY
8	GRAVEL DRIVEWAY - 3' WIDE (CONCRETE ON TOP)
9	GRAVEL DRIVEWAY
10	GRAVEL DRIVEWAY
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99	GRAVEL DRIVEWAY
100	GRAVEL DRIVEWAY

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NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
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C	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
B	05/02/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
A	04/23/08	INITIAL REVIEW	JKM	MJT	JMS		

**BLACK & VEATCH CORPORATION**

ENGINEER MJT DRAWN JKM

CHECKED DATE

JEA  
 GREENLAND ENERGY CENTER

PLANT ARRANGEMENT  
 SIMPLE CYCLE COMBUSTION TURBINE FACILITY

PROJECT	DRAWING NUMBER	REV
148570-SS-0010		D
CODE	ATTACHMENT C-3	
AREA		

US ARMY CORPS OF ENGINEERS  
 APPLICATION NUMBER SAJ-2008-2310(P-P-NBF)  
 DATE 6/27/08  
 DRAWING SHEET 2 OF 5

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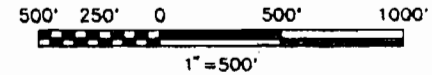
US ARMY CORPS OF ENGINEERS  
 APPLICATION NUMBER SAJ-2008-23106 (P--NBF)  
 DATE 6/27/08  
 DRAWING SHEET 3 OF 5



WETLAND AREA	AREA (ACRES)
W-1	0.05
W-2	0.54
W-3	0.19
W-4	0.39
W-5	0.76
W-6	0.05
W-7	3.36
W-8	3.36
S-1	-
S-2	-
OW-1	2.09

LEGEND

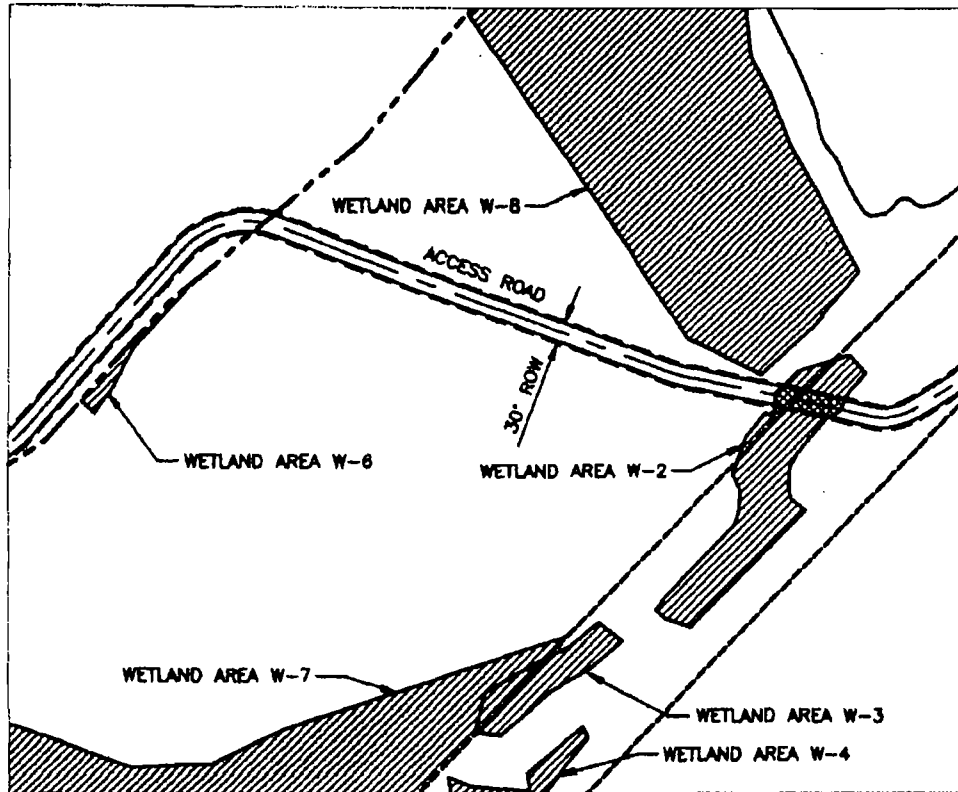
- PROPERTY BOUNDARY
- - - T-LINE ROW
- DRAINAGE
- ▨ WETLAND AREA



E	06/06/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS	C	05/08/08	WETLANDS UPDATE	JKM	MJT	JMS		
D	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS	NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
			JEA GREENLAND ENERGY CENTER					PROJECT 148570-SS-0009		DRAWING NUMBER 148570-SS-0009		REV E	
ENGINEER		DRAWN		DATE		WETLAND SURVEY ACCESS ROAD			CODE AREA		ATTACHMENT E-8		
		JKM											
CHECKED		DATE											

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 06/06/08 13:17:44

US ARMY CORPS OF ENGINEERS  
 APPLICATION NUMBER SAJ-2008-2310(S P--NBF)  
 DATE 6/27/08  
 DRAWING SHEET 4 OF 5

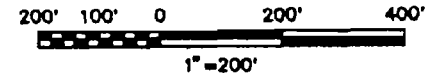


**DISTURBED AREAS**

WETLAND AREA W-2 - 0.054 ACRE IMPACT

**LEGEND**

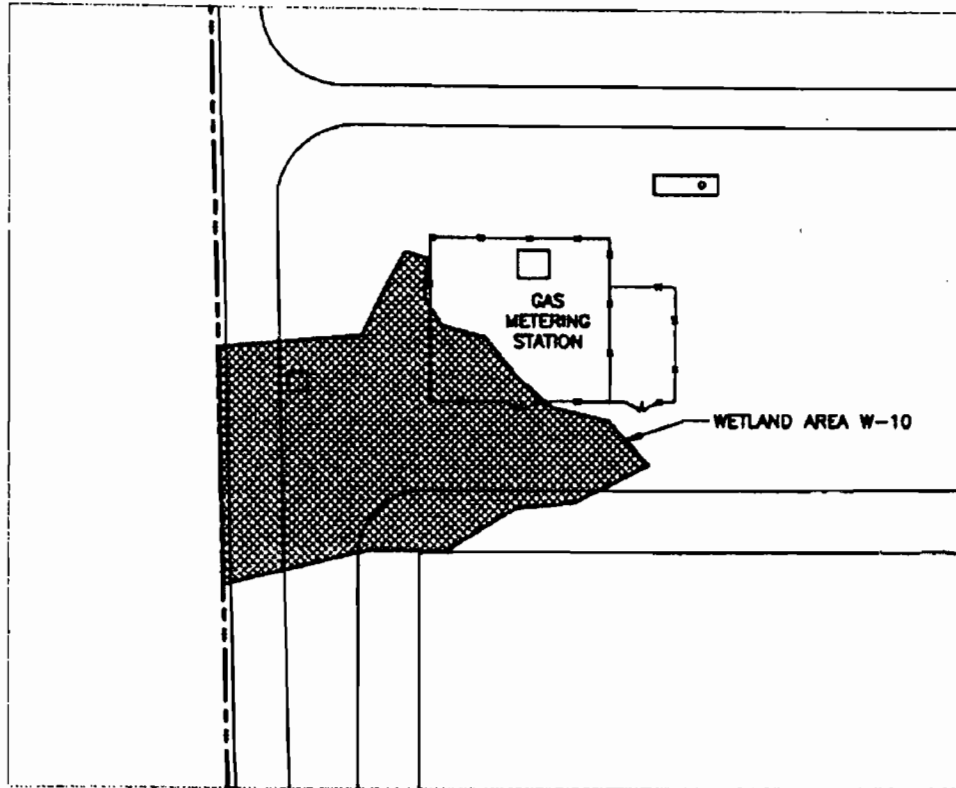
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- - - - - T-LINE ROW
- - - - - ACCESS ROAD CONSTRUCTION LIMIT
- ▨ WETLAND AREA
- ▩ DISTURBED WETLAND AREA



E	06/06/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS	C	05/08/08	WETLAND UPDATE	JKM	MJT	JMS		
D	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS	NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
<b>BLACK &amp; VEATCH CORPORATION</b>			<b>JEA</b> <b>GREENLAND ENERGY CENTER</b>					PROJECT	DRAWING NUMBER	REV			
ENGINEER			DRAWN			WETLAND DISTURBANCE			CODE	ATTACHMENT E-15			
CHECKED			DATE			ACCESS ROAD			AREA				
			JKM						148570-SS-0012			E	

MCR44806 ACAD 16.1s (LMS Tech)  
 A1ASL010 A1 1=1  
 05/30/08 10:38:05

US ARMY CORPS OF ENGINEERS  
 APPLICATION NUMBER SAJ-2008-2310(SP-NBF)  
 DATE 6/27/08  
 DRAWING SHEET 5 OF 5

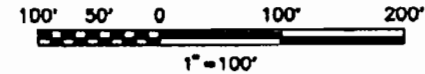


**DISTURBED AREAS**

WETLAND AREA W-10 - 0.68 ACRE IMPACT

**LEGEND**

- PROPERTY BOUNDARY
- ▨ DISTURBED WETLAND AREA



				A	05/30/08	INITIAL REVIEW	JKM	MJT	JMS	
				NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE APP
<b>BLACK &amp; VEATCH CORPORATION</b>		JEA GREENLAND ENERGY CENTER			PROJECT DRAWING NUMBER 148570-SS-0013		REV A			
ENGINEER	DRAWN	JKM		WETLAND DISTURBANCE GAS METERING STATION AND PLANT ROADS			CODE		ATTACHMENT E-16	
CHECKED	DATE						AREA			

***10.1.6 Title IV Acid Rain Permit Application***





# Certificate of Representation

For more information, see instructions and 40 CFR 72.24; 40 CFR 96.113, 96.213, or 96.313, or a comparable state regulation under the Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Annual, SO<sub>2</sub>, and NO<sub>x</sub> Ozone Season Trading Programs; 40 CFR 97.113, 97.213, or 97.313; or 40 CFR 60.4113, or a comparable state regulation under the Clean Air Mercury Rule (CAMR), as applicable.

## FACILITY (SOURCE) INFORMATION

This submission is:  New  Revised (revised submissions must be complete; see instructions)

### STEP 1 Provide information for the facility (source).

Facility (Source) Name: Greenland Energy Center	State: FL	Plant Code: 56799
County Name: Duval		
Latitude: 30.15958	Longitude: 87.51694	

### STEP 2 Enter requested information for the designated representative.

Name: Michael Brost	Title: Vice President, Electric Systems
Company Name: JEA	
Address: 21 West Church Street, Jacksonville, FL 32202	
Phone Number: (904) 665-7547	Fax Number: (904) 665-7950
E-mail address: brosmj@jea.com	

### STEP 3 Enter requested information for the alternate designated representative.

Name: Athena Mann	Title: Vice President, Environmental Services
Company Name: JEA	
Address: 21 West Church Street, Jacksonville, FL 32202	
Phone Number: (904) 665-6252	Fax Number: (904) 665-7950
E-mail address: mannat@jea.com	

Facility (Source) Name (from Step 1) : Greenland Energy Center

**UNIT INFORMATION**

**STEP 4: Complete one page for each unit located at the facility identified in STEP 1** (i.e., for each boiler, simple cycle combustion turbine, or combined cycle combustion turbine) Do not list duct burners. Indicate each program to which the unit is subject, and enter all other unit-specific information, including the name of each owner and operator of the unit and the generator ID number and nameplate capacity of each generator served by the unit. If the unit is subject to a program, then the facility (source) is also subject. (For units subject to the NO<sub>x</sub> Budget Trading Program, a separate "Account Certificate of Representation" form must be submitted to meet requirements under that program.)

Applicable Program(s):  Acid Rain  CAIR NO<sub>x</sub> Annual  CAIR SO<sub>2</sub>  CAIR NO<sub>x</sub> Ozone Season  CAMR

Unit ID# 1	Unit Type: CT	Source Category: Electric Utility	Generator ID Number (Maximum 8 characters)	Acid Rain Nameplate Capacity (MWe)	CAIR-CAMR Nameplate Capacity (MWe)
			1	184.1	184.1
		NAICS Code: 221112			
Date unit began (or will begin) serving any generator producing electricity for sale (including test generation) (mm/dd/yyyy): 06/01/2010		Check One: Actual <input type="checkbox"/> Projected <input checked="" type="checkbox"/>			
Company Name: JEA			<input checked="" type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		

Facility (Source) Name (from Step 1) : Greenland Energy Center

**UNIT INFORMATION**

**STEP 4: Complete one page for each unit located at the facility identified in STEP 1** (i.e., for each boiler, simple cycle combustion turbine, or combined cycle combustion turbine) Do not list duct burners. Indicate each program to which the unit is subject, and enter all other unit-specific information, including the name of each owner and operator of the unit and the generator ID number and nameplate capacity of each generator served by the unit. If the unit is subject to a program, then the facility (source) is also subject. (For units subject to the NO<sub>x</sub> Budget Trading Program, a separate "Account Certificate of Representation" form must be submitted to meet requirements under that program.)

Applicable Program(s):  Acid Rain  CAIR NO<sub>x</sub> Annual  CAIR SO<sub>2</sub>  CAIR NO<sub>x</sub> Ozone Season  CAMR

Unit ID#	Unit Type	Source Category: Electric Utility	Generator ID Number (Maximum 8 characters)	Acid Rain Nameplate Capacity (MWe)	CAIR-CAMR Nameplate Capacity (MWe)
			2	184.1	184.1
Unit ID# 2	Unit Type: CT	NAICS Code: 221112			
Date unit began (or will begin) serving any generator producing electricity for sale (Including test generation) (mm/dd/yyyy): 06/01/2010			Check One: Actual <input type="checkbox"/> Projected <input checked="" type="checkbox"/>		
Company Name: JEA			<input checked="" type="checkbox"/> Owner <input checked="" type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		
Company Name:			<input type="checkbox"/> Owner <input type="checkbox"/> Operator		

Facility (Source) Name (from Step 1) : Greenland Energy Center

**STEP 5: Read the appropriate certification statements, sign, and date.**

Acid Rain Program

I certify that I was selected as the designated representative or alternate designated representative (as applicable) by an agreement binding on the owners and operators of the affected source and each affected unit at the source (i.e., the source and each unit subject to the Acid Rain Program, as indicated in "Applicable Program(s)" in Step 4).

I certify that I have all necessary authority to carry out my duties and responsibilities under the Acid Rain Program on behalf of the owners and operators of the affected source and each affected unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions.

I certify that the owners and operators of the affected source and each affected unit at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, an affected unit, or where a utility or industrial customer purchases power from an affected unit under a life-of-the-unit, firm power contractual arrangement, I certify that:

I have given a written notice of my selection as the designated representative or alternate designated representative (as applicable) and of the agreement by which I was selected to each owner and operator of the affected source and each affected unit at the source; and

Allowances, and proceeds of transactions involving allowances, will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement, except that, if such multiple holders have expressly provided for a different distribution of allowances, allowances and proceeds of transactions involving allowances will be deemed to be held or distributed in accordance with the contract.

Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Annual Trading Program

I certify that I was selected as the CAIR designated representative or alternate CAIR designated representative (as applicable), by an agreement binding on the owners and operators of the CAIR NO<sub>x</sub> source and each CAIR NO<sub>x</sub> unit at the source (i.e., the source and each unit subject to the CAIR NO<sub>x</sub> Annual Trading Program, as indicated in "Applicable Program(s)" in Step 4).

I certify that I have all necessary authority to carry out my duties and responsibilities under the CAIR NO<sub>x</sub> Annual Trading Program on behalf of the owners and operators of the CAIR NO<sub>x</sub> source and each CAIR NO<sub>x</sub> unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions.

I certify that the owners and operators of the CAIR NO<sub>x</sub> source and each CAIR NO<sub>x</sub> unit at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, a CAIR NO<sub>x</sub> unit, or where a utility or industrial customer purchases power from a CAIR NO<sub>x</sub> unit under a life-of-the-unit, firm power contractual arrangement, I certify that:

I have given a written notice of my selection as the CAIR designated representative or alternate CAIR designated representative (as applicable) and of the agreement by which I was selected to each owner and operator of the CAIR NO<sub>x</sub> source and each CAIR NO<sub>x</sub> unit at the source; and

CAIR NO<sub>x</sub> allowances and proceeds of transactions involving CAIR NO<sub>x</sub> allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement, except that, if such multiple holders have expressly provided for a different distribution of CAIR NO<sub>x</sub> allowances by contract, CAIR NO<sub>x</sub> allowances and proceeds of transactions involving CAIR NO<sub>x</sub> allowances will be deemed to be held or distributed in accordance with the contract.

Facility (Source) Name (from Step 1) : Greenland Energy Center

### Clean Air Interstate Rule (CAIR) SO<sub>2</sub> Trading Program

I certify that I was selected as the CAIR designated representative or alternate CAIR designated representative (as applicable), by an agreement binding on the owners and operators of the CAIR SO<sub>2</sub> source and each CAIR SO<sub>2</sub> unit at the source (i.e., the source and each unit subject to the SO<sub>2</sub> Trading Program, as indicated in "Applicable Program(s)" in Step 4).

I certify that I have all necessary authority to carry out my duties and responsibilities under the CAIR SO<sub>2</sub> Trading Program, on behalf of the owners and operators of the CAIR SO<sub>2</sub> source and each CAIR SO<sub>2</sub> unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions.

I certify that the owners and operators of the CAIR SO<sub>2</sub> source and each CAIR SO<sub>2</sub> unit at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, a CAIR SO<sub>2</sub> unit, or where a utility or industrial customer purchases power from a CAIR SO<sub>2</sub> unit under a life-of-the-unit, firm power contractual arrangement, I certify that:

I have given a written notice of my selection as the CAIR designated representative or alternate CAIR designated representative (as applicable) and of the agreement by which I was selected to each owner and operator of the CAIR SO<sub>2</sub> source and each CAIR SO<sub>2</sub> unit at the source; and

CAIR SO<sub>2</sub> allowances and proceeds of transactions involving CAIR SO<sub>2</sub> allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement, except that, if such multiple holders have expressly provided for a different distribution of CAIR SO<sub>2</sub> allowances by contract, CAIR SO<sub>2</sub> allowances and proceeds of transactions involving CAIR SO<sub>2</sub> allowances will be deemed to be held or distributed in accordance with the contract.

### Clean Air Interstate Rule (CAIR) NO<sub>x</sub> Ozone Season Trading Program

I certify that I was selected as the CAIR designated representative or alternate CAIR designated representative (as applicable), by an agreement binding on the owners and operators of the CAIR NO<sub>x</sub> Ozone Season source and each CAIR NO<sub>x</sub> Ozone Season unit at the source (i.e., the source and each unit subject to the CAIR NO<sub>x</sub> Ozone Season Trading Program, as indicated in "Applicable Program(s)" in Step 4).

I certify that I have all necessary authority to carry out my duties and responsibilities under the CAIR NO<sub>x</sub> Ozone Season Trading Program on behalf of the owners and operators of the CAIR NO<sub>x</sub> Ozone Season source and each CAIR NO<sub>x</sub> Ozone Season unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions.

I certify that the owners and operators of the CAIR NO<sub>x</sub> Ozone Season source and each CAIR NO<sub>x</sub> Ozone Season unit shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, a CAIR NO<sub>x</sub> Ozone Season unit, or where a utility or industrial customer purchases power from a CAIR NO<sub>x</sub> Ozone Season unit under a life-of-the-unit, firm power contractual arrangement, I certify that:

I have given a written notice of my selection as the CAIR designated representative or alternate CAIR designated representative (as applicable) and of the agreement by which I was selected to each owner and operator of the CAIR NO<sub>x</sub> Ozone Season source and each CAIR NO<sub>x</sub> Ozone Season unit; and

CAIR NO<sub>x</sub> Ozone Season allowances and proceeds of transactions involving CAIR NO<sub>x</sub> Ozone Season allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement, except that, if such multiple holders have expressly provided for a different distribution of CAIR NO<sub>x</sub> Ozone Season allowances by contract, CAIR NO<sub>x</sub> Ozone Season allowances and proceeds of transactions involving CAIR NO<sub>x</sub> Ozone Season allowances will be deemed to be held or distributed in accordance with the contract.

Facility (Source) Name (from Step 1) : Greenland Energy Center

Clean Air Mercury Rule (CAMR) Hg Budget Trading Program

I certify that I was selected as the Hg designated representative or alternate Hg designated representative, as applicable, by an agreement binding on the owners and operators of the source and each Hg Budget unit at the source (i.e., the source and each unit subject to CAMR, as indicated in "Applicable Program(s)" in Step 4).

I certify that I have all the necessary authority to carry out my duties and responsibilities under the Hg Budget Trading Program on behalf of the owners and operators of the source and of each Hg Budget unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions.

I certify that the owners and operators of the source and of each Hg Budget unit at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, a Hg Budget unit, or where a utility or industrial customer purchases power from a Hg Budget unit under a life-of-the-unit, firm power contractual arrangement, I certify that:

I have given a written notice of my selection as the Hg designated representative or alternate Hg designated representative, as applicable, and of the agreement by which I was selected to each owner and operator of the source and of each Hg Budget unit at the source; and

Hg allowances and proceeds of transactions involving Hg allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement, except that, if such multiple holders have expressly provided for a different distribution of Hg allowances by contract, Hg allowances and proceeds of transactions involving Hg allowances will be deemed to be held or distributed in accordance with the contract.

Clean Air Mercury Rule (CAMR) Program Other Than the Hg Budget Trading Program

I certify that I was selected as the Hg designated representative or alternate Hg designated representative, as applicable, by an agreement binding on the owners and operators of the source and each electric generating unit (EGU) (as defined at 40 CFR 60.24(h)(8)) at the source (i.e., the source and each unit subject to CAMR, as indicated in "Applicable Program(s)" in Step 4).

I certify that I have all the necessary authority to carry out my duties and responsibilities under a State Plan approved by the Administrator as meeting the requirements of 40 CFR 60.24(h) on behalf of the owners and operators of the source and of each EGU at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions.



I certify that the owners and operators of the source and of each EGU at the source shall be bound by any order issued to me by the Administrator, the permitting authority, or a court regarding the source or unit.

Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, an EGU, or where a utility or industrial customer purchases power from an EGU under a life-of-the-unit, firm power contractual arrangement, I certify that I have given a written notice of my selection as the Hg designated representative or alternate Hg designated representative, as applicable, and of the agreement by which I was selected to each owner and operator of the source and of each EGU at the source.

Facility (Source) Name (from Step 1) : Greenland Energy Center

General

I am authorized to make this submission on behalf of the owners and operators of the source or units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

 Signature (Designated Representative)	Date 6-16-08
 Signature (Alternate Designated Representative)	Date 6-16-08

# Acid Rain Part Application

For more information, see instructions and refer to 40 CFR 72.30, 72.31, and 74; and Chapter 62-214, F.A.C.

This submission is:     New     Revised     Renewal

**STEP 1**

**Identify the source by plant name, state, and ORIS or plant code.**

Plant name: Greenland Energy Center	State: FL	ORIS/Plant Code: 56799
-------------------------------------	-----------	---------------------------

**STEP 2**

**Enter the unit ID# for every Acid Rain unit at the Acid Rain source in column "a."**

**If unit a SO<sub>2</sub> Opt-in unit, enter "yes" in column "b".**

**For new units or SO<sub>2</sub> Opt-In units, enter the requested information in columns "d" and "e."**

a	b	c	d	e
Unit ID#	SO <sub>2</sub> Opt-in Unit? (Yes or No)	Unit will hold allowances in accordance with 40 CFR 72.9(c)(1)	New or SO <sub>2</sub> Opt-in Units  Commence Operation Date	New or SO <sub>2</sub> Opt-in Units  Monitor Certification Deadline
1	No	Yes	June 1, 2010	
2	No	Yes	June 1, 2010	
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		
		Yes		



Plant Name (from STEP 1): Greenland Energy Center

### STEP 3

#### Read the standard requirements.

#### Acid Rain Part Requirements.

- (1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Submit a complete Acid Rain Part application (including a compliance plan) under 40 CFR Part 72 and Rules 62-214.320 and 330, F.A.C., in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
  - (ii) Submit in a timely manner any supplemental information that the DEP determines is necessary in order to review an Acid Rain Part application and issue or deny an Acid Rain Part;
- (2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain Part application or a superseding Acid Rain Part issued by the DEP; and
  - (ii) Have an Acid Rain Part.

#### Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR Part 75, and Rule 62-214.420, F.A.C.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.
- (4) For applications including a SO<sub>2</sub> Opt-in unit, a monitoring plan for each SO<sub>2</sub> Opt-in unit must be submitted with this application pursuant to 40 CFR 74.14(a). For renewal applications for SO<sub>2</sub> Opt-in units include an updated monitoring plan if applicable under 40 CFR 75.53(b).

#### Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another Acid Rain unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000, or the deadline for monitor certification under 40 CFR Part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain Part application, the Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

#### Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR Part 77.

#### Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the EPA or the DEP:
  - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

Plant Name (from STEP 1): Greenland Energy Center

**STEP 3,  
Continued.**

**Recordkeeping and Reporting Requirements (cont)**

- (iv) Copies of all documents used to complete an Acid Rain Part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72, Subpart I, and 40 CFR Part 75.

Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
- (6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO<sub>x</sub> averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities.

No provision of the Acid Rain Program, an Acid Rain Part application, an Acid Rain Part, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or
- (5) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established.

**STEP 4  
For SO<sub>2</sub> Opt-in  
units only.**

In column "f" enter the unit ID# for every SO<sub>2</sub> Opt-in unit identified in column "a" of STEP 2.

For column "g" describe the combustion unit and attach information and diagrams on the combustion unit's configuration.

In column "h" enter the hours.

f	g	h (not required for renewal application)
Unit ID#	Description of the combustion unit	Number of hours unit operated in the six months preceding initial application

Plant Name (from STEP 1): Greenland Energy Center

**STEP 5**

For SO<sub>2</sub> Opt-in units only. (Not required for SO<sub>2</sub> Opt-in renewal applications.)

In column "i" enter the unit ID# for every SO<sub>2</sub> Opt-in unit identified in column "a" (and in column "f").

For columns "j" through "n," enter the information required under 40 CFR 74.20-74.25 and attach all supporting documentation required by 40 CFR 74.20-74.25.

i	j	k	l	m	n
Unit ID#	Baseline or Alternative Baseline under 40 CFR 74.20 (mmBtu)	Actual SO <sub>2</sub> Emissions Rate under 40 CFR 74.22 (lbs/mmBtu)	Allowable 1985 SO <sub>2</sub> Emissions Rate under 40 CFR 74.23 (lbs/mmBtu)	Current Allowable SO <sub>2</sub> Emissions Rate under 40 CFR 74.24 (lbs/mmBtu)	Current Promulgated SO <sub>2</sub> Emissions Rate under 40 CFR 74.25 (lbs/mmBtu)

**STEP 6**

For SO<sub>2</sub> Opt-in units only.

Attach additional requirements, certify and sign.

- A. If the combustion source seeks to qualify for a transfer of allowances from the replacement of thermal energy, a thermal energy plan as provided in 40 CFR 74.47 for combustion sources must be attached.
- B. A statement whether the combustion unit was previously an affected unit under 40 CFR 74.
- C. A statement that the combustion unit is not an affected unit under 40 CFR 72.6 and does not have an exemption under 40 CFR 72.7, 72.8, or 72.14.
- D. Attach a complete compliance plan for SO<sub>2</sub> under 40 CFR 72.40.
- E. The designated representative of the combustion unit shall submit a monitoring plan in accordance with 40 CFR 74.61. For renewal application, submit an updated monitoring plan if applicable under 40 CFR 75.53(b).
- F. The following statement must be signed by the designated representative or alternate designated representative of the combustion source: "I certify that the data submitted under 40 CFR Part 74, Subpart C, reflects actual operations of the combustion source and has not been adjusted in any way."


Signature	Date
-----------	------

**STEP 7**

Read the certification statement; provide name, title, owner company name, phone, and e-mail address; sign, and date.

**Certification (for designated representative or alternate designated representative only)**

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name: Michael Brost	Title: Vice President, Electric Systems
Owner Company Name: JEA	
Phone: (904) 665-7547	E-mail address: brosmj@jea.com
Signature 	Date 6-16-08

**10.1.8 Department of Energy Self-Certification**

**JEA Letterhead  
DRAFT**

JEA  
Greenland Energy Center

March 1, 2010

Office of Coal and Power Im/Ex  
Office of Coal and Power Systems (FE-27)  
Office of Fossil Energy  
Room 4G-025  
1000 Independence Avenue, S.W.  
Washington, DC 20585

Subject: Greenland Energy Center  
Self-Certification

To Whom It May Concern:

On behalf of the JEA, a municipal power generator, I am pleased to submit the Self-Certification of Coal and Liquefied Natural Gas Capability for a new baseload combined cycle combustion turbine electric generation unit, pursuant to Section 201(d) of the Powerplant and Industrial Fuel Use Act of 1978 (FUA), as amended. The new unit is located at JEA's Greenland Energy Center, located in Jacksonville, Florida.

If you have any questions or require additional information please contact Jay Worley, JEA Director of Environmental Programs, at (904) 665-8729.

Sincerely,

Athena Mann  
VP Environmental Services

Enclosure  
cc: Jay Worley

JEA  
Greenland Energy Center  
Self-Certification

The JEA hereby submits to the U.S. Department of Energy (DOE) a Self-Certification of Coal and Liquefied Natural Gas Capability for a new baseload combined cycle combustion turbine electric generating unit at JEA's Greenland Energy Center, pursuant to Section 201(d) of the Powerplant and Industrial Fuel Use Act of 1978 (FUA), as amended, and Section 501.60(a)(2) of DOE's regulations (10 CFR 501.60(a)(2)).

1. Name and Address of Owner of the Proposed Facility:

JEA  
21 West Church Street  
Jacksonville, Florida 32202-3139

2. Correspondence Should be Addressed to:

Mr. Jay Worley, Director of Environmental Programs  
JEA  
21 West Church Street  
Jacksonville, Florida 32202-3139

3. Operator's Name and Address:

JEA  
21 West Church Street  
Jacksonville, Florida 32202-3139

4. Location and Address of Facility:

12121 Philips Highway  
Jacksonville, Florida 32256-1788

5. Configuration of the Facility:

The Facility will be a 2-on-1 combined cycle combustion turbine facility.

6. Design Electric Capacity of the Facility:

522 megawatts (net)

JEA  
Greenland Energy Center  
Self-Certification  
(continued)

7. Fuel to be Used:

The design fuel for this facility is natural gas. The backup fuel is ultra-low sulfur No. 2 fuel oil.

8. Name of Utility Purchasing Electricity from the Facility:

Power from the facility will be provided to JEA customers in the JEA service area.

9. Date Facility is Expected to be Placed in Service:

June 1, 2012

10. Certification: I, James A. Dickenson, Managing Director & Chief Executive Officer, do hereby certify that the proposed Facility:

- a. Has sufficient inherent design characteristics to permit the addition of equipment (including all necessary pollution devices) necessary to render the Facility capable of using syngas from gasified coal or liquefied natural gas as its primary energy source; and
- b. Is not physically, structurally, or technologically precluded from using syngas from gasified coal or liquefied natural gas as its primary energy source.

Certified this 1<sup>st</sup> day of March, 2010.

JEA

By:

Name:

Title:

Date:

## 10.2 Zoning Descriptions

A copy of the City of Jacksonville zoning categories identified in the City Land Development Code applicable to the GEC site and the Application for Rezoning to Planned Unit Development are included following this page. The current zoning districts onsite include Industrial Business Park (IBP-1), Commercial Office (CO), Industrial Light (IL), Planned Unit Development (PUD), and Residential Rural (RR).



***10.2.1 City of Jacksonville Zoning  
Excerpts from Section 656.300 Comprehensive Plan Land Use Categories***

## **SUBPART B. RESIDENTIAL USE CATEGORIES AND ZONING DISTRICTS**

### **Sec. 656.303. Purposes and intent.**

The residential categories allow for different types of housing such as single-family dwellings, multiple-family dwellings, day care, group homes, foster care, and other congregate living facilities in appropriate locations. Not included are hotels, motels, campgrounds, travel trailer parks for the transient population, and other similar commercial facilities. Also excluded in the residential category are institutional residential facilities, such as jails, prisons, hospitals, dormitories and residential military facilities.

Areas depicted for residential uses on the Future Land Use Maps of the Comprehensive Plan are shown under four residentially dominated plan categories: Rural Residential, Low Density Residential, Medium Density Residential, and High Density Residential. Various housing types, ranging from single-family dwellings at a density of one unit per acre, to multiple-family dwellings at densities of over 20 dwelling units per acre, are allowed as priority uses in the various districts. Achievement of the density ranges of the various categories will only be permitted when full urban services are available to the development site. The maximum density recommended in the various residential categories shall apply to the land included in each development permit requested, whether in single or multiple ownership.

Certain nonresidential uses are also permitted as secondary or supporting uses, subject to the provisions of Part 3. Neighborhood Supporting Recreation and Public/Semi-public Facilities, such as private and public schools, churches, day care centers, utility stations, branch libraries, community centers, utility substations, as well as neighborhood commercial, cultural and conservation uses, may be permitted in appropriate locations. Golf and country clubs and similar supporting uses may be allowed as part of a residential community that is developed subject to a site plan approval.

New neighborhood commercial uses shall not be allowed as secondary/supporting uses where such uses would constitute an intrusion into an existing single-family area.

In order to encourage more compact development patterns, mixed use, planned unit and cluster developments are also allowed.

Not all potential uses are permitted or permissible by exception anywhere in the residential categories. The exact type of land use and the density or intensity appropriate at any one location will be determined using the criteria and standards in this Chapter and in the Future Land Use Maps of the Comprehensive Plan.

(Ord. 91-59-148, § 1; Ord. 2002-608-E, § 1)

### **Sec. 656.304. Rural Residential Category.**

This category provides rural estate residential opportunities in the suburban area of the City. Housing developments at a net density range of up to two dwelling units per acre will be allowed when community scale potable water and sewer facilities are available to the site, and one unit per net acre when the site will be served with on-site water and wastewater facilities. Generally, single-family dwellings and mobile homes will be the predominant land uses in this category.

The following primary and secondary zoning districts may be considered in the Rural Residential Category depicted on the Future Land Use Maps of the Comprehensive Plan.

A. *Primary zoning districts.* The primary zoning districts shall include the following:

- (1) Residential Rural (RR); Section 656.304.
- (2) Residential Low Density-A (RLD-A); Section 656.305.
- (3) Residential Low Density-B (RLD-B); Section 656.305.

This district allows primarily single-family dwellings on large lots in the suburban and rural areas of the City. The district requirements for the Residential Rural (RR) and the Residential Low Density (RLD-A and RLD-B) Zoning Districts are specified below.

1. *Residential Rural (RR) District.*

(a) *Permitted uses and structures.*

- (1) Single-family dwellings.
- (2) Foster care homes.
- (3) Community residential homes of six or fewer residents meeting the performance standards and development criteria set forth in Part 4.
- (4) Family day care homes meeting the performance standards and development criteria set forth in Part 4.
- (5) Essential services, including water, sewer, gas, telephone, radio, television and electric, meeting the performance standards and development criteria set forth in Part 4.
- (6) Churches, including a rectory or similar use, meeting the performance standards and development criteria set forth in Part 4.
- (7) Golf courses meeting the performance standards and development criteria set forth in Part 4.
- (8) Neighborhood parks, pocket parks, playgrounds or recreational structures which serve or support a neighborhood or several adjacent neighborhoods, meeting the performance standards and development criteria set forth in Part 4.
- (9) Country clubs meeting the performance standards and development criteria set forth in Part 4.
- (10) Animals, other than household pets, meeting the performance standards and development criteria set forth in Part 4.
- (11) Home occupation meeting the performance standards and development criteria set forth in Part 4.

(b) *Permitted accessory uses and structures.* See Section 656.403.

(c) *Permissible uses by exception.*

- (1) Cemeteries and mausoleums but not funeral homes or mortuaries.
- (2) Schools meeting the performance standards and development criteria set forth in Part 4.
- (3) Borrow pits subject to the regulations contained in Part 9.
- (4) Bed and breakfast establishments meeting the performance standards and development criteria set forth in Part 4.
- (5) Essential services, including water, sewer, gas, telephone, radio, television and electric, meeting the performance standards and development criteria set forth in Part 4.
- (6) Day care centers meeting the performance standards and development criteria set forth in Part 4.
- (7) Churches, including a rectory or similar use, meeting the performance standards and development criteria set forth in Part 4.
- (8) Home occupations meeting the performance standards and development criteria set forth in Part 4.

(d) *Minimum lot requirements (width and area).* For single-family dwellings and mobile homes, the minimum lot requirements (width and area), except as an otherwise required for certain other uses, are as follows:

- (1) Width--100 feet.
  - (2) Area--43,560 square feet.
- (e) *Minimum lot coverage by all buildings and structures.* 20 percent.
- (f) *Minimum yard requirements.* The minimum yard requirements for all permitted or permissible uses and structures are as follows:
- (i) Front--25 feet.

- (ii) Side--Ten feet; provided that the combined side yards shall not be less than 25 feet.
- (iii) Rear--Ten feet.
- (g) *Maximum height of structures.* 35 feet.

II. *Residential Low Density-A (RLD-A) and Residential Low Density-B (RLD-B) Districts.* The permitted uses and structures, accessory uses and structures, permissible uses by exception, minimum lot and yard requirements and maximum lot coverage and height of buildings and structures shall be as provided in Section 656.305.

B. *Secondary zoning districts.* The following secondary zoning districts may be permitted in the Rural Residential Category as depicted on the Future Land Use Maps of the Comprehensive Plan, subject to the district regulations for same:

- (1) Commercial Office (CO); Section 656.311.
- (2) Commercial Neighborhood (CN); Section 656.312.
- (3) Agriculture (AGR); Section 656.331.
- (4) Public Buildings and Facilities (PBF-1); Section 656.332.
- (5) Public Buildings and Facilities (PBF-2); Section 656.332.
- (6) Conservation (CSV); Section 656.333.
- (7) Planned Unit Development (PUD); Section 656.340.

The aforementioned secondary zoning districts may be permitted provided that the supplemental criteria and standards for same specified in Subpart G, Part 3 are met. (Ord. 91-59-148, § 1; Ord. 91-761-410, § 1; Ord. 91-761-410, § 1; Ord. 94-340-447, § 2; Ord. 2000-90-E, § 1; Ord. 2002-608-E, § 1)

## **SUBPART C. COMMERCIAL USE CATEGORIES AND ZONING DISTRICTS\***

**\*Editor's note:** Ord. 2007-704-E, § 1, amended the Code by repealing former Subpt. C, §§ 656.310--656.315, and adding a new Subpt. C. Former Subpt. C pertained to similar subject matter, and derived from Ord. 91-59-148; Ord. 91-522-167; Ord. 91-527-268; Ord. 91-761-410; Ord. 92-58-30; Ord. 92-955-674; Ord. 92-1760-1438; Ord. 92-2020-1431; Ord. 93-178-112; Ord. 93-407-256; Ord. 93-672-1055; Ord. 94-77-412; Ord. 94-195-171; Ord. 94-339-274; Ord. 94-483-331; Ord. 94-505-349; Ord. 94-769-462; Ord. 94-1309-746; Ord. 96-305-296; Ord. 96-579-380; Ord. 97-405-E; Ord. 96-730-461; Ord. 98-528-E; Ord. 1999-242-E; Ord. 1999-834-E; Ord. 1999-546-E; Ord. 1999-1009-E; Ord. 2000-55-E; Ord. 2000-743-E; Ord. 2001-814-E; Ord. 2002-608-E; and Ord. 2003-755-E.

**Cross references:** Businesses, trades and occupations, Tit. VI.

### **Sec. 656.310. Purpose and intent.**

Commercial categories provide for sales and service activities, such as retail, personal and professional services, offices, hotels, entertainment, and amusement facilities. Commercial recreation and entertainment activities, such as amusement parks and marinas, are also allowed in this category. Multiple-family dwellings, when developed as part of an integrated mixed use project, are also permitted in some categories consistent with the Medium Density Residential and High Density Residential Category regulations and other provisions of Part 3.

Not all potential uses are permissible anywhere in the commercially designated areas. The exact type of land use and the density or intensity appropriate at any one location will be determined using the criteria and standards in this Chapter and in the Operative Provisions of the Future Land Use Element of the Comprehensive Plan.

(Ord. 2007-704-E, § 1)

### **Sec. 656.311. Residential-Professional-Institutional Category.**

This mixed use category primarily for office, institutional and medium density

residential uses. Large scale institutional uses, which require supporting residential and office components, are permitted, as are office-professional uses, nursing homes, day care centers and related uses when sited in compliance with all applicable development regulations.

The category permits housing and mixed use developments in a gross density range of up to 20 dwelling units per acre when full urban services are available to the site. Generally, multi-family dwellings such as apartments, condominiums, townhomes and rowhouses will be the predominant land use in this category, although cluster and patio home developments, and supporting professional, office and institutional uses may also be developed in appropriate locations. Developments in this category are frequently appropriate transitional uses between residential and nonresidential areas.

The following primary and secondary zoning districts may be considered in the residential professional and institutional category depicted on the Future Land Use Maps of the Comprehensive Plan.

A. *Primary zoning districts.* The primary zoning districts shall include the following:

- (1) Residential, Medium Density-D (RMD-D); Section 656.306.
- (2) Commercial Office (CO); Section 656.311.
- (3) Commercial Residential and Office (CRO); Section 656.311.

The commercial office and residential mixed use districts allow for business and professional offices and medium density residential uses of a density of 20 dwelling units per acre.

I. *Residential Medium Density-D (RMD-D).* Permitted uses and structures, accessory uses and structures, permissible uses by exception, minimum lot and yard requirements, and maximum lot coverage and height of buildings and structures shall be as provided in Section 656.306.

II. *Commercial Office (CO) District.*

(a) *Permitted uses and structures.*

- (1) Medical and dental or chiropractor offices (but not clinics or hospitals).
- (2) Professional or business offices.
- (3) Cosmetology and similar uses including facilities for production of eyeglasses, hearing aids, dentures, prosthetic appliances and similar products either in conjunction with a professional service being rendered or in a stand alone structure not exceeding 4,000 square feet.
- (4) Day care centers incidental to a professional office
- (5) Essential services, including water, sewer, gas, telephone, radio, television and electric, meeting the performance standards and development criteria set forth in Part 4.
- (6) Single family dwellings which were originally constructed as single family dwellings.

(b) *Permitted accessory uses and structures.* See Section 656.403.

(c) *Permissible uses by exception.*

- (1) Day care centers meeting the performance standards and development criteria set forth in Part 4.
- (2) Churches, including a rectory or similar use, meeting the performance standards and development criteria set forth in Part 4.
- (3) Off-Street parking lots meeting the performance standards and development criteria set forth in Part 4.

(d) *Minimum lot requirements (width and area).*

- (1) Width--60 feet.
- (2) Area--6,000 square feet (except as otherwise required for certain uses).

(e) *Maximum lot coverage by all buildings and structures.* 50 percent.

(f) *Minimum yard requirements.*

- (1) Front--20 feet.

- (2) Side--10 feet.
  - (3) Rear--10 feet.
  - (g) *Maximum height of structures.* 35 feet; provided, height may be unlimited where all required side yards are increased one foot for every one foot of building height in excess of 35 feet. No building shall be higher than 35 feet, when located adjacent to a single family use or zoning district.
  - (h) *Limitations on permitted and permissible uses by exception.* Unless otherwise provided, all of the permitted and permissible uses by exception in the CO District are limited by the following conditions:
    - (1) No retail sales, display or storage of merchandise shall be permitted.
    - (2) No vehicles other than passenger automobiles or trucks of not more than 3/4-ton payload capacity or 5,000 pounds in actual scale weight shall be used in the business operation.
- III. *Commercial, Residential and Office (CRO) District.*
- (a) *Permitted uses and structures.*
    - (1) Medical and dental office or clinics (but not hospitals).
    - (2) Professional and business offices.
    - (3) Multiple-family dwellings.
    - (4) Single family dwellings that were originally designed and constructed prior to adoption of the Comprehensive Plan.
    - (5) Schools meeting the performance standards and development criteria set forth in Part 4.
    - (6) Vocational, trade or business schools.
    - (7) Colleges and universities.
    - (8) Fraternity and sorority houses.
    - (9) Churches, including a rectory or similar uses, meeting the performance standards and development criteria set forth in Part 4.
    - (10) Parks, playgrounds and playfields or recreational or community structures meeting the performance standards and development criteria set forth in Part 4.
    - (11) Adult Congregate Living Facility (but not group care home or residential treatment facility).
    - (12) Libraries, museums and community centers.
    - (13) Radio and television broadcasting studios and offices (subject to Part 15).
    - (14) Banks without drive-through, savings and loan institutions, and similar uses.
    - (15) Art galleries, dance, art, gymnastics, fitness centers, martial arts and music studios, and theaters for stage performances (but not motion picture theaters).
    - (16) Cosmetology and similar uses including facilities for production of eyeglasses, hearing aids, dentures, prosthetic appliances and similar products either in conjunction with a professional service being rendered or in a stand alone structure not exceeding 4,000 square feet.
    - (17) Bed and breakfast establishments meeting the performance standards and development criteria set forth in Part 4.
    - (18) Essential services, including water, sewer, gas, telephone, radio, television and electric, meeting the performance standards and development criteria set forth in Part 4.
    - (19) Community residential homes of up to six residents meeting the performance standards and development criteria set forth in Part 4.
    - (20) Hospice facilities.
    - (21) Employment office (but not a day labor pool).
  - (b) *Limitations on permitted uses.* All of the permitted uses in the CRO District are limited by the following conditions unless otherwise provided:
    - (1) Retail sales, display or storage of merchandise shall be subordinate and clearly

incidental to a permitted use.

(2) No vehicles, other than passenger automobiles or trucks of not more than three-quarter-ton payload capacity or 5,000 pounds actual scale weight shall be used.

(c) *Permitted accessory uses and structures.* See Section 656.403.

(d) *Permissible uses by exception.*

(1) Cemeteries and mausoleums but not funeral homes or mortuaries.

(2) Residential treatment facilities.

(3) Off-street parking lots for premises requiring off-street parking meeting the performance standards and development criteria set forth in Part 4.

(4) New Single-family dwellings.

(5) Community residential homes of seven to 14 residents meeting the performance standards and development criteria set forth in Part 4.

(6) Emergency shelter meeting the performance standards and development criteria set forth in Part 4.

(7) Group care home meeting the performance standards and development criteria set forth in Part 4.

(8) Essential services meeting the performance standards and development criteria set forth in Part 4.

(9) Day care centers meeting the performance standards and development criteria set forth in Part 4.

(10) Home occupations meeting the performance standards and development criteria set forth in Part 4.

(11) Drive-through facilities in conjunction with a permitted or permissible use or structure.

(12) Rooming houses.

(13) Private clubs.

(14) Churches, including a rectory or similar use, meeting the performance standards and development criteria set forth in Part 4.

(15) Retail outlets for the sale of food and drugs, leather goods and luggage, jewelry (including watch repair but not pawn shops), art, cameras or photographic supplies (including camera repair), sporting goods, hobby shops and pet shops (but not animal kennels), musical instruments, television and radio (including repair incidental to sales), florist or gift shops, delicatessens, bake shops (but not wholesale bakeries), drugs and similar products, and dry cleaning pickup station, all not to exceed 50 percent of the gross floor area of the building of which it is a part.

(i) Sale, display and preparation shall be conducted within a completely enclosed building

(ii) Products shall be sold only at retail.

(iii) No sale, display or storage of secondhand merchandise shall be permitted.

(16) Restaurants, including the facilities for the sale and service of all alcoholic beverages for on-premises consumption only, subject to the following condition:

(i) Seating shall not exceed a capacity of 60; provided, that seating may be unlimited where total floor area of the restaurant does not exceed ten percent of the gross floor area of the building of which it is a part.

(e) *Minimum lot requirements (width and area).*

(1) Width:

(i) Single-family dwellings--50 feet.

(ii) Multiple-family dwellings--50 feet.

(iii) All other uses 70 feet (except as otherwise required for certain uses).

(2) Area:

(i) Single-family dwellings--5,000 square feet.

- (ii) Multiple-family dwellings--6,000 square feet for the first two family units and 2,100 square feet for each additional unit.
- (iii) All other uses--7,000 square feet (except as otherwise required for certain uses).
- (f) *Maximum lot coverage by all buildings and structures.* 50 percent
- (g) *Minimum yard requirements.*
  - (1) Single-family dwellings:
    - (i) Front--20 feet.
    - (ii) Side-- 5 feet; provided that the combined side yards shall be no less than 15 feet.
    - (iii) Rear-- 10 feet.
  - (2) Multiple-family dwellings:
    - (i) Front--20 feet.
    - (ii) Side-- 10 feet.
    - (iii) Rear--20 feet.
  - (3) Multiple-family dwellings with more than one principal structure on the lot:
    - (i) Front--20 feet.
    - (ii) Side--20 feet.
    - (iii) Rear--20 feet.
  - (4) All other uses:
    - (i) Front--20 feet.
    - (ii) Side-- 10 feet.
    - (iii) Rear--20 feet.
- (h) *Accessory use structure used in conjunction with multi-family structure:*
  - (1) Front--Accessory use structures shall not be permitted in front yards as they are established by the location of the principal structure.
  - (2) Side and rear-- 5 feet
- (i) *Maximum height of structures.*
  - (1) Single-family dwellings - 35 feet.
  - (2) Accessory Use Structures - 15 feet, provided the structure may be one foot higher for each 3 feet of additional setback up to the height of the primary structure or the structure shall otherwise be required the same setbacks of the primary structure.
  - (3) All other uses--45 feet; provided however, that height may be unlimited where all required yards are increased by one foot for every one foot of building height in excess of 45 feet.

B. *Secondary zoning districts.* The following secondary zoning districts may be permitted in the Residential-Professional Office Category as depicted on the Future Land Use Maps of the Comprehensive Plan, subject to the district regulations for same.

- (1) Residential Low Density-G (RLD-G); Section 656.305.
- (2) Reserved.
- (3) Residential Medium Density-A (RMD-A); Section 656.306.
- (4) Residential Medium Density-B (RMD-B); Section 656.306.
- (5) Residential Medium Density-C (RMD-C); Section 656.306.
- (6) Residential Medium Density-D (RMD-D); Section 656.306.
- (7) Residential Medium Density-MH (RMD-MH); Section 656.306.
- (8) Agriculture (AGR); Section 656.331.
- (9) Commercial Neighborhood (CN); Section 656.312.
- (10) Public Buildings and Facilities (PBF); Section 656.332.
- (11) Conservation (CSV); Section 656.333.
- (12) Planned Unit Development (PUD); Section 656.340.

The aforementioned secondary zoning districts may be permitted provided that the supplemental criteria and standards for same specified in Subpart G, Part 3 are met. (Ord. 2007-704-E, § 1)



## SUBPART D. INDUSTRIAL USE CATEGORIES AND ZONING DISTRICTS\*

\*Cross references: Businesses, trades and occupations, Tit. VI.

### **Sec. 656.320. Purposes and intent.**

The industrial categories allow for uses associated with mining, processing, manufacturing, packaging, warehousing and distribution operations. Also included are construction and utility maintenance yards and machinery repair shops. In addition, nonindustrial supporting uses with similar external impacts are allowed. Such uses include railroad switching yards, truck terminals, bus and train stations, trade and technical training facilities, medical facilities, and utility plants and facilities, including spoil disposal sites, sanitary landfills, transfer stations, recycling centers, air strips, business/professional offices, hotels, motels, restaurants, gas stations and similar supporting commercial uses.

The Comprehensive Plan includes four industrial land use categories: Light Industry, Heavy Industry, Water Dependent-Water Related and Business Park. Some industries produce adverse impacts, such as noise, odors, toxic chemicals and wastes, and transportation conflicts and should therefore be isolated away from residential and other low intensity use areas.

Not all potential uses are permissible anywhere in the industrially designated areas. The exact type of land use and the intensity appropriate at any one location will be determined using the criteria and standards in this Chapter and in the Comprehensive Plan.

(Ord. 91-59-148, § 1)

### **Sec. 656.321. Business Park Category.**

This mixed land use category is primarily intended to accommodate low to moderate intensity office and industrial parks, which are generally developed as nonresidential subdivisions. Land uses permitted in this category include business/professional offices, service establishments, light industrial, and warehousing uses carried out in completely enclosed structures with no open storage. A portion of the land area of a business park, not to exceed 25 percent, may be devoted to internally-oriented hotels, motels, restaurants and similar supporting commercial uses designed and scaled consistent with the primary internal orientation. Site access to roads classified as arterial or higher on the adopted Functional Highway Classification Map of the Comprehensive Plan. Nonemergency access to the business parks from local streets will be prohibited.

The following primary and secondary zoning districts may be considered in the Business Park Category depicted on the Future Land Use Maps of the Comprehensive Plan.

A. *Primary zoning districts.* The primary zoning districts shall include the following:

- (1) Industrial Business Park-1 (IBP-1); Section 656.321.
- (2) Industrial Business Park-2 (IBP-2); Section 656.321.

The Industrial Business Park Districts allow business/professional offices, and light industrial uses along with certain supporting commercial, open space, community facilities and utilities.

I. *Industrial Business Park-1 (IBP-1) District.*

(a) *Permitted uses and structures.*

- (1) Medical and dental or chiropractor offices and clinics.
- (2) Professional offices.

- (3) Business offices.
  - (4) Facilities for the production of eyeglasses, hearing aids, dentures, prosthetic appliances and similar products in conjunction with a professional service being rendered at the time, if the gross floor area shall not exceed 4,000 square feet.
  - (5) Banks (including drive-thru tellers) loan companies, mortgage brokers, stockbrokers and similar financial institutions.
  - (6) Union halls.
  - (7) Vocational, trade or business schools and similar uses.
  - (8) Essential services, including water, sewer, gas, telephone, radio and electric, meeting the performance standards and development criteria set forth in Part 4.
  - (b) *Permitted accessory uses and structures.* See Section 656.403.
  - (c) *Permissible uses by exception.*
    - (1) Off-street parking lots for premises requiring off-street parking meeting the performance standards and development criteria set forth in Part 4.
    - (2) Day care centers and care centers meeting the performance standards and development criteria set forth in Part 4.
    - (3) Churches, including a rectory and similar uses, meeting the performance standards and development criteria set forth in Part 4.
    - (4) Essential services, including water, sewer, gas, telephone, radio and electric, meeting the performance standards and development criteria set forth in Part 4.
  - (d) *Minimum lot requirements (width and area).*
    - (1) Width--60 feet.
    - (2) Area--6,000 square feet (except as otherwise required for certain uses).
  - (e) *Maximum lot coverage by all buildings and structures.* 35 percent.
  - (f) *Minimum yard requirements.*
    - (1) Front--20 feet.
    - (2) Side--Ten feet.
    - (3) Rear--Ten feet.
  - (g) *Maximum height of structures.* 35 feet, provided, however, that height may be unlimited where all required yards are increased by one foot for each three feet of building height or fraction thereof in excess of 35 feet.
  - (h) *Limitations on permitted or permissible uses by exception.* All of the permitted and permissible uses by exception in the IBP-1 District are subject to the following provisions:
    - (1) They shall be conducted entirely within an enclosed building.
    - (2) They shall include no outside storage or other similar activities.
    - (3) They shall be provided with off-street loading facilities which are located at the rear or side of the building and visually screened from an abutting public or approved private street.
    - (4) Off-street parking facilities shall be separated from an abutting public or approved private street by at least an eight-foot landscaped area.
    - (5) No retail sales, display or storage of merchandise shall be permitted.
    - (6) No manufacture, repair or work of a mechanical nature of any kind shall be permitted and no machinery shall be used, other than normal office equipment such as typewriters, calculators, computers and bookkeeping machines.
- II. *Industrial Business Park-2 (IBP-2) District.*
- (a) *Permitted uses and structures.*
    - (1) Medical and dental or chiropractor offices and clinics.
    - (2) Hospitals.
    - (3) Professional offices.
    - (4) Business offices.

- (5) Warehousing, wholesaling, distribution and similar uses, and light manufacturing, fabrication, assembling of components, printing and similar uses.
  - (6) Manufacturer's agents and display rooms, banks and financial institutions, offices of building trades contractor (not including outside storage or use of a vehicle in excess of one-ton capacity or any equipment, machinery, ditching machines, tractors, bulldozers or other heavy construction equipment).
  - (7) Research, dental and medical laboratories, manufacturers of prosthetic appliances, dentures, eyeglasses, hearing aids and similar products.
  - (8) Radio or television broadcasting offices or studios, but not transmitters or antennas.
  - (9) Vocational, technical, trade or industrial schools and similar uses.
  - (10) Essential services, including water, sewer, gas, telephone, radio and electric, meeting the performance standards and development criteria set forth in Part 4.
  - (11) Off-street parking lots for premises requiring off-street parking lots, meeting the performance standards and development criteria set forth in Part 4.
- (b) *Permitted accessory uses.* See Section 656.403.
  - (c) *Permissible uses by exception.*
    - (1) Retail sales and service of alcoholic beverages for on-premises consumption, not to exceed 25 percent of the building of which it is a part or 40 seats whichever is greater.
    - (2) Day care centers or care centers meeting the performance standards and criteria set forth in Part 4.
    - (3) Essential services, including water, sewer, gas, telephone, radio and electric, meeting the performance standards and development criteria set forth in Part 4.
    - (4) Churches, including a rectory and similar uses, meeting the performance standards and development criteria set forth in Part 4.
    - (5) Retail sales of all types of merchandise, service establishments including restaurants, and the retail sale and service of alcoholic beverages for either on-premises or off-premises consumption or both. The aforementioned shall not exceed 25 percent of the building of which it is a part.
  - (d) *Minimum lot requirements (width and area).*
    - (1) Width--100 feet.
    - (2) Area--10,000 square feet.
  - (e) *Maximum lot coverage by all buildings and structures.* 65 percent.
  - (f) *Minimum yard requirements.*
    - (1) Front--20 feet.
    - (2) Side--Ten feet.
    - (3) Rear--Ten feet.
  - (g) *Maximum height of structures.* 35 feet, provided, however, height may be unlimited where all required yards are increased by one foot for each three feet of building height or fraction thereof in excess of 35 feet.
  - (h) *Limitations on permitted or permissible uses by exception.* All of the permitted and permissible uses by exception in the IBP-2 District are subject to the following provisions:
    - (1) They shall be conducted entirely within an enclosed building.
    - (2) They shall include no outside storage or other similar activities.
    - (3) They shall be provided with off-street loading facilities which are located at the rear or side of the building and visually screened from an abutting public or approved private street.
    - (4) Off-street parking shall be separated from an abutting public or approved private street by a least an eight-foot landscaped area.
- B. *Secondary zoning districts.* The following secondary zoning districts may be permitted in the Business Park Category as depicted on the Future Land Use Maps of

the Comprehensive Plan, subject to the district regulations for same.

- (1) Public Buildings and Facilities-1 (PBF-1); Section 656.332.
- (2) Public Buildings and Facilities-2 (PBF-2); Section 656.332.
- (3) Agriculture (AGR); Section 656.331.
- (4) Conservation (CSV); Section 656.333.
- (5) Planned Unit Development (PUD); Section 656.340.

The aforementioned secondary zoning districts may be permitted, provided that the supplemental criteria and standards for same specified in Subpart G, Part 3 are met. (Ord. 91-59-148, § 1; Ord. 91-761-410, § 1)

**Sec. 656.322. Light Industrial Category.**

This category includes industrial uses which have fewer objectional impacts such as noise, odor, toxic chemical and wastes. Types of uses include light assembly and manufacturing, processing, storage/warehousing, research and development activities. Secondary uses include railroad yards, truck terminals, bus and railroad stations, public facilities such as trade and technical schools, health clinics, fire stations, utility plants, filling stations, restaurants and similar other supporting commercial uses. Site access to roads classified as collectors or higher on the Functional Highway Classification Map of the Comprehensive Plan, is required. Nonemergency access to the light industrial area from local streets will be prohibited.

The following primary and secondary zoning districts may be considered in the Light Industry Category depicted on the Future Land Use Maps of the Comprehensive Plan.

A. *Primary zoning districts.* The primary zoning districts shall include the following:

- (1) Industrial Business Park-1 (IBP-1); Section 656.321.
- (2) Industrial Business Park-2 (IBP-2); Section 656.321.
- (3) Industrial Light (IL); Section 656.322.
- (4) Public Building and Facilities-2 (PBF-2); Section 656.332.

These districts permit light industrial uses, offices, public facilities and supporting retail commercial uses described below.

I. *Industrial Business Park-1 (IBP-1) and Industrial Business Park-2 (IBP-2) Districts.* The permitted uses and structures, accessory uses and structures, permissible uses by exception, minimum lot and yard requirements, and maximum lot coverage and height of buildings and structures shall be as provided in Section 656.321.

II. *Industrial Light (IL) District.*

(a) *Permitted uses and structures.*

- (1) Wholesaling, warehousing, storage or distribution establishments (but not concrete batch mixing plants) and similar uses.
- (2) Light manufacturing, processing (including food processing but not slaughterhouse), packaging or fabricating.
- (3) Printing, lithography, publishing or similar establishments.
- (4) Business and professional offices.
- (5) Service establishments catering to commerce and industry, including linen supply, laundry and dry cleaning plants, freight movers, communications services, business machine services, restaurants, hiring and union halls, employment agencies, sign companies, automobile service stations, major repair garages, truck stops and similar uses.
- (6) Vocational, technical, trade or industrial schools and similar uses.
- (7) Medical clinics.
- (8) Freight, bus, trucking, shipping or other transportation terminals, commercial parking lots and garages, express offices and terminal facilities and telephone

exchanges, repair or installation facilities and similar uses.

(9) Radio or television broadcasting offices, studios, transmitters, telephone and cellular telephone towers.

(10) Scrap processing, indoor, clean activity, meeting the performance standards and development criteria set forth in Part 4.

(11) Bulk storage yards, (but not concrete batch mixing plants) including bulk storage of flammable liquids and acids if storage not within a completely enclosed building or structure is visually screened by a six-foot fence or wall not less than 95 percent opaque.

(12) Building trades contractors with outside storage yards and heavy construction equipment if storage, including heavy construction machinery, not within a completely enclosed building or structure, is visually screened by a six-foot fence or wall not less than 95 percent opaque.

(13) Outdoor storage yards and lots including auto storage yards (but not scrap processing yards or concrete batch mixing plants) if storage is completely enclosed by a six-foot fence or wall not less than 95 percent opaque.

(14) Retail outlets in conjunction with wholesaling establishments if the are a designated for retail sales does not exceed ten percent of the gross floor area of the building of which it is a part.

(15) Banks, including drive-thru tellers.

(16) Recycling facilities meeting the performance standards and development criteria set forth in Part 4.

(17) Retail sales of heavy machinery, farm equipment and building materials.

(18) Essential services, including water, sewer, gas, telephone, radio and electric, meeting the performance standards and development criteria set forth in Part 4.

(19) Veterinarians meeting the performance standards and development criteria set forth in Part 4.

(b) *Permitted accessory uses.*

(1) See Section 656.403.

(2) Residential facilities (including not more than one mobile home) located on the same premises as an industrial use for the use of watchmen or caretakers whose employment requires residence on the premises.

(c) *Permissible uses by exception.*

(1) An industrial or commercial use which is not otherwise permitted or permissible in this Zoning Code, except the following:

(i) Acid, chemical, fertilizer or insecticide manufacture or storage.

(ii) Explosives manufacturing or storage.

(iii) Paint, oil (including linseed), shellac, turpentine, lacquer or varnish manufacture.

(iv) Paper and pulp manufacture.

(v) Petroleum refining.

(vi) Stockyards or feeding pens and livestock auctions.

(vii) A use which is potentially dangerous, noxious or offensive to neighboring uses or the public in general by reason of smoke, odor, noise, flare, fumes, gas, vibration, threat of fire or explosion, emission of particulate matter or radiation.

(2) Recycling facilities and yards meeting the performance standards and development criteria set forth in Part 4.

(3) Care centers meeting the performance standards and development criteria set forth in Part 4.

(4) Essential services, including water, sewer, gas, telephone, radio and electric, meeting the performance standards and development criteria set forth in Part 4.

(5) Churches, including a rectory and similar uses, meeting the performance standards and development criteria set forth in Part 4.

(6) Retail sales and service of alcoholic beverages for either off-premises consumption or on-premises consumption or both.

(7) Retail sales.

(8) Concrete batch mixing plants.

(9) Yard waste composting facility including the mulching process, meeting the performance standards and development criteria set forth in Part 4.

(10) Automobile wrecking yards.

(d) *Minimum lot requirements (width and area).* None.

(e) *Maximum lot coverage by all buildings.* None.

(f) *Minimum yard requirements.* None.

(g) *Maximum height of structures.* None.

(h) *Limitations on permitted and permissible uses by exception.* All of the permitted and permissible uses by exception in the IL District, other than storage, are to be conducted entirely within an enclosed building.

III. *Public Building and Facilities-2 (PBF-2) District.* The permitted uses and structures, accessory uses and structures, permissible uses by exception, minimum lot and yard requirements, and maximum lot coverage and height of buildings and structures shall be as provided in Section 656.332.

B. *Secondary zoning districts.* The following secondary zoning districts may be permitted in the Light Industrial Category as depicted on the Future Land Use Maps of the Comprehensive Plan, subject to the district regulations for same.

(1) Commercial Community/General-1 (CCG-1); Section 656.313.

(2) Commercial Community/General-2 (CCG-2); Section 656.313.

(3) Public Buildings and Facilities-1 (PBF-1); Section 656.332.

(4) Public Buildings and Facilities-3 (PBF-3); Section 656.332.

(5) Agriculture (AGR); Section 656.331.

(6) Conservation (CSV); Section 656.333.

(7) Planned Unit Development (PUD); Section 656.340.

The aforementioned secondary zoning districts may be permitted provided that the supplemental criteria and standards for same specified in Subpart G, Part 3 are met. (Ord. 91-59-148, § 1; Ord. 91-761-410, § 1; Ord. 91-1290-590, § 1)

## **SUBPART F. PLANNED UNIT DEVELOPMENT**

### **Sec. 656.340. Planned Unit Development--PUD.**

It is the intent and purpose of this district that Planned Unit Developments, both large scale, which consists of five acres or more, and small scale, which consists of less than five acres, be utilized to create living environments that are responsive to the needs of their inhabitants; to provide flexibility in planning, design and development; to encourage innovative approaches to the design of community environments; to encourage the fulfillment of housing needs appropriate to various lifestyles and income levels; to encourage the integration of different housing types within a development; provide an opportunity for new approaches to ownership; to provide for an efficient use of land; to provide an environment compatible with surrounding land use; to adapt the zoning process to changes in construction and development technology; to encourage the preservation of the natural site features; to provide community environments that are so designed and located as to be an integral part of the total ecosystem; to encourage the design of communities and structures adapted to the local climate; thereby promoting the public health, safety, morals, order, comfort, convenience, appearance, prosperity, and general welfare of the City of Jacksonville. It is further intended that the Planned Unit Development district may be utilized to implement the Comprehensive

Plan. It is not the intent to utilize the Planned Unit Development district solely to diminish the usual application of the provisions of the Zoning Code.  
(Ord. 91-59-148, § 1; Ord. 92-2017-1458, § 7)

**Sec. 656.341. Procedures.**

(a) *Pre-application conference.* Prior to the preparation of an application for rezoning to the Planned Unit Development district, each applicant should meet with the Planning and Development Department and other affected and/or interested City departments, where applicable, regional and state agencies, representatives of adjacent municipalities and counties, as deemed necessary by the Department, in connection with the preparation of an Application for Rezoning to the Planned Unit Development district. For properties located within the Downtown Overlay Zone, as defined in Section 656.361.2, a pre-application conference with the staff of the Jacksonville Economic Development Commission is mandatory prior to the preparation of an application for rezoning to the Planned Unit Development district. The general outlines of the proposal, evidenced schematically by site plan(s) and a written description of the intended plan of development, sufficient for the understanding of the proposed development, should be provided by the applicant for consideration at such meeting(s), before the filing of such an application for rezoning. The purpose of the pre-application conference shall be to assist in bringing the overall application as consistent as possible into conformity with these and other regulations, to define specifically those variations from the usual application of the provisions of the Zoning Code, and to furnish the applicant with recommendations that would inform and assist with the preparation of the components of an application for rezoning to the Planned Unit Development district.

(b) *Authorization to file an application for rezoning to planned unit development district.* All applications for rezoning to the Planned Unit Development district, including applications for minor modifications thereto, shall be submitted to the Planning and Development Department prior to filing. The Department shall verify that the application is complete and sufficient for review, including any specific requirements from the pre-application conference, prior to filing.

(c) *Required exhibits for an application for rezoning to planned unit development.*

(1) An application for rezoning to the Planned Unit Development district shall proceed in general as other applications for rezoning and in addition to the information usually required for such applications, a commitment by all owners within the boundaries of the proposed Planned Unit Development which requires the following:

- (i) To proceed with the development in accordance with the site plan(s), written description of the intended plan of development and any condition(s) set forth by the Council in the ordinance which approves the Planned Unit Development district; and
- (ii) To bind their successors in title to proceed with the development according to subsection (c)(1)(i) of this Section.

(2) An application for rezoning to the Planned Unit Development district shall in addition to the aforementioned, be accompanied by the following, in sufficient copies as deemed necessary by the Planning and Development Department for referrals and recommendations:

(i) Site plan(s), map(s), and drawing(s), or other graphic documents of the proposed Planned Unit Development depicted at an appropriate scale as determined by the Department, shall indicate the following, unless it is determined by the Department that such exhibits are not necessary for review of the same:

(A) The existing site characteristics including any significant variations of elevations, water course(s), unique natural features, and natural vegetation.

(B) The location of all land uses by acreage, density including the number of dwelling units, intensity, and/or nonresidential floor area of such uses. A legend including the following applicable information shall be provided as part of the site plan(s) in accordance with the following format:

TABLE INSET:

Total gross acreage	_____ Acres	100%
Amount of each different land use by acreage	_____ Acres	_____ %
Total number and type of dwelling units by each type of same	_____ d.u.	_____ %
Total amount of active recreation and/or open space	_____ Acres	_____ %
Total amount of passive open space	_____ Acres	_____ %
Amount of public and private rights-of-way	_____ Acres	_____ %
Maximum coverage of buildings and structures at ground level	_____ Sq. Ft.	_____ %

(C) The existing and proposed vehicular circulation system, pedestrian circulation system and points of ingress and egress to the development, including rights-of-way and paving widths. In addition, all existing and proposed rights-of-way, driveways and median openings (if any) within 660 feet of the proposed development.

(D) Site plan(s), map(s), drawing(s), traffic studies and/or other studies and reports, as may be by the Department.

All of the aforementioned required exhibits may be required by the Department in order to make the findings, determinations and recommendations. Additional information as needed may be required by the Department during the review.

(E) A small scale Planned Unit Development, in addition to the aforementioned required exhibits, as determined by the Department, may be detailed to the point of the site plan(s) providing the building layout, elevations and/or other details related to site design for the proposed development consistent with the written description of the intended plan of development.

(ii) A written description of the intended plan of development shall be submitted to the Department clearly describing permitted uses and structures, permitted accessory uses and structures, permissible uses by exception, minimum lot requirements (width/area), maximum lot coverage by all buildings and structures, minimum and/or maximum yard requirements, maximum height of structures and any limitations on permitted and/or permissible uses by exceptions. The written description of the intended plan of development shall also include a description of where the proposed Planned Unit Development differs from the usual application of the provisions of the Zoning Code. The written description of the intended plan of development shall also include the name of the project and the names of the professional project planners(s), architect(s), engineer(s), developer(s) and quantitative data as follows: size in acres of the total development; total number of dwelling units and/or nonresidential floor area or both; total



amount of recreation and/or open space; amount of public and/or private rights-of-way, and the proposed land coverage of all buildings and structures. In addition, the written description of the intended plan of development shall include a schedule indicating the approximate date(s) when construction of the phases within the proposed Planned Unit Development are to be initiated and completed. The written description of the intended plan of development shall also provide a written statement of the intent for the continued operation and maintenance of those areas and functions described herein and facilities which are not to be provided, operated or maintained by the City.

All required and supplementary data, exhibits, information, site plan(s), etc. submitted as part of an application for rezoning to Planned Unit Development district, including any additional data, exhibits, information, site plan(s), etc. and amendments thereto, shall be clearly identified by title, name, date, exhibit and/or other notation acceptable to the Planning and Development Department.

(d) *Criteria for review.* In evaluation and consideration of an application for rezoning to the Planned Unit Development district, the Planning and Development Department, Planning Commission (or, in the case of properties located within the Downtown Overlay Zone, as defined in Section 656.361.2, the Downtown Development Review Board) and the City Council including the appropriate committee thereof shall evaluate and consider the following criteria in addition to the criteria set forth in Section 656.125, Ordinance Code:

(1) *Consistency with the Comprehensive Plan.* No Planned Unit Development may be approved unless it is consistent with the Comprehensive Plan.

(2) *Consistency with the Concurrency Management System.* The established levels of service standards adopted in the Comprehensive Plan.

(3) *Allocation of residential land use.* That any residential land use in an application for rezoning to the Planned Unit Development district shall not exceed the projected holding capacity reflected in the background data and analysis contained within the Future Land Use Element of the Comprehensive Plan.

(4) *Internal compatibility.* All land uses proposed within a proposed Planned Unit Development should be compatible with other proposed uses and not have any undue adverse impact on any neighboring use. An evaluation of the internal compatibility of a proposed Planned Unit Development shall be based on the following factors:

- (i) The streetscape;
- (ii) The existence or absence of, and the location of, open spaces, plazas, recreational areas and common areas;
- (iii) The use of existing and proposed landscaping;
- (iv) The treatment of pedestrian ways;
- (v) Focal points and vistas;
- (vi) The use of the topography, physical environment and other natural features;
- (vii) Traffic and pedestrian circulation pattern;
- (viii) The use and variety of building setback lines, separations and buffering;
- (ix) The use and variety of building groupings;
- (x) The use and variety of building sizes and architectural styles;
- (xi) The use and variety of materials;
- (xii) The separation and buffering of vehicular use areas and Sections of vehicular use areas;
- (xiii) The variety and design of dwelling types;
- (xiv) The particular land uses proposed and the conditions and limitations thereon;
- (xv) The form of ownership proposed for various uses;
- (xvi) Compatible relationship between land uses in a mixed use project; and
- (xvii) Any other factor deemed relevant to privacy, safety, preservation, protection or

welfare of any use within the proposed Planned Unit Development.

(5) *External compatibility.* All land uses within a proposed Planned Unit Development should be compatible with existing and planned uses of properties surrounding the proposed Planned Unit Development and not have any avoidable or undue adverse impact on existing or planned surrounding uses. An evaluation of the external compatibility of a proposed Planned Unit Development shall be based on the following factors:

- (i) Those areas of the proposed Planned Unit Development located on or near its perimeter and the conditions and limitations thereon;
- (ii) The type, number and location of surrounding external uses;
- (iii) The Comprehensive Plan and existing zoning on surrounding lands; and
- (iv) Any other factor deemed relevant to the privacy, safety, preservation, protection or welfare of lands surrounding the proposed Planned Unit Development which includes any existing or planned use of such lands.

(6) *Intensity of development.* The residential density and intensity of use of a proposed Planned Unit Development should be compatible with and have no undue adverse impact upon the physical and environmental characteristics of the site and surrounding lands. The permitted residential density and intensity of use in a proposed Planned Unit Development may be adjusted in consideration of the following factors:

- (i) The locations of various proposed uses within the proposed Planned Unit Development and the degree of compatibility of such uses with each other and with surrounding uses;
- (ii) The amount and type of protection provided for the safety, habitability and privacy of land uses both internal and external to the proposed Planned Unit Development;
- (iii) The existing residential density and intensity of use of surrounding lands;
- (iv) The availability and location of utility services and public facilities and services;
- (v) The amount and size of open spaces, plazas, common areas and recreation areas;
- (vi) The use of energy-saving techniques and devices, including sun and wind orientation;
- (vii) The existence and treatment of any environmental hazards to the proposed Planned Unit Development property or surrounding lands;
- (viii) The access to and suitability of transportation arteries within the proposed Planned Unit Development and existing external transportation systems and arteries; and
- (ix) Any other factor deemed relevant to the limitation of the intensity of development for the benefit of the public health, welfare and safety.

(7) *Usable open spaces, plazas, recreation areas.* Usable open spaces, plazas and recreation areas provided within a proposed Planned Unit Development shall be evaluated based on conformance with the policies of the Comprehensive Plan and the sufficiency of such areas to provide appropriate recreational opportunities, protect sensitive environmental areas, conserve areas of unique beauty or historical significance, provide structure to neighborhood design, and encourage compatible and cooperative relationships between adjoining land uses.

(8) *Impact on wetlands.* Development within a proposed Planned Unit Development shall be consistent with the limitations specified within the wetland categories as defined in the Comprehensive Plan; i.e., Saltwater Marshes, Riverine/Estuarine Wetlands, and All Other Wetlands.

(9) *Listed species regulations.* Development within a proposed Planned Unit Development may be subject to a listed species survey as required by the Comprehensive Plan.

(10) *Off-Street parking including loading and unloading areas.* Sufficient off-street parking, including loading and unloading areas for vehicles, including bicycles shall be

provided.

(11) *Sidewalks, trails, and bikeways.* The design of a proposed Planned Unit Development should incorporate appropriate pedestrian and bicycle accessways so as to provide for a variety of movement opportunities.

(e) *Enactment of the ordinance for a planned unit development.* Following the public hearings, as required for all applications for rezoning, the City Council may enact an ordinance, which clearly identifies and/or lists all data, exhibits, information, site plan(s), etc. being approved as part of the Planned Unit Development district, establishing a Planned Unit Development district including any conditions related thereto, based upon findings that the Planned Unit Development district will accomplish the objectives and meet the standards of the district and is consistent with the Comprehensive Plan. Any monetary contributions shall be conditions listed in the ordinance and the conditions shall contain a minimum dollar amount for such contribution, the timing of the payment, the Department responsible for accepting the payment, and the Department who will be assigned the payment, including the appropriate revenue account number for the payment. Any nonmonetary contributions, including but not limited to recreation facilities, shall be conditions listed in the ordinance and the conditions shall contain a minimum value of such nonmonetary contribution.

Development within a Planned Unit Development district shall proceed substantially in accordance with the site plan(s), written description of the intended plan of development and any conditions set forth by the City Council in the ordinance which approves the Planned Unit Development district.

(f) *Modifications to a Planned Unit Development district.* An amendment to an approved Planned Unit Development district may be accomplished through either an Administrative Modification, Minor Modification, or by filing an application for rezoning, meeting criteria as herein described.

(1) *Administrative modifications.* In order to facilitate deviations to an approved Planned Unit Development district, the Director of Planning and Development may authorize administrative modifications which comply with the following criteria:

(i) There is no change in the approved land use(s) including the amount, configuration and location thereof, no increase in the number of dwelling units or amount of nonresidential floor area, or any associated characteristics of any use.

(ii) Driveways and/or streets are located in the same general location, are the same or fewer number originally approved, perform the same general function and maintain the same public and/or private rights therein.

(iii) There is no change of any specific dimension or setback depicted on the site plan(s) or in the written description of the intended plan of development.

(iv) There is no change to any condition(s) set forth by the City Council in the ordinance which approved the Planned Unit Development district.

The Director is authorized to promulgate the rules and procedures necessary to implement an Administrative Modification. Additionally, the Director shall transmit a copy of any request for Administrative Modification to any District Council Member within five days of receipt, for the District Council Member's review and comment. The District Council Member may provide written comments to the Planning and Development Department regarding the applicability of the Administrative Modification criteria contained herein within the time frame established for the Department's review of the request for Administrative Modification.

For purposes of this subsection, for administrative modifications for properties located within the Downtown Overlay Zone, as defined in Section 656.361.2, all references to "Director of Planning and Development" or "Planning and Development Department" shall mean the Downtown Development Review Board.

(2) *Minor modifications.* In order to facilitate minor modifications to an approved Planned Unit Development district, the Planning Commission may authorize minor modifications which comply with the following criteria:

(i) That there is no change in the approved land use(s), including the amount and general location thereof, no increase in the number of dwelling units or amount of nonresidential floor area, or any associated characteristics of any use.

(ii) Driveways and/or streets do not significantly alter the general distribution of traffic or modify the public or private rights therein.

(iii) There is no change to any condition(s) set forth by the City Council in the ordinance which approved the Planned Unit Development district.

The Planning Commission is authorized to promulgate the rules and procedures necessary to implement a minor modification. Additionally, the Director shall transmit a copy of any request for Minor Modification to any District Council Member within five days of receipt, for the District Council Member's review and comment. The District Council Member may provide written comments to the Planning and Development Department regarding the applicability of the Minor Modification criteria contained herein within the time frame established for the Department's review of the request for Minor Modification.

Minor modifications to an approved Planned Unit Development district shall be advertised and noticed in a manner prescribed herein:

Notice of the time and place of the public hearing which is required to be held by this Section with respect to each minor modification shall be posted at least 14 days in advance of the scheduled public hearing by United States mail to all owners of real property within 350 of the boundaries of the land upon which a minor modification is requested; provided, that where such notice is determined by the Director to be insufficient to ensure actual notice to a majority of adjoining owners, he may require mailed notice to be given to such owners as the Director may determine to be appropriate. For the purpose of notice requirements to adjoining owners, the names and addresses of the owners shall be deemed to be those on the current tax records in the Office of the Property Appraiser. The failure of an owner required by this Section to be notified by mail to receive the notice shall not invalidate or otherwise have any effect upon a public hearing or action taken by the Commission on an application for minor modification, and the applicant for a minor modification shall post signs at intervals of not more than 200 feet along all street sides of property upon which the request is made in the form required by the Commission within three working days after the filing for a minor modification. The sign shall be posted in full view of the public on each street side of the land involved in a manner consistent with Section 656.124(c) and shall be maintained by the applicant until a final determination has been made on the minor modification. The sign shall be removed by the applicant within ten working days after final action by the Commission. Appeals from decisions of the Commission shall be pursuant to Section 656, Part 1, Subpart D, Ordinance Code.

For purposes of this subsection, for minor modifications for properties located within the Downtown Overlay Zone, as defined in Section 656.361.2, all references to "Planning Commission" or "Planning and Development Department" shall mean the Downtown Development Review Board. Furthermore, the requirement contained in this subsection concerning mailed notification to owners of real property within 350 feet of the boundaries of the land upon which the minor modification is requested shall not apply unless such notice is determined by Jacksonville Economic Development Commission staff to be appropriate, however, the applicant shall submit an electronic version of the published notice to JEDC staff for placement on the City's website.

(3) *Major changes.* In order to facilitate any other change to an approved Planned Unit

Development district, an application for rezoning shall be filed in a manner consistent with other applications for rezoning.

(g) *Verification of substantial compliance with the Planned Unit Development district.*

(1) *Required review.* Prior to any portion of development within a Planned Unit Development district, an applicant shall submit detailed development plans to the Department, pursuant to the procedures in this subsection, for verification of substantial compliance with the approved Planning Unit Development ordinance, adopted written description, and adopted site plan.

(2) *Application requirements.* In addition to any documentation required by subsection (3) below, the applicant shall submit the following sets of detailed development plans for the portion of the Planned Unit Development proposed to be developed:

(i) Three sets to the Department.

(ii) One set to the City Council Research Division.

(iii) One set to the District Council Member.

(iv) Any Property located within the Downtown Overlay Zone, as defined by section 656.361.2, an additional set of PUD plans shall be provided to a designated staff member of the Jacksonville Economic Development Commission for review and comment on those properties.

(3) *Parks and recreation.* In addition to the detailed development plans required by subsection (2) above, the applicant shall provide documentation and instrumentation to indicate the ownership and maintenance responsibility for any proposed neighborhood park, pocket park, playfield or recreational structure to the following:

(i) One copy to the Department.

(ii) One copy to the City Council Research Division.

(iii) One copy to the District Council Member.

(iv) One copy to the Parks, Recreation, Entertainment and Conservation Department.

(v) One copy to the Office of General Counsel.

(4) *Department review.* At least two planners shall review the application for verification of substantial compliance for consistency with the approved Planned Unit Development ordinance, adopted written description and adopted site plan. Prior to issuing a determination on the application for verification of substantial compliance, the Department shall forward its preliminary findings, in writing, to the District Council Member.

(5) *District Council Member comments.* The District Council Member may provide written comments regarding the Department's preliminary findings within five business days of receipt of the preliminary findings. The District Council Member may choose to provide written comments through the City Council Research Division. Disputes between the Department and the District Council Member shall be resolved as provided herein.

(6) *Compliance finding.* If the Department finds the application in compliance with the approved Planned Unit Development ordinance, adopted written description, and adopted site plan, and the application is not appealed pursuant to subsection (7) below, then the Department shall provide approved copies of the application as follows:

(i) One copy to the Department official file.

(ii) One copy to the Zoning Counter.

(iii) One copy to the District Council Member.

(iv) One copy to the applicant.

(7) *Dispute resolution.* Disputes between the Department and the District Council Member during preliminary review shall be heard by the Planning Commission pursuant to the following:

(i) The District Council Member or the Department may request dispute resolution by the Planning Commission.

(ii) The Planning Commission shall conduct a hearing at the next regularly scheduled meeting.

(iii) The Planning Commission's review is limited to whether or not the application substantially complies with the approved Planned Unit Development ordinance, adopted written description and adopted site plan. No additional conditions may be imposed on the applicant by the Planning Commission.

(iv) The parties to the proceeding are the District Council Member, the Department, and the applicant. No other parties shall be permitted to comment.

(v) The record shall consist of the approved Planned Unit Development ordinance, the adopted written description, the adopted site plan, the application for verification of substantial compliance, the Department's preliminary findings, the District Council Member's comments, and any additional information provided at the Planning Commission hearing by the parties.

(vi) The Planning Commission shall issue a finding regarding substantial compliance on the date of the hearing and this finding shall be the final agency action for the City, with appeals to a court of competent jurisdiction. If the Commission finds the application in compliance, then the staff to the Commission shall distribute copies consistent with subsection (6) above. If the Commission finds the application not in compliance, the Commission shall issue a letter to the applicant so stating.

(Ord. 91-59-148, § 1; Ord. 92-2017-1458, § 8; Ord. 95-211-772, § 2; Ord. 98-678-E, § 5; Ord. 2000-90-E, § 4; Ord. 2005-893-E, § 1; Ord. 2005-1293-E, § 1; Ord. 2006-1395-E, § 1; Ord. 2007-564-E, § 19)

**Sec. 656.342. Standards and performance criteria.**

The Planning Commission may adopt standards and performance criteria to be followed in the Commission's review of PUDs, which provide requirements for open space, off-street parking, land-use intensity, setbacks and other design parameters. Upon adoption by the Planning Commission, such standards and performance criteria may be modified or amended only upon specific action by the Planning Commission. Such standards and criteria shall be published and made available to the public for utilization in the planning and development of PUDs.

(Ord. 91-59-148, § 1)

***10.2.2 Jacksonville Application for Rezoning to Planned Unit Development***



# APPLICATION FOR REZONING TO **PLANNED UNIT DEVELOPMENT**

For Digital Copies of this application, see: [www.col.net/departments/planning+and+development/Applications/Planned Unit Development.html](http://www.col.net/departments/planning+and+development/Applications/Planned+Unit+Development.html)

## TO BE COMPLETED BY PLANNING AND DEVELOPMENT DEPARTMENT ONLY

- 1. Ordinance #: \_\_\_\_\_
- 2. Staff Sign-Off Initials/Date: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 3. Filing Date: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 4. Development #: \_\_\_\_\_
- 5. Number of Signs To Be Posted: \_\_\_\_
- 6. 1<sup>st</sup> City Council: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 7. Planning Commission: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 8. LUZ: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 9. 2<sup>nd</sup> City Council: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 10. Current Zoning District(s): \_\_\_\_\_
- 11. Current Land Use Category: \_\_\_\_\_
- 12. Proposed Land Use Category: \_\_\_\_\_
- \*13. If applicable, Indicate companion land use amendment application number: \_\_\_\_\_
- 14. Neighborhood Association (if applicable): \_\_\_\_\_

## TO BE COMPLETED BY THE APPLICANT

- 15. Previous Zoning Application Filed For Site? NO
- 16. If Yes, State Application No(s) \_\_\_\_\_
- 17. Council District: 13
- 18. Planning District: 3
- 19. Census Tract: 014407
- 20. Total Land Area (Nearest 1/100th of an Acre): 175.63
- 21. Map Panel #: 8617
- 22. Proposed PUD Name: Greenland Energy Center

Before completing this form, carefully read the accompanying instructions. If space provided is not adequate, use a separate page, number and reference it, and attach it with the application. **All PUD applications must be submitted unbound, typed or printed legibly in black ink, reviewed, verified for sufficiency and signed-off by Planning and Development Department staff prior to filing.** For all PUD applications, **TWO (2)** copies must be filed with the Planning and Development Department, Suite 700, Florida Theatre Building, 128 East Forsyth Street, Jacksonville, Florida 32202. Phone number – (904) 630-1902

### A. GENERAL INFORMATION ON APPLICANT/OWNER(S)

- 1. Applicant's Personal Name: Karl J. Sanders, Esquire
- 2. Applicant's Company Name: Edwards, Cohen, Sanders, Dawson & Mangu, PA
- 3. Applicant's Mailing Address: 6 East Bay Street, Suite 500
- 4. Applicant's City, State, Zip code: Jacksonville, FL 32202
- 5. Applicant's Phone Number: ( 904 ) 633 - 7979 Fax Number: ( 904 ) 633 - 9026
- 6. Applicant's Email Address: Ksanders@edcolaw.com
- 7. Owner's Name: JEA, c/o Eileen Connolly
- 8. Owner's Mailing Address: 21 W. Church Street, CC-6
- 9. Owner's City, State, Zip Code: Jacksonville, FL 32202
- 10. Owner's Phone Number: ( 904 ) 665 - 4325 Fax Number: ( 904 ) 665 - 4153

**B. JUSTIFICATION FOR REZONING APPLICATION:** To facilitate construction of a natural gas power generating facility and potable water treatment facility.



**C. LOCATION OF PROPERTY**

- 1. Property Appraiser's Real Estate Number(s): SEE ATTACHED PAGE 3
- 2. General Location: Philips Highway (b/w Davis Creek Rd. and St. Augustine Rd.)
- 3. Property Address: 12121 Philips Highway
- 4. Between Streets Davis Creek Road and St. Augustine Road

**D. REQUIRED ATTACHMENTS FOR FORMAL, COMPLETE APPLICATION**

The following items must be labeled as exhibits and attached to 2 complete, unbound applications in the order prescribed below. All pages of the application must be on 8 1/2" X 11" paper with provision for page numbering by the staff as prescribed in the application instructions manual. Please check each item below and the PUD Check List for inclusion of information required.

- Exhibit 1 A very clear, accurate and legible legal description of the property that must be only and entirely placed on the JP&DD formatted forms provided with the application package. The legal description may be either lot and block or metes and bounds.
- Exhibit A Property Ownership Affidavit - Notarized Letter(s).
- Exhibit B Agent Authorization - Notarized letter(s) designating the agent.
- Exhibit C Binding Letter.
- Exhibit D Written description in accordance with the PUD Checklist and with provision for dual page numbering by the JP&DD staff.
- Exhibit E Site plan on 8 1/4" X 11" paper with provision for dual page numbering by the JP&DD staff.

**E. REQUIRED SUPPLEMENTAL INFORMATION (Submitted separately & not part of the formal application)**

- Exhibit F **8 Copies** of the site plan (24" X 36") drawn at a scale large enough to clearly indicate the following: (a) North arrow and scale; (b) Property lines and dimensions of the site; (c) Building locations and building lot coverage; (d) Parking area; (e) Required Landscaped Areas; (f) All ingress and egress locations (driveways, alleys and easements) within 660 feet; (g) Adjacent streets and rights-of-way; (h) jurisdictional wetlands; and (i) existing site conditions and improvements that will be undisturbed.
- Exhibit G One copy of the deed to indicate proof of property ownership.
- Exhibit H Aerial Photograph.
- Exhibit I Listed Species Survey (If the proposed site is greater than fifty acres).
- Exhibit J Other Information as required by the Department (i.e.-\*building elevations, \*signage details, traffic analysis, etc.).
- Exhibit K Site Location Map.

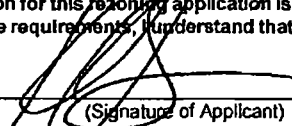
**F. PUBLIC HEARINGS AND POSTING OF SIGNS**

No application will be accepted until all the requested information has been supplied and the required fee has been paid. Acceptance of a completed application does not guarantee its approval by the City Council. The applicant will be notified of public hearing dates on this application upon the filing of the application. The applicant or authorized agent MUST BE PRESENT at the public hearings.

The required SIGN(S) must be POSTED on the property BY THE APPLICANT within 5 days after the filing of an application. The sign(s) may be removed only after final action of the Council and must be removed within 10 days of such action. The applicant must also pay for the required public notice stating the nature of the proposed request which is required to be published in an approved newspaper AT LEAST 14 DAYS IN ADVANCE OF THE PUBLIC HEARING. Advertising costs are payable by the applicant directly to the newspaper and the applicant must furnish PROOF OF PUBLICATION to the Planning and Development Department, 128 East Forsyth Street, Florida Theatre Building, Suite 700, Jacksonville, Florida, 32202, prior to the public hearing.

**G. APPLICATION CERTIFICATION**

I, hereby, certify that I am the owner or the authorized agent of the owner(s) of the property described herein, that all answers to the questions in this application and all information contained in the material attached to and made a part of this application, are accurate and true to the best of my knowledge and belief. I also attest by my signature that all required information for this rezoning application is completed and duly attached in the prescribed order. Furthermore, if the package is found to be lacking the above requirements, I understand that the application will be returned for correct information.

  
 (Signature of Applicant)

7/7/08  
 (Date)

<b>FOR OFFICIAL USE ONLY - FILING FEE INFORMATION</b>	
1) Rezoning Application's General Base Fee:	<b>\$1,500.00</b>
2) Plus \$10.00/acre or portion thereof _____ Acres @ \$10.00/acre:	_____
3) Plus Notification Costs Per Addressee _____ Notifications @ \$7.00 each:	_____
4) Total Rezoning Application Cost (Not to Exceed \$10,000):	_____
<b>NOTE: Advertising Costs To Be Billed to Owner/Agent</b>	

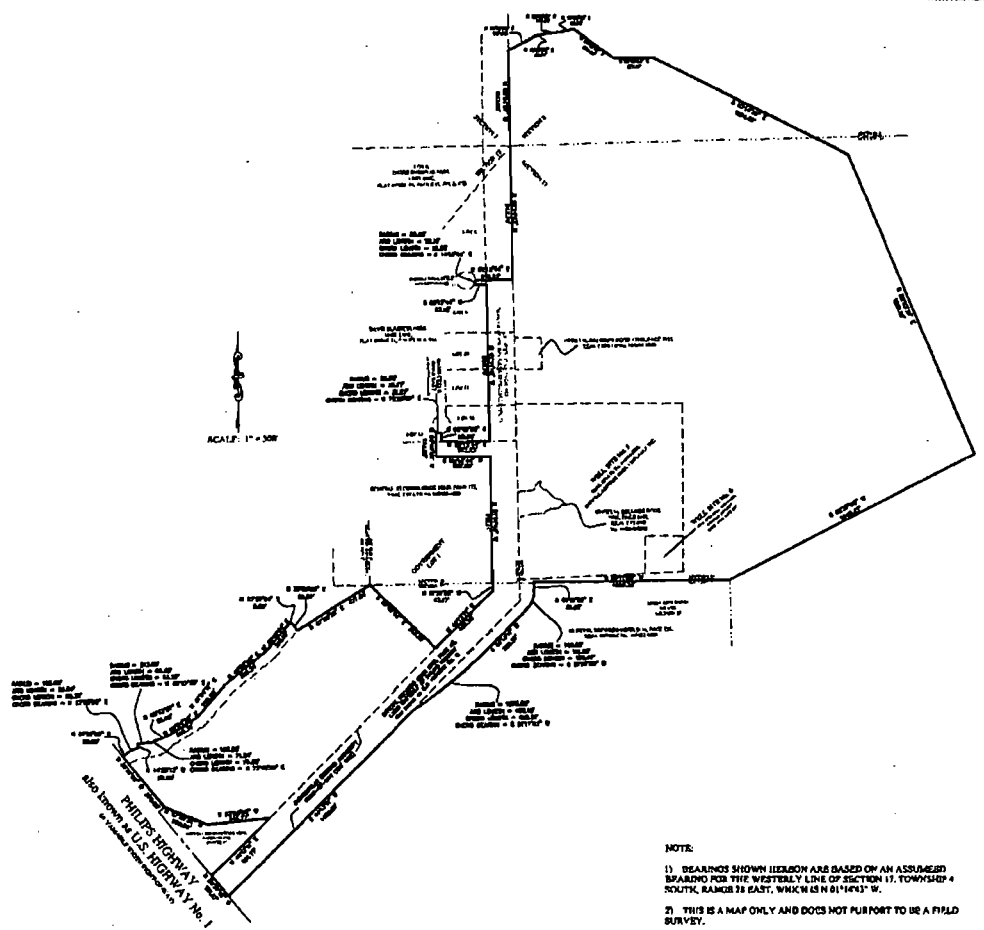
**APPLICATION FOR REZONING TO PLANNED UNIT DEVELOPMENT  
PAGE 3**

**RE NUMBERS**

167872-0000 (DDI-JEA)  
168050-0000 (DDI-JEA)  
168051-0000 (DDI-JEA)  
168060-0000 (DDI-JEA)  
168060-0020 (JEA)  
168060-0030 (JEA)  
168060-0040 (JEA)  
168068-1000 (SPHINX N)  
168080-8220 (BP LLP)  
168080-8230 (BP LLP)  
168080-8240 (BP LLP)  
168080-8250 (BP LLP)  
168080-8260 (WEP)  
168152-0200 (SPHINX S)  
168153-0000 (T-Line)  
168155-0620 (JEA Driving Range)

MAP SHOWING SKETCH OF DESCRIPTION OF

A PORTION OF SECTION 8, TOGETHER WITH A PORTION OF SECTION 17, TOGETHER WITH A PORTION OF SECTION 16, TOGETHER WITH A PORTION OF SECTION 17, THE MARY ANN DAVIS CANAL, ALL LYING IN AND BEING A PORTION OF TOWNSHIP 4 SOUTH, RANGE 38 EAST, TOGETHER WITH PORTIONS OF LOTS 4, 10, 11, 12 AND 13 AS SHOWN ON THE PLAN OF DAVES SUBSIDIZED PARK LIFT TRAIL, RECORDED IN PLAT BOOK 31, PAGES 84 AND 84A, OF THE COUNTY PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA.



LINE DESCRIPTION

A PORTION OF SECTION 8, TOGETHER WITH A PORTION OF SECTION 17, TOGETHER WITH A PORTION OF SECTION 16, TOGETHER WITH A PORTION OF SECTION 17, THE MARY ANN DAVIS CANAL, ALL LYING IN AND BEING A PORTION OF TOWNSHIP 4 SOUTH, RANGE 38 EAST, TOGETHER WITH PORTIONS OF LOTS 4, 10, 11, 12 AND 13 AS SHOWN ON THE PLAN OF DAVES SUBSIDIZED PARK LIFT TRAIL, RECORDED IN PLAT BOOK 31, PAGES 84 AND 84A, OF THE COUNTY PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA.

BEARINGS SHOWN (BEFORE) ARE BASED ON AN ASSUMED BEARING FOR THE WESTERLY LINE OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 38 EAST, WHICH IS N 81°49' 15" W.

THIS IS A MAP ONLY AND DOES NOT PURPORT TO BE A FIELD SURVEY.

CONTAINS PLATS ACROSS HERE ON LOTS

NOTE:

1) BEARINGS SHOWN (BEFORE) ARE BASED ON AN ASSUMED BEARING FOR THE WESTERLY LINE OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 38 EAST, WHICH IS N 81°49' 15" W.

2) THIS IS A MAP ONLY AND DOES NOT PURPORT TO BE A FIELD SURVEY.

SURVEY DATE: N/A	DRAWING DATE: JULY 10, 2008
FIELD BOOK: PACETY	DRAWING SCALE: 1" = 300'
DRAFTED BY: RTS	REVISION DATE:
CHECKED BY: RTS	
COMPUTER FILE: 20080805.DWG	
JOB FILE NO: 2008080	

3131 CORPORATE SQUARE BOULEVARD,  
JACKSONVILLE, FLORIDA 32216  
904-722-0400  
FAX 904-722-0402  
DEGROVE@DEGROVE.COM  
LICENSED BUSINESS NUMBER L.R.4403

**DEGROVE**  
SURVEYORS, INC.

THIS MAP MEETS THE REQUIREMENTS OF THE MINIMUM TECHNICAL STANDARDS PURSUANT TO CHAPTER 91G17-4 F.A.C.

RUSSELL TAYLOR SMITH, P.L.C., FLORIDA CERTIFICATION NO. 4603

NOTICE: NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPED.

CERTIFIED TO: JEA

**EXHIBIT A**

**Property Ownership Affidavit**

Date: February 12, 2008

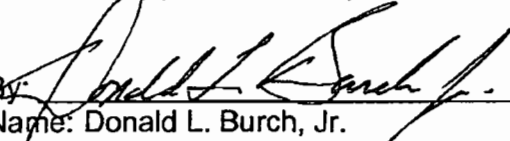
City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Ownership Certification

Ladies and Gentlemen:

I, **DONALD L. BURCH, JR.**, Director of Real Estate Services for JEA, hereby certify that JEA is the owner of the property described in the legal description attached as **Exhibit 1** in connection with filing applications for future land use map amendment and rezoning submitted to the Jacksonville Planning and Development Department.

JEA, a body politic and corporate

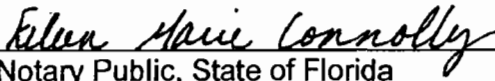
By:   
Name: Donald L. Burch, Jr.  
Title: Director, Real Estate Services

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 12<sup>th</sup> day of February, 2008, by **Donald L. Burch, Jr.**, Director of Real Estate Services for JEA, a body politic and corporate, on behalf of JEA, who (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

EILEEN MARIE CONNOLLY  
Notary Public, State of Florida  
My comm. exp. Sept. 2, 2008  
Comm. No. DD 352610

  
Notary Public, State of Florida  
Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
My Commission Number is: \_\_\_\_\_

**EXHIBIT "B"**  
**Agent Authorization**

Date: February 12, 2008

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

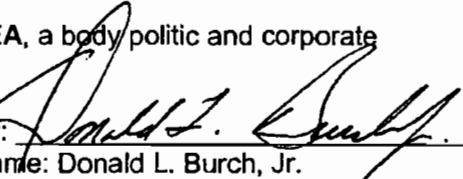
Re: Agent Authorization for the following site location:

12121 Philips Highway - RE Nos. 168155-0620; 168153-0000; 168060-0030;  
168060-0020; 168060-0040 (between Davis Creek Road and Old St. Augustine  
Road

Ladies and Gentlemen:

You are hereby advised that the undersigned is owner of the property described in **Exhibit 1** attached hereto. Said owner hereby authorizes and empowers the law firm of Edwards, Cohen, Sanders, Dawson & Mangu, P.A. to act as its agent to file applications for future land use map amendment and rezoning with respect to the above-referenced property and in connection with such authorization to file such applications, papers, documents, requests and other matters necessary for such requested change.

JEA, a body politic and corporate

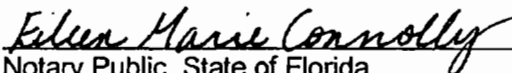
By:   
Name: Donald L. Burch, Jr.  
Title: Director, Real Estate Services

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 12<sup>th</sup> day of February, 2008, by **Donald L. Burch, Jr.**, Director of Real Estate Services for JEA, a body politic and corporate, on behalf of JEA, who (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

EILEEN MARIE CONNOLLY  
Notary Public, State of Florida  
My comm. exp. Sept. 2, 2008  
Comm. No. DD 352610

  
Notary Public, State of Florida  
Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
My Commission Number is: \_\_\_\_\_

**EXHIBIT C**

**Binding Letter**

Date: February 12, 2008

City of Jacksonville  
Planning and Development Department  
Jacksonville, Florida 32202

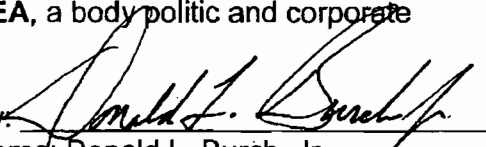
**Re: SOUTHEAST GENERATING STATION PUD**

Ladies and Gentlemen:

You are hereby advised that the undersigned, owner of the above referenced property, being more particularly described in the PUD document attached hereto and by reference made a part hereof, hereby agrees to bind its successor(s) in title to development in accordance with (a) the site plan and the written description of the proposed development plan submitted with the rezoning application and (b) any conditions set forth by the City Council of the City of Jacksonville in the rezoning ordinance. Owner also agrees to proceed with the development of the subject property in accordance with items (a) and (b) above and will complete such development in accordance with the site plan approved by that ordinance. Provisions shall be made by written agreement for continuing operation and maintenance of all common areas and facilities that are not to be provided, operated or maintained by the City of Jacksonville.

Sincerely,

**JEA, a body politic and corporate**

By: 

Name: Donald L. Burch, Jr.

Title: Director, Real Estate Services

# ORDINANCE

## Legal Description

A PORTION OF SECTION 8, TOGETHER WITH A PORTION OF SECTION 17, IN TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT A P-K NAIL SET IN CONCRETE AT THE SOUTHWESTERLY CORNER OF SAID SECTION 17, SAID CORNER ALSO BEING SITUATE ON THE NORTHERLY LINE OF SAID MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH RANGE 28 EAST; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY LINE OF SAID SECTION 17, 19.12 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE SOUTHWEST CORNER OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322 OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY; THENCE NORTH 87 DEGREES 13 MINUTES 45 SECONDS EAST ALONG THE SOUTH LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 916.41 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE SOUTHEAST CORNER OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322; THENCE NORTH 00 DEGREES 13 MINUTES 54 SECONDS WEST ALONG THE EAST LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 953.17 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE NORTHEAST CORNER OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322; THENCE SOUTH 89 DEGREES 50 MINUTES 06 SECONDS WEST ALONG THE NORTH LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 933.11 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE NORTHWEST CORNER OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, ALSO BEING A POINT ON THE WEST LINE OF SAID SECTION 17; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST ALONG THE WEST LINE OF SAID SECTION 17, 194.99 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 89 DEGREES 50 MINUTES 30 SECONDS EAST. DEPARTING SAID EAST LINE OF SECTION 17, 150.00 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, 175.02 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 89 DEGREES 50 MINUTES 06 SECONDS WEST, 150.00 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603, SAID POINT BEING ON THE AFORESAID WEST LINE OF SECTION 17; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG SAID WEST LINE OF SECTION 17, 1072.21 FEET TO A THREE INCH IRON PIPE FILLED WITH CONCRETE, SAID THREE INCH IRON PIPE BEING THE NORTHWESTERLY CORNER OF SAID SECTION 17, ALSO BEING THE SOUTHWESTERLY CORNER OF SAID SECTION 8; THENCE NORTH 00 DEGREES 54 MINUTES 07 SECONDS WEST, ALONG SAID WEST LINE OF SECTION 8, 543.08 FEET TO A POINT SITUATE ON SAID LINE SAID POINT BEING A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 62 DEGREES 58 MINUTES 02 SECONDS EAST, DEPARTING FROM SAID WEST LINE OF SECTION 8, 167.83 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 75 DEGREES 53 MINUTES 25 SECONDS EAST, 38.79 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 82 DEGREES 46 MINUTES 52 SECONDS EAST, 109.93 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 77 DEGREES 32 MINUTES 18 SECONDS EAST, 68.62 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 54 DEGREES 55 MINUTES 32 SECONDS EAST, 280.24 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603;

# ORDINANCE

## Legal Description

THENCE NORTH 89 DEGREES 05 MINUTES 53 SECONDS EAST, 217.16 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 63 DEGREES 14 MINUTES 36 SECONDS EAST, 1224.67 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 22 DEGREES 53 MINUTES 22 SECONDS EAST, 1821.53 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 62 DEGREES 37 MINUTES 45 SECONDS WEST, 1543.27 FEET TO A THREE INCH IRON PIPE FILLED WITH CONCRETE, SAID THREE INCH IRON PIPE BEING SITUATE ON THE AFORESAID NORTH LINE OF THE MARY ANN DAVIS GRANT, SECTION 37; THENCE SOUTH 89 DEGREES 11 MINUTES 50 SECONDS WEST, ALONG SAID NORTH LINE OF THE MARY ANN DAVIS GRANT, SECTION 37, 1179.36 FEET TO THE POINT OF BEGINNING.

CONTAINING 113.80 ACRES MORE OR LESS.

### WETLANDS AREA "E"

A PORTION OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT A NAIL SET IN CONCRETE AT THE SOUTHWESTERLY CORNER OF SAID SECTION 17; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY BOUNDARY LINE OF SAID SECTION 17, 367.34 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY BOUNDARY LINE OF SAID SECTION 17, 146.21 FEET TO A POINT SITUATE ON LAST SAID LINE; THENCE NORTH 84 DEGREES 39 MINUTES 47 SECONDS EAST, DEPARTING FROM SAID WESTERLY BOUNDARY LINE OF SECTION 17, 64.44 FEET; THENCE NORTH 87 DEGREES 02 MINUTES 13 SECONDS EAST, 24.32 FEET; THENCE NORTH 25 DEGREES 30 MINUTES 45 SECONDS EAST, 27.27 FEET; THENCE NORTH 29 DEGREES 52 MINUTES 10 SECONDS EAST, 31.18 FEET; THENCE SOUTH 72 DEGREES 55 MINUTES 10 SECONDS EAST, 14.26 FEET; THENCE SOUTH 03 DEGREES 47 MINUTES 29 SECONDS WEST, 23.43 FEET; THENCE SOUTH 29 DEGREES 51 MINUTES 40 SECONDS EAST, 19.90 FEET; THENCE SOUTH 74 DEGREES 49 MINUTES 33 SECONDS EAST, 28.26 FEET; THENCE SOUTH 39 DEGREES 16 MINUTES 39 SECONDS EAST, 31.26 FEET; THENCE SOUTH 48 DEGREES 45 MINUTES 39 SECONDS EAST, 28.80 FEET; THENCE SOUTH 77 DEGREES 21 MINUTES 03 SECONDS EAST, 35.79 FEET; THENCE SOUTH 42 DEGREES 12 MINUTES 12 SECONDS EAST, 37.84 FEET; THENCE SOUTH 64 DEGREES 06 MINUTES 55 SECONDS WEST, 51.92 FEET; THENCE SOUTH 85 DEGREES 04 MINUTES 10 SECONDS WEST, 36.53 FEET; THENCE SOUTH 58 DEGREES 24 MINUTES 50 SECONDS WEST, 50.21 FEET; THENCE NORTH 89 DEGREES 41 MINUTES 37 SECONDS WEST, 47.65 FEET; THENCE SOUTH 76 DEGREES 18 MINUTES 11 SECONDS WEST, 92.71 FEET TO THE POINT OF BEGINNING.

CONTAINING 0.68 ACRES MORE OR LESS



# ORDINANCE

## Legal Description

### WELL SITE 4

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17; THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1072.21 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 150.00 FEET; THENCE SOUTH 01°04'49" EAST, A DISTANCE OF 175.02 FEET; THENCE NORTH 89°59'36" WEST, A DISTANCE OF 150.00 FEET TO A POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, A DISTANCE OF 175.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 0.60 ACRES, MORE OR LESS.

### WELL SITE 5

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17, THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1442.20 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 933.11 FEET; THENCE SOUTH 00°04'00" EAST, A DISTANCE OF 753.17 FEET; THENCE SOUTH 89°59'35" WEST, A DISTANCE OF 212.47 FEET; THENCE SOUTH 00°00'25" EAST, A DISTANCE OF 209.65 FEET; THENCE SOUTH 87°23'39" WEST, A DISTANCE OF 703.52 FEET TO A POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, ALONG SAID SECTION LINE, A DISTANCE OF 348.20 FEET; THENCE NORTH 76°28'00" EAST, A DISTANCE OF 92.71 FEET; THENCE SOUTH 89°31'48" EAST, A DISTANCE OF 47.65 FEET; THENCE NORTH 58°34'39" EAST, A DISTANCE OF 50.21 FEET; THENCE NORTH 64°16'44" EAST, A DISTANCE OF 36.53 FEET; THENCE NORTH 64°16'44" EAST, A DISTANCE OF 51.92 FEET; THENCE NORTH 42°02'23" WEST, A DISTANCE OF 37.84 FEET; THENCE NORTH 77°11'14" WEST, A DISTANCE OF 35.79 FEET; THENCE NORTH 48°35'50" WEST, A DISTANCE OF 28.80 FEET; THENCE NORTH 39°06'50" WEST, A DISTANCE OF 31.26 FEET; THENCE NORTH 74°39'44" WEST, A DISTANCE OF 28.26 FEET; THENCE NORTH 29°41'51" WEST, A DISTANCE OF 19.90 FEET; THENCE NORTH 03°57'18" EAST, A DISTANCE OF 23.43 FEET; THENCE NORTH 72°45'21" WEST, A DISTANCE OF 14.26 FEET; THENCE SOUTH 30°01'59" WEST, A DISTANCE OF 31.18 FEET; THENCE SOUTH 25°40'34" WEST, A DISTANCE OF 27.27 FEET; THENCE SOUTH 87°12'02" WEST, A DISTANCE OF 24.32 FEET; THENCE SOUTH 84°49'36" WEST, A DISTANCE OF 64.44 FEET TO A POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, ALONG SAID SECTION LINE, A DISTANCE OF 500.60 FEET TO THE POINT OF BEGINNING.

CONTAINING 19.00 ACRES, MORE OR LESS.

# ORDINANCE \_\_\_\_\_

## Legal Description

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WELL SITE 6

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17; THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1442.20 FEET; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 933.11 FEET; THENCE SOUTH 00°04'00" EAST, A DISTANCE OF 753.17 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°04'00" EAST, A DISTANCE OF 200.00 FEET; THENCE SOUTH 87°23'39" WEST, A DISTANCE OF 212.89 FEET; THENCE NORTH 00°00'25" WEST, A DISTANCE OF 209.65 FEET; THENCE NORTH 89°59'35" EAST, A DISTANCE OF 212.47 FEET TO THE POINT OF BEGINNING.

CONTAINING 1.00 ACRE, MORE OR LESS.

# ORDINANCE

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## Legal Description

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PARCEL "A"

A PORTION OF THE MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE COMMENCE AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY, AS DESCRIBED IN DEED RECORDED IN THE OFFICIAL RECORDS OF SAID COUNTY IN VOLUME 2081, PAGE 43, WITH THE NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY - US HIGHWAY No. 1 (A 150 FOOT RIGHT-OF-WAY AT THIS POINT) AND RUN NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY, A DISTANCE OF 472.03 FEET TO AN ANGLE POINT IN LAST MENTIONED RIGHT-OF-WAY LINE; RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 40.00 FEET TO AN ANGLE POINT IN SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY (A 190 FOOT RIGHT-OF-WAY AT THIS POINT) AND THE POINT OF BEGINNING. FROM THE POINT OF BEGINNING THUS DESCRIBED RUN THENCE NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 315.00 FEET TO A POINT; RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 20.00 FEET TO A POINT OF CURVATURE; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF A CURVE, SAID CURVE BEING CONCAVE SOUTHERLY AND HAVING A RADIUS OF 133.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 71 DEGREES 44 MINUTES 13 SECONDS EAST, 86.87 FEET TO A POINT OF REVERSE CURVE; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF SAID CURVE, SAID CURVE BEING CONCAVE NORTHERLY, AND HAVING A RADIUS OF 210.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 75 DEGREES 05 MINUTES 58 SECONDS EAST, 113.65 FEET TO A POINT ON SAID CURVE; RUN THENCE NORTH 48 DEGREES 05 MINUTES 25 SECONDS EAST, NOT TANGENT TO LAST MENTIONED CURVE, A DISTANCE OF 50.99 FEET TO A POINT; RUN THENCE NORTH 59 DEGREES 24 MINUTES 01 SECONDS EAST, A DISTANCE OF 209.52 FEET TO A POINT; RUN THENCE NORTH 42 DEGREES 22 MINUTES 10 SECONDS EAST, A DISTANCE 231.33 FEET TO A POINT; RUN THENCE NORTH 51 DEGREES 16 MINUTES 58 SECONDS EAST, A DISTANCE OF 303.96 FEET TO A POINT; RUN THENCE NORTH 41 DEGREES 03 MINUTES 34 SECONDS EAST, A DISTANCE OF 204.90 FEET TO A POINT; RUN THENCE NORTH 58 DEGREES 45 MINUTES 24 SECONDS EAST, A DISTANCE OF 477.75 FEET TO THE SOUTHWESTERLY CORNER OF GOVERNMENT LOT 1, SECTION 18, TOWNSHIP 4 SOUTH, RANGE 28 EAST; RUN THENCE SOUTH 44 DEGREES 29 MINUTES 19 SECONDS EAST, A DISTANCE OF 514.87 FEET TO A POINT ON PREVIOUSLY MENTIONED NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY RECORDED IN OFFICIAL RECORDS VOLUME 2081, PAGE 43; RUN THENCE SOUTH 45 DEGREES 30 MINUTES 41 SECONDS WEST ALONG SAID NORTHWESTERLY LINE, A DISTANCE OF 1329.68 FEET TO A POINT; RUN THENCE SOUTH 85 DEGREES 10 MINUTES 37 SECONDS WEST, A DISTANCE OF 347.06 FEET TO A POINT; RUN THENCE NORTH 66 DEGREES 09 MINUTES 35 SECONDS WEST, A DISTANCE OF 260.22 FEET TO THE POINT OF BEGINNING.

SUBJECT TO A DRAINAGE EASEMENT OVER AND ACROSS THE FOLLOWING DESCRIBED PORTION OF THE ABOVE DESCRIBED LANDS: FOR A POINT OF REFERENCE COMMENCE AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY, AS DESCRIBED IN DEED

# ORDINANCE

## Legal Description

RECORDED IN THE OFFICIAL RECORDS OF SAID COUNTY IN VOLUME 2081, PAGE 43, WITH THE NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY - US HIGHWAY No. 1 (A 150 FOOT RIGHT-OF-WAY AT THIS POINT) AND RUN NORTH 45 DEGREES 30 MINUTES 41 SECONDS EAST ALONG SAID NORTHWESTERLY LINE OF 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY, A DISTANCE OF 1393.10 FEET TO THE POINT OF BEGINNING. FROM THE POINT OF BEGINNING THUS DESCRIBED CONTINUE NORTH 45 DEGREES 30 MINUTES 41 SECONDS EAST ALONG SAID NORTHWESTERLY LINE, A DISTANCE OF 398.38 FEET TO A POINT; RUN THENCE NORTH 44 DEGREES 29 MINUTES 19 SECONDS WEST, A DISTANCE OF 514.87 FEET TO THE SOUTHWESTERLY CORNER OF GOVERNMENT LOT 1, SECTION 18, TOWNSHIP 4 SOUTH, RANGE 28 EAST; RUN THENCE SOUTH 58 DEGREES 45 MINUTES 24 SECONDS WEST, A DISTANCE OF 210.00 FEET TO A POINT; RUN THENCE SOUTH 25 DEGREES 28 MINUTES 39 SECONDS EAST, A DISTANCE OF 595.46 FEET TO THE POINT OF BEGINNING.

AND

### EASEMENT PARCEL

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER AND ACROSS THE FOLLOWING DESCRIBED LANDS: A PORTION OF THE MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE COMMENCE AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY, AS DESCRIBED IN DEED RECORDED IN THE OFFICIAL RECORDS OF SAID COUNTY IN VOLUME 2081, PAGE 43, WITH THE NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY - US HIGHWAY No. 1 (A 150 FOOT RIGHT-OF-WAY AT THIS POINT) AND RUN NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY, A DISTANCE OF 472.03 FEET TO AN ANGLE POINT IN LAST MENTIONED RIGHT-OF-WAY LINE; RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 40.00 FEET TO AN ANGLE POINT IN SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY (A 190 FOOT RIGHT-OF-WAY AT THIS POINT); RUN THENCE NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 315.00 FEET TO THE POINT OF BEGINNING; FROM THE POINT OF BEGINNING THUS DESCRIBED RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 20.00 FEET TO A POINT OF CURVATURE; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF A CURVE, SAID CURVE BEING CONCAVE SOUTHERLY AND HAVING A RADIUS OF 133.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 71 DEGREES 44 MINUTES 13 SECONDS EAST, 86.87 FEET TO A POINT OF REVERSE CURVE; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF SAID CURVE, SAID CURVE BEING CONCAVE NORTHERLY, AND HAVING A RADIUS OF 210.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 75 DEGREES 05 MINUTES 58 SECONDS EAST, 113.65 FEET TO A POINT ON SAID CURVE; RUN THENCE NORTH 48 DEGREES 05 MINUTES 25 SECONDS EAST, NOT TANGENT TO LAST MENTIONED CURVE, A DISTANCE OF 50.99 FEET TO A POINT; RUN THENCE NORTH 59 DEGREES 24 MINUTES 01 SECONDS EAST, A DISTANCE OF 209.52 FEET TO A POINT; RUN THENCE NORTH 42 DEGREES 22 MINUTES 10 SECONDS EAST, A DISTANCE 231.33 FEET TO A POINT; RUN THENCE NORTH 43 DEGREES 10 MINUTES 26

# ORDINANCE \_\_\_\_\_

## Legal Description

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SECONDS WEST, A DISTANCE OF 60.18 FEET TO A POINT; RUN THENCE SOUTH 42 DEGREES 22 MINUTES 10 SECONDS WEST, A DISTANCE OF 227.02 FEET TO A POINT; RUN THENCE SOUTH 59 DEGREES 24 MINUTES 01 SECONDS WEST, A DISTANCE OF 200.54 FEET TO A POINT; RUN THENCE SOUTH 70 DEGREES 42 MINUTES 37 SECONDS WEST, A DISTANCE OF 50.99 FEET TO A POINT ON A CURVE; RUN THENCE IN A WESTERLY DIRECTION ALONG THE ARC OF A CURVE, SAID BEING CONCAVE NORTHERLY AND HAVING A RADIUS OF 130.00 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 75 DEGREES 05 MINUTES 58 SECONDS WEST, 70.35 FEET TO A POINT OF REVERSE CURVE; RUN THENCE IN A WESTERLY DIRECTION ALONG THE ARC OF A CURVE, SAID CURVE BEING CONCAVE SOUTHERLY AND HAVING A RADIUS OF 213.00 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 71 DEGREES 44 MINUTES 13 SECONDS WEST, 139.13 FEET TO THE POINT OF TANGENCY OF SAID CURVE; RUN THENCE SOUTH 52 DEGREES 40 MINUTES 30 SECONDS WEST, A DISTANCE OF 20.00 FEET TO A POINT ON PREVIOUSLY MENTIONED NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY; RUN THENCE SOUTH 37 DEGREES 19 MINUTES 30 SECONDS EAST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 80.00 FEET TO THE POINT OF BEGINNING.

ORDINANCE \_\_\_\_\_

**Legal Description**

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**JEA T-LINE PROPERTY**

A part of Mary Ann Davis Grant, Section 37, Township 4 South, Range 28 East, Duval County, Florida, more particularly described as follows: For a Point of Beginning, commence at the intersection of the Northerly line of said Mary Anne Davis Grant, Section 37, and the Easterly line of Section 18, Township 4 South, Range 28 East; thence run S 1° 21' 52" E. a distance of 105.02 feet to a point; thence run S. 44° 13' 11" W. a distance of 2596.21 feet to the Northeasterly right-of-way line of the Florida East Coast Railroad; thence run N. 40° 59' 52" W. along said railroad right-of-way, a distance of 150.52 feet to a point; thence run N. 44° 13' 11" E. a distance of 2520.66 feet to a point; thence run N. 1° 21' 52" W. a distance of 43.14 feet to the aforesaid Northerly line of Mary Ann Davis Grant, Section 37; thence run N. 89° 04' 55" E. along the Northerly line of said Grant, a distance of 150 feet to the Point of Beginning.

Excepting from the above described lands that portion of Philips Highway (U.S. Highway No. 1).

**EXHIBIT A**

**Property Ownership Affidavit**

Date: July 3, 2008

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Ownership Certification

Ladies and Gentlemen:

I, FITZHUGH K. POWELL hereby certify that I am the authorized agent of Sphinx Management, Inc., a Florida corporation, the owner of the property described in the legal description attached as **Exhibit 1** in connection with filing applications for future land use map amendment and rezoning submitted to the Jacksonville Planning and Development Department.

**SPHINX MANAGEMENT, INC.**, a Florida corporation

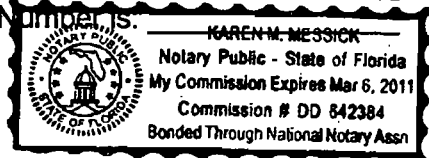
By: [Signature]  
Name: Fitzhugh K. Powell  
Title: President

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 3rd day of July, 2008, by Fitzhugh K. Powell the President of **SPHINX MANAGEMENT, INC.**, a Florida corporation, on behalf of said corporation. He/She is (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

[Signature]  
Notary Public, State of Florida  
Name: KAREN M MESSICK  
My Commission Expires: \_\_\_\_\_  
My Commission Number is: \_\_\_\_\_



**EXHIBIT "B"**  
**Agent Authorization**

Date: July 3, 2008

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202


Re: Agent Authorization for the following site location:

RE # 168152-0200 – Philips Highway (between Davis Creek Road and  
Old St. Augustine Road

Ladies and Gentlemen:

You are hereby advised that the undersigned is the owner of the property described in **Exhibit 1** attached hereto. Said owner hereby authorizes and empowers the law firm of Edwards, Cohen, Sanders, Dawson & Mangu, P.A. to act as its agent to file applications for future land use map amendment and rezoning with respect to the above-referenced property and in connection with such authorization to file such applications, papers, documents, requests and other matters necessary for such requested change.

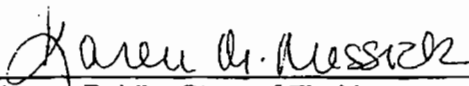
**SPHINX MANAGEMENT, INC.**, a Florida  
corporation

By:   
Name: Fitzhugh K. Powell  
Title: President

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 3rd day of July, 2008, by Fitzhugh K. Powell the President of **SPHINX MANAGEMENT, INC.**, a Florida corporation, on behalf of said corporation. He/She is (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

  
Notary Public, State of Florida  
Name: KAREN M. MESSICK  
My Commission Expires: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_





**EXHIBIT C**

**Binding Letter**

Date: July 3, 2008

City of Jacksonville  
Planning and Development Department  
Jacksonville, Florida 32202


**Re: SOUTHEAST GENERATING STATION PUD**

Ladies and Gentlemen:

You are hereby advised that the undersigned, owner of the above referenced property, being more particularly described in the PUD document attached hereto and by reference made a part hereof, hereby agrees to bind its successor(s) in title to development in accordance with (a) the site plan and the written description of the proposed development plan submitted with the rezoning application and (b) any conditions set forth by the City Council of the City of Jacksonville in the rezoning ordinance. Owner also agrees to proceed with the development of the subject property in accordance with items (a) and (b) above and will complete such development in accordance with the site plan approved by that ordinance. Provisions shall be made by written agreement for continuing operation and maintenance of all common areas and facilities that are not to be provided, operated or maintained by the City of Jacksonville.

Sincerely,

SPHINX MANAGEMENT, INC.,  
a Florida corporation

By:   
Name: Fitzhugh K. Powell  
Title: President

# ORDINANCE

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## Legal Description

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"Road Parcel"

A PORTION OF MARY ANN DAVIS GRANT SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHWESTERLY CORNER OF SAID SECTION 17, SAID CORNER BEING SITUATE ON THE NORTH LINE OF SAID MARY ANN DAVIS GRANT SECTION 37, THENCE NORTH 89 DEGREES 11 MINUTES 50 SECONDS EAST, ALONG THE NORTHERLY BOUNDARY OF SAID SECTION 37, 80.00 FEET TO A POINT ON SAID NORTHERLY BOUNDARY LINE; THENCE SOUTH 01 DEGREES 21 MINUTES 52 SECONDS EAST, DEPARTING FROM SAID NORTHERLY BOUNDARY LINE OF THE MARY ANN DAVIS GRANT SECTION 37, 51.02 FEET TO THE POINT OF CURVATURE OF A CURVE LEADING SOUTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF THE CURVE, SAID CURVE BEING CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 140.00 FEET, AN ARC LENGTH OF 111.38 FEET, SAID ARC BEING SUB TENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 21 DEGREES 25 MINUTES 39 SECONDS WEST, 108.47 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 44 DEGREES 13 MINUTES 11 SECONDS WEST, 380.37 FEET TO THE POINT OF CURVATURE OF A CURVE LEADING SOUTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF THE CURVE, SAID CURVE BEING CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 1975.66 FEET, AN ARC LENGTH OF 488.15 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 51 DEGREES 17 MINUTES 53 SECONDS WEST, 486.91 FEET TO A POINT ON SAID CURVE, SAID POINT ALSO BEING SITUATE ON THE SOUTHEASTERLY BOUNDARY LINE OF A JEA 150 FOOT WIDE TRANSMISSION CORRIDOR, DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 2081, PAGE 43, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY; THENCE NORTH 44 DEGREES 13 MINUTES 11 SECONDS EAST, ALONG SAID SOUTHEASTERLY BOUNDARY LINE, 869.18 FEET TO AN ANGLE POINT IN SAID BOUNDARY LINE; THENCE NORTH 01 DEGREES 21 MINUTES 52 SECONDS WEST, ALONG THE EASTERLY BOUNDARY LINE OF SAID JEA 150 FOOT WIDE TRANSMISSION CORRIDOR, 105.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 52,298.20 SQUARE FEET OR 1.20 ACRES MORE OR LESS

# ORDINANCE

## Legal Description

"WTP Parcel"

A PORTION OF THE MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE COMMENCE AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY, AS DESCRIBED IN DEED RECORDED IN THE OFFICIAL RECORDS OF SAID COUNTY IN VOLUME 2081, PAGE 43 WITH THE NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY - U.S. HIGHWAY NO.1 (A 150 FOOT RIGHT-OF-WAY AT THIS POINT) AND RUN NORTH 37°19' 30" WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY, A DISTANCE OF 472.03 FEET TO AN ANGLE POINT IN LAST MENTIONED RIGHT-OF-WAY LINE; THENCE NORTH 52°40'30" EAST, A DISTANCE OF 40.00 FEET TO AN ANGLE POINT IN SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY (A 190 FOOT RIGHT-OF-WAY AT THIS POINT); THENCE NORTH 37°19'30" WEST ALONG LAST MENTIONED RIGHT-OF-WAYLINE, A DISTANCE OF 315.00 FEET TO THE POINT OF BEGINNING.

FROM THE POINT OF BEGINNING THUS DESCRIBED RUN NORTH 52°40'30" EAST, A DISTANCE OF 20.00 FEET TO A POINT OF CURVATURE; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF A CURVE BEING CONCAVE SOUTHERLY AND HAVING A RADIUS OF 133.00 FEET, AN ARC DISTANCE OF 88.50 FEET TO A POINT OF REVERSE CURVE, SAID ARC SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 71°44'13" EAST, 86.87 FEET; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF A CURVE BEING CONCAVE NORTHERLY, AND HAVING A RADIUS OF 210.00 FEET, AN ARC DISTANCE OF 115.08 FEET TO A POINT, SAID ARC SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 75°05'58" EAST, 113.65 FEET; THENCE NORTH 48°05'25" EAST, NOT TANGENT TO LAST MENTIONED CURVE, A DISTANCE OF 50.99 FEET; THENCE NORTH 59°24'01" EAST, A DISTANCE OF 209.52 FEET; THENCE NORTH 42°22'10" EAST, A DISTANCE OF 231.33 FEET; RUN THENCE NORTH 51°16'58" EAST, A DISTANCE OF 303.96 FEET; THENCE NORTH 41°03'34" EAST, A DISTANCE OF 204.90 FEET; THENCE NORTH 40°05'38" WEST, A DISTANCE OF 60.72 FEET; THENCE SOUTH 41°03'34" WEST, A DISTANCE OF 208.87 FEET; THENCE SOUTH 51°16'58" WEST, A DISTANCE OF 303.27 FEET; THENCE SOUTH 42°22'10" WEST, A DISTANCE OF 227.02 FEET; THENCE SOUTH 59°24'01" WEST, A DISTANCE OF 200.54 FEET; THENCE SOUTH 48°05'25" WEST, A DISTANCE OF 50.99 FEET TO A POINT ON A CURVE; RUN THENCE IN A WESTERLY DIRECTION ALONG THE ARC OF A CURVE BEING CONCAVE NORTHERLY AND HAVING A RADIUS OF 150.00 FEET, AN ARC DISTANCE OF 82.20 FEET TO A POINT OF REVERSE CURVE, SAID ARC SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 75°05'58" WEST, 81.18 FEET; RUN THENCE IN A WESTERLY DIRECTION ALONG THE ARC OF A CURVE BEING CONCAVE SOUTHERLY AND HAVING A RADIUS OF 193.00 FEET, AN ARC DISTANCE OF 128.42 FEET TO THE POINT OF TANGENCY OF SAID CURVE, SAID ARC SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 71°44'13" WEST, 126.06 FEET; THENCE SOUTH 52° 40' 30" WEST, A DISTANCE OF 20.00 FEET TO A POINT ON PREVIOUSLY MENTIONED NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY; THENCE SOUTH 37°19'30" EAST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 60.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 1.68 ACRES, MORE OR LESS

# ORDINANCE

## Legal Description

PARCEL 801A

A PORTION OF SECTION 18, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHEASTERLY CORNER OF LOT 12, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY, SAID CORNER ALSO BEING SITUATE ON THE EASTERLY BOUNDARY LINE OF SAID SECTION 18; THENCE SOUTH 01 DEGREES 14 MINUTES 43 SECONDS EAST, ALONG SAID EASTERLY BOUNDARY LINE OF SECTION 18, 802.78 FEET TO THE SOUTHEASTERLY CORNER OF SAID SECTION 18, SAID CORNER BEING SITUATE ON NORTHERLY BOUNDARY LINE OF THE MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, LYING IN AND BEING A PORTION OF SAID DUVAL COUNTY, SAID CORNER ALSO BEING THE NORTHEASTERLY CORNER OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY TRANSMISSION CORRIDOR DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 2081, PAGE 43, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY, SAID CORNER ALSO BEING THE SOUTHEASTERLY CORNER OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 2077, PAGE 6, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY; THENCE SOUTH 89 DEGREES 04 MINUTES 55 SECONDS WEST, DEPARTING FROM SAID EASTERLY BOUNDARY LINE OF SECTION 18, ALONG THE NORTHERLY BOUNDARY LINE OF SAID 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY TRANSMISSION CORRIDOR DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 2081, PAGE 43, ALSO BEING THE SOUTHERLY BOUNDARY LINE OF SAID 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 2077, PAGE 6, 150.00 FEET TO THE NORTHWESTERLY CORNER OF SAID 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY TRANSMISSION CORRIDOR DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 2081, PAGE 43, ALSO BEING THE SOUTHWESTERLY CORNER OF SAID 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 2077, PAGE 6; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, DEPARTING FROM SAID NORTHERLY BOUNDARY LINE OF SAID 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY TRANSMISSION CORRIDOR DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 2081, PAGE 43, AND ALONG THE WESTERLY BOUNDARY LINE OF SAID 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT AS DESCRIBED AND RECORDED IN OFFICIAL RECORD VOLUME 2077, PAGE 6, 803.11 FEET TO A POINT SITUATE ON THE SOUTHERLY LINE OF SAID LOT 12, DAVIS CREEK BUSINESS PARK UNIT TWO; THENCE NORTH 89 DEGREES 12 MINUTES 44 SECONDS EAST ALONG THE SOUTHERLY LINE OF SAID LOT 12, DAVIS CREEK BUSINESS PARK UNIT TWO, 150.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 120,441.14 SQUARE FEET OR 2.76 ACRES MORE OR LESS.

# ORDINANCE \_\_\_\_\_

## Legal Description

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PARCEL 801

A PORTION OF SECTION 18, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHEASTERLY CORNER OF LOT 12, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY, SAID CORNER ALSO BEING SITUATE ON THE EASTERLY BOUNDARY LINE OF SAID SECTION 18; THENCE SOUTH 89 DEGREES 12 MINUTES 44 SECONDS WEST, ALONG THE SOUTHERLY BOUNDARY LINE OF SAID LOT 12, DAVIS CREEK BUSINESS PARK UNIT TWO, 150.00 FEET TO A POINT SITUATE ON THE WESTERLY BOUNDARY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT AS DESCRIBED AND RECORDED IN OFFICIAL RECORD VOLUME 2077, PAGE 6, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY, SAID POINT ALSO BEING THE POINT OF BEGINNING; THENCE SOUTH 01 DEGREES 14 MINUTES 43 SECONDS EAST, ALONG SAID WESTERLY BOUNDARY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT AS DESCRIBED AND RECORDED IN OFFICIAL RECORD VOLUME 2077, PAGE 6, 85.00 FEET; THENCE SOUTH 89 DEGREES 12 MINUTES 44 SECONDS WEST, DEPARTING FROM SAID WESTERLY BOUNDARY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT AS DESCRIBED AND RECORDED IN OFFICIAL RECORD VOLUME 2077, PAGE 6, 297.89 FEET; THENCE NORTH 00 DEGREES 48 MINUTES 08 SECONDS WEST, 85.00 FEET TO AN INTERSECTION WITH THE SOUTHERLY LINE OF LOT 13, AS SHOWN ON SAID PLAT OF DAVIS CREEK BUSINESS PARK UNIT TWO; THENCE NORTH 89 DEGREES 12 MINUTES 44 SECONDS EAST ALONG THE SOUTHERLY LINE OF SAID LOT 13 AND SAID LOT 12 AS SHOWN ON SAID PLAT OF DAVIS CREEK BUSINESS PARK UNIT TWO, 297.23 FEET TO THE POINT OF BEGINNING.

CONTAINING 25,292.33 SQUARE FEET OR 0.58 ACRES MORE OR LESS.

**EXHIBIT A**

**Property Ownership Affidavit**

Date: 2-10-08

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Ownership Certification

Ladies and Gentlemen:

I, William E. Powell hereby certify that I am the authorized agent of **BUSINESS PARKLANDS, LLP**, a Florida limited liability partnership, the owner of the property described in the legal description attached as **Exhibit 1** in connection with filing application for rezoning submitted to the Jacksonville Planning and Development Department.

**BUSINESS PARKLANDS, LLP**, a Florida limited liability partnership

By: William E. Powell  
Name: WILLIAM E. POWELL  
Title: MANAGER

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 10<sup>th</sup> day of July, 2008, by William E. Powell the Manager of **BUSINESS PARKLANDS, LLP**, a Florida limited liability partnership, on behalf of said partnership. He/She is (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

**ROSEMARY G. KLEMMT**  
Notary Public, State of Florida  
My comm. exp. Aug. 16, 2009  
Comm. No. DD 445200

Rosemary G. Klemmt  
Notary Public, State of Florida  
Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
My Commission Number is: \_\_\_\_\_

# EXHIBIT B

## Agent Authorization

Date: 7-10-08

City of Jacksonville  
Planning and Development Department  
128 East Forsyth Street; Suite 700  
Jacksonville, Florida 32202

Re: Parcel # 168080-8220; 168080-8230; 168080-8240; and 168080-8250

Ladies and Gentlemen:

You are hereby advised that the undersigned is the owner of the property described in Exhibit 1 attached hereto. Said owner hereby authorizes and empowers the law firm of Edwards, Cohen, Sanders, Dawson & Mangu, P.A. to apply for a rezoning of the above-referenced property on behalf of JEA, and in connection with said authorization to file any and all documents necessary to secure same.

Owner:

**BUSINESS PARKLANDS, LLP,**  
a Florida limited liability partnership

By: William E. Powell  
Print Name: WILLIAM E. POWELL  
Title: MANAGER

STATE OF FLORIDA  
COUNTY OF DUVAL

The foregoing affidavit was sworn and subscribed before me this 10<sup>th</sup> day of July, 2008, by William E. Powell, the Manager of Business Parklands, LLP, a Florida limited liability partnership, on behalf of the partnership, who is (check one) () personally known to me or ( ) has produced \_\_\_\_\_ as identification.

Rosemary G. Klemmt  
(Notary Signature)

ROSEMARY G. KLEMMT  
Notary Public, State of Florida  
My comm. exp. Aug. 18, 2009  
Comm. No. DD 445200  
[Notarial Seal]

**EXHIBIT C**

**Binding Letter**

Date: 7-10-08

City of Jacksonville  
Planning and Development Department  
Jacksonville, Florida 32202

**Re: SOUTHEAST GENERATING STATION PUD  
Parcel Nos. 168080-8220; 168080-8230; 168080-8240; and 168080-8250**

Ladies and Gentlemen:

You are hereby advised that the undersigned, owner of the above referenced property, being more particularly described in the PUD document attached hereto and by reference made a part hereof, hereby agrees to bind its successor(s) in title to development in accordance with (a) the site plan and the written description of the proposed development plan submitted with the rezoning application and (b) any conditions set forth by the City Council of the City of Jacksonville in the rezoning ordinance. Owner also agrees to proceed with the development of the subject property in accordance with items (a) and (b) above and will complete such development in accordance with the site plan approved by that ordinance. Provisions shall be made by written agreement for continuing operation and maintenance of all common areas and facilities that are not to be provided, operated or maintained by the City of Jacksonville.

Sincerely,

**BUSINESS PARKLANDS, LLP**  
a Florida limited liability partnership

By: William E. Powell  
Name: WILLIAM E. POWELL  
Title: MANAGER



# ORDINANCE \_\_\_\_\_

## Legal Description

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PARCEL 802

A PORTION OF LOT 12, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHEASTERLY CORNER OF SAID LOT 12, THENCE SOUTH 89 DEGREES 12 MINUTES 44 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 12, 387.23 FEET TO A POINT SITUATE ON LAST SAID LINE, SAID POINT ALSO BEING THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 89 DEGREES 12 MINUTES 44 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 12, 30.00 FEET TO THE SOUTHWESTERLY CORNER THEREOF; THENCE NORTH 00 DEGREES 48 MINUTES 08 SECONDS WEST, 50.00 FEET TO A POINT SITUATE ON A CURVE LEADING NORTHEASTERLY IN THE SOUTHERLY RIGHT-OF-WAY LINE OF A CUL-DE-SAC OF DAVIS CREEK ROAD EAST (A 50 FOOT RIGHT-OF-WAY); THENCE ALONG AND AROUND THE ARC OF SAID CURVE IN THE SOUTHERLY RIGHT-OF-WAY LINE OF A CUL-DE-SAC OF DAVIS CREEK ROAD EAST, SAID CURVE BEING CONCAVE NORTHERLY AND HAVING A RADIUS OF 50.00 FEET AND AN ARC LENGTH OF 32.18 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 70 DEGREES 45 MINUTES 41 SECONDS EAST, 31.63 FEET TO A POINT SITUATE ON SAID CURVE; THENCE SOUTH 00 DEGREES 48 MINUTES 08 SECONDS EAST DEPARTING FROM SAID SOUTHERLY RIGHT-OF-WAY LINE, 60.01 FEET TO THE POINT OF BEGINNING.

CONTAINING 1595.74 SQUARE FEET OR 0.04 ACRES MORE OR LESS.

# ORDINANCE \_\_\_\_\_

## Legal Description

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PARCEL 802-A

A PORTION OF LOT 12, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHEASTERLY CORNER OF SAID LOT 12, THENCE SOUTH 89 DEGREES 12 MINUTES 44 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 12, 150.00 FEET TO A POINT SITUATE ON LAST SAID LINE, SAID POINT ALSO BEING SITUATE ON THE WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 2077, PAGE 6; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG SAID WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, 205.06 FEET TO A POINT SITUATE ON THE NORTHERLY BOUNDARY LINE OF SAID LOT 12; THENCE NORTH 89 DEGREES 11 MINUTES 52 SECONDS EAST, ALONG SAID NORTHERLY LINE OF LOT 12, 150.00 FEET TO THE NORTHEASTERLY CORNER THEREOF; THENCE SOUTH 01 DEGREES 14 MINUTES 43 SECONDS EAST, ALONG THE EASTERLY LINE OF SAID LOT 12, 205.09 FEET TO THE POINT OF BEGINNING.

CONTAINING 30,761.19 SQUARE FEET OR 0.71 ACRES MORE OR LESS.

# ORDINANCE \_\_\_\_\_

## Legal Description

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PARCEL 803

A PORTION OF LOT 11, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHEASTERLY CORNER OF SAID LOT 11, THENCE SOUTH 89 DEGREES 11 MINUTES 52 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 11, 150.00 FEET TO A POINT SITUATE ON LAST SAID LINE, SAID POINT ALSO BEING SITUATE ON THE WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 2077, PAGE 6; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG SAID WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, 205.01 FEET TO A POINT SITUATE ON THE NORTHERLY BOUNDARY LINE OF SAID LOT 11; THENCE NORTH 89 DEGREES 11 MINUTES 52 SECONDS EAST, ALONG SAID NORTHERLY LINE OF LOT 11, 150.00 FEET TO THE NORTHEASTERLY CORNER THEREOF; THENCE SOUTH 01 DEGREES 14 MINUTES 43 SECONDS EAST, ALONG THE EASTERLY LINE OF SAID LOT 11, 205.01 FEET TO THE POINT OF BEGINNING.

CONTAINING 30,761 SQUARE FEET OR 0.71 ACRES MORE OR LESS.

# ORDINANCE \_\_\_\_\_

## Legal Description

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PARCEL 804

A PORTION OF LOT 10, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHEASTERLY CORNER OF SAID LOT 10, THENCE SOUTH 89 DEGREES 11 MINUTES 52 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 10, 150.00 FEET TO A POINT SITUATE ON LAST SAID LINE, SAID POINT ALSO BEING SITUATE ON THE WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 2077, PAGE 6; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG SAID WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, 205.01 FEET TO A POINT SITUATE ON THE NORTHERLY BOUNDARY LINE OF SAID LOT 10; THENCE NORTH 89 DEGREES 11 MINUTES 52 SECONDS EAST, ALONG SAID NORTHERLY LINE OF LOT 10, 150.00 FEET TO THE NORTHEASTERLY CORNER THEREOF; THENCE SOUTH 01 DEGREES 14 MINUTES 43 SECONDS EAST, ALONG THE EASTERLY LINE OF SAID LOT 10, 205.01 FEET TO THE POINT OF BEGINNING.

CONTAINING 30,751 SQUARE FEET OR 0.71 ACRES MORE OR LESS.

# ORDINANCE \_\_\_\_\_

## Legal Description

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PARCEL 805

A PORTION OF LOT 9, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHEASTERLY CORNER OF SAID LOT 9, THENCE SOUTH 89 DEGREES 11 MINUTES 52 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 9, 150.00 FEET TO A POINT SITUATE ON LAST SAID LINE, SAID POINT ALSO BEING SITUATE ON THE WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 2077, PAGE 6; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG SAID WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, 265.75 FEET TO A POINT SITUATE ON LAST SAID LINE; THENCE SOUTH 89 DEGREES 12 MINUTES 44 SECONDS WEST DEPARTING FROM SAID WESTERLY LINE OF A 150 FOOT JACKSONVILLE ELECTRIC AUTHORITY EASEMENT, 67.12 FEET TO A POINT ON A CURVE LEADING NORTHEASTERLY ON THE EASTERLY RIGHT-OF-WAY LINE OF A CUL-DE-SAC OF DAVIS CREEK ROAD (A 50 FOOT RIGHT-OF-WAY); THENCE ALONG AND AROUND THE ARC OF SAID CURVE, SAID CURVE BEING CONCAVE WESTERLY AND HAVING A RADIUS OF 50.00 FEET, AN ARC LENGTH OF 26.18 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF NORTH 14 DEGREES 12 MINUTES 44 SECONDS EAST, 25.88 FEET TO A POINT ON SAID CURVE, SAID POINT ALSO BEING SITUATE ON THE NORTHERLY BOUNDARY LINE OF SAID LOT 9; THENCE NORTH 89 DEGREES 12 MINUTES 44 SECONDS EAST, DEPARTING FROM SAID EASTERLY RIGHT-OF-WAY LINE OF A CUL-DE-SAC OF DAVIS CREEK ROAD AND ALONG SAID NORTHERLY LINE OF LOT 9, 210.23 FEET TO THE NORTHEASTERLY CORNER THEREOF; THENCE SOUTH 01 DEGREES 14 MINUTES 43 SECONDS EAST, ALONG THE EASTERLY LINE OF SAID LOT 9, 290.72 FEET TO THE POINT OF BEGINNING.

CONTAINING 45,173 SQUARE FEET OR 1.04 ACRES MORE OR LESS.

**EXHIBIT A**

**Property Ownership Affidavit**

Date: 7-10-08

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Ownership Certification

Ladies and Gentlemen:

I, William E. Powell, hereby certify that I am the owner of the property described in the legal description attached as **Exhibit 1** in connection with filing application for rezoning submitted to the Jacksonville Planning and Development Department.

William E. Powell  
**WILLIAM E. POWELL**

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 10th day of July, 2008, by William E. Powell. He is (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

**ROSEMARY G. KLEMMT**  
Notary Public, State of Florida  
My comm. exp. Aug. 18, 2009  
Comm. No. DD 445200

Rosemary G. Klemmt  
Notary Public, State of Florida  
Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
My Commission Number is: \_\_\_\_\_

# EXHIBIT B

## Agent Authorization

Date: 7-10-08

City of Jacksonville  
Planning and Development Department  
128 East Forsyth Street; Suite 700  
Jacksonville, Florida 32202

Re: Parcel # 168155-0600

Ladies and Gentlemen:

You are hereby advised that the undersigned is the owner of the property described in **Exhibit 1** attached hereto. Said owner hereby authorizes and empowers the law firm of Edwards, Cohen, Sanders, Dawson & Mangu, P.A. to apply for a rezoning of the above-referenced property on behalf of JEA, and in connection with said authorization to file any and all documents necessary to secure same.

*William E. Powell*

Owner: William E. Powell

STATE OF FLORIDA  
COUNTY OF DUVAL

The foregoing affidavit was sworn and subscribed before me this 10th day of July, 2008, by William E. Powell, who is (check one) () personally known to me or ( ) has produced \_\_\_\_\_ as identification.

*Rosemary G. Klemmt*  
(Notary Signature)

[Notarial Seal]

**ROSEMARY G. KLEMMT**  
Notary Public, State of Florida  
My comm. exp. Aug. 16, 2009  
Comm. No. DD 445200

**EXHIBIT C**

**Binding Letter**

Date: 2-10-08

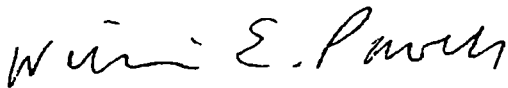
City of Jacksonville  
Planning and Development Department  
Jacksonville, Florida 32202

**Re: SOUTHEAST GENERATING STATION PUD  
Parcel No. 168155-0600**

Ladies and Gentlemen:

You are hereby advised that the undersigned, owner of the above referenced property, being more particularly described in the PUD document attached hereto and by reference made a part hereof, hereby agrees to bind its successor(s) in title to development in accordance with (a) the site plan and the written description of the proposed development plan submitted with the rezoning application and (b) any conditions set forth by the City Council of the City of Jacksonville in the rezoning ordinance. Owner also agrees to proceed with the development of the subject property in accordance with items (a) and (b) above and will complete such development in accordance with the site plan approved by that ordinance. Provisions shall be made by written agreement for continuing operation and maintenance of all common areas and facilities that are not to be provided, operated or maintained by the City of Jacksonville.

Sincerely,



WILLIAM E. POWELL



# ORDINANCE \_\_\_\_\_

## Legal Description

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Easement Parcels (800, 801, 802)

PARCEL 800

A PORTION OF LOT 13, DAVIS CREEK BUSINESS PARK UNIT TWO, AS RECORDED IN PLAT BOOK 51, PAGES 94 AND 94A, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHEASTERLY CORNER OF SAID LOT 13, THENCE SOUTH 89 DEGREES 12 MINUTES 44 SECONDS WEST ALONG THE SOUTHERLY LINE OF SAID LOT 13, 30.00 FEET, THENCE NORTH 00 DEGREES 48 MINUTES 08 SECONDS WEST, DEPARTING FROM SAID SOUTHERLY LINE OF LOT 13, 59.99 FEET TO A POINT SITUATE ON A CURVE LEADING SOUTHEASTERLY IN THE SOUTHERLY RIGHT-OF-WAY LINE OF A CUL-DE-SAC OF DAVIS CREEK ROAD EAST (A 50 FOOT RIGHT-OF-WAY); THENCE ALONG AND AROUND THE ARC OF SAID CURVE IN THE SOUTHERLY RIGHT-OF-WAY LINE OF A CUL-DE-SAC OF DAVIS CREEK ROAD EAST, SAID CURVE BEING CONCAVE NORTHERLY AND HAVING A RADIUS OF 50.00 FEET AND AN ARC LENGTH OF 32.17 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 72 DEGREES 22 MINUTES 07 SECONDS EAST, 31.67 FEET TO A POINT SITUATE ON SAID CURVE, SAID POINT BEING SITUATE ON THE EASTERLY LINE OF SAID LOT 13; THENCE SOUTH 00 DEGREES 48 MINUTES 08 SECONDS EAST ALONG THE EASTERLY LINE OF SAID LOT 13, 50.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 1595.51 SQUARE FEET OR 0.04 ACRES MORE OR LESS.

## EXHIBIT D

### PUD Written Description

GREENLAND ENERGY CENTER  
July 7, 2008

City Development Number: 4121.167

#### I. PROJECT DESCRIPTION

This Application seeks to rezone approximately 175.63 +/- acres of property (portions of RE Nos. 168060-0000, 168060-0020, 168060-0030, 168060-0040, 168153-0000, and 168155-0620), located at 12121 Phillips Highway, south of SR 9A between Davis Pond Road and St. Augustine Road, from IBP, CO, IL, PUD and RR zoning districts to Planned Unit Development ("PUD"). The subject property consists of that certain land as more fully depicted on **Exhibit "1"** (the "Property"). As more fully described below, the PUD zoning district is being requested to permit the development of a new electric-generating station and ancillary uses.

A conceptual site plan of the proposed development is attached as **Exhibit "E"** to this application (the "Site Plan"). The proposed PUD rezoning provides for the development of a new electric-generating facility in southeastern Duval County that will be known as the Greenland Energy Center (the "GEC"). The initial phase of the development will consist of two General Electric (GE) 7FA combustion turbine generators (CTGs) operating in simple cycle mode, with an exhaust stack for each CTG. The CTGs will have the capability to fire natural gas and ultra low sulfur fuel oil (ULSFO). In addition to the CTGs, JEA also proposes to install an emergency diesel fire pump, an emergency diesel engine generator, two 1.875 million gallon ULSFO storage tanks and a fuel gas heater as part of the proposed facility. The GEC will initially function as a peaking power plant until the Combined Cycle Conversion is complete in approximately 2012, when it will become an intermediate power plant.

Phase 2 of the GEC is the Combined Cycle Conversion Project, which will commence in 2010 and consists of adding two heat recovery steam generators to two of three existing 170 megawatts (MW) simple-cycle combustion turbines, adding a single 200 MW steam turbine to form a combined cycle system, and adding duct burners resulting in a gross generating capacity of 812 MW. The power plant will be fired with natural gas as a primary fuel with low sulfur, distillate oil for emergency back up. Additional facilities included in the project include cooling towers, water and wastewater treatment facilities, a storm water collection and storage system, an operation center, and transformers and switching gear necessary to connect to the transmission system.

The Property is bordered by commercial, industrial, office, and medium-density residential uses. To the west of the Property is an industrial office park. The remaining surrounding properties are undeveloped with the following land use designations and zoning districts:

- North: Business Park (BP) / Industrial Business Park (IBP) / Undeveloped Land
- East: Residential-Professional-Institutional (RPI) and Low Density Residential (LDR) / Commercial Office (CO) and Residential Rural (RR) / Undeveloped Land
- South: Business Park (BP), Low Density Residential (LDR), and Community General Commercial (CGC) / Agriculture (AGR), Residential Rural (RR), and Commercial Office (CO) / Single-Family Homes, Undeveloped Land, CSX Railroad, and a Tree Farm
- West: Light Industrial (LI) and Business Park (BP) / Industrial Business Park (IBP), Agriculture (AGR), and Planned Unit Development (PUD) / Undeveloped Land and Industrial Uses

**FUTURE LAND USE AND ZONING FOR ADJACENT PARCELS**

<b>Direction</b>	<b>Future Land Use Category</b>	<b>Zoning District</b>
East	RPI, LDR	CO, RR
West	LI, BP	IBP, AGR, PUD
North	BP	IBP
South	BP, LDR, CGC,	AGR, RR, CO

**II. USES AND RESTRICTIONS**

**A. Permitted Uses:**

The primary use is for public utility facilities, including a gas-powered electric generating facility, water treatment facilities and related utility uses.

**B. Accessory Structures:**

The following accessory structures shall be permitted on the Property:

- Steam Turbine Building – 35,284 square feet
- Administration Building – 26,250 square feet
- Warehouse – 14,000 square feet
- Water Treatment Building – 9,000 square feet
- Guard Shack – 400 square feet
- Potable Water Treatment Building – 12,000 square feet
- Fire Pump Building – 1,000 square feet
- Ancillary mechanical facilities.

**C. Restrictions on Uses:**

The use of the property shall be limited to industrial/public utility uses.

### **III. DESIGN GUIDELINES**

#### **A. Lot Requirements:**

- (1) Minimum lot area: none
- (2) Minimum lot width: none
- (3) Maximum lot coverage: none
- (4) Minimum front yard: North – none
- (5) Minimum side yard: East & West – none
- (6) Minimum rear yard: South – none

(7) Maximum height of structures: The maximum height of the administration building shall be 35 feet; the maximum height of the steam turbine building shall be 60 feet; the stack height for the Combined Cycle facilities shall be 160 feet and the stack height for the simple cycle facilities shall be 115 feet. By comparison, the transmission line located west of and adjacent to the property is 100 feet high.

#### **B. Ingress, Egress and Circulation:**

(1) *Parking Requirements.* Parking shall be included as more fully depicted and illustrated in the attached Site Plan. The site will have approximately 40 parking spaces to serve a total of 20 employees at any one time.

(2) *Vehicular Access.* Access to and from the site shall be primarily from Philips Highway. There will be emergency access allowed through the adjoining industrial property, which is adjacent to the westerly boundary of the Property

(3) *Pedestrian Access.* Pedestrian access is not provided for this site.

#### **C. Signs:**

The PUD shall permit a double-faced or single-faced illuminated monument signs, to be located at the entrance to the site. The sign shall be up to seventy-five (75) square feet in area on each side, and up to ten (10) feet in height.

#### **D. Landscaping:**

The landscaping plan for this property shall be as generally depicted on the attached Site Plan. There will be 32 acres of buffer located around the Project, including:

- ⇒ A 200-foot vegetative buffer along the easterly and northerly boundary of the Property terminating at a 13 acre wetland/conservation easement along the north and westerly boundary.

- ⇒ A 150-foot transmission line corridor along the westerly boundary of the Property.
- ⇒ An 8-acre stormwater treatment pond on the south boundary of the Property.
- ⇒ A 200-foot wetland buffer on the southeasterly boundary of the property.

**E. Recreation and Open Space:**

The site contains approximately 137.01 acres of open space. There is no active recreation provided for in or around the electric-generating facilities.

**F. Utilities:**

Water, electric and sanitary sewer will be provided by the JEA and the City of Jacksonville as appropriate.

**G. Wetlands:**

Any development impacting protected wetlands will be permitted according to local, state and federal requirements.

**IV. DEVELOPMENT PLAN APPROVAL**

With each request for verification of substantial compliance with this PUD, a preliminary development plan shall be submitted to the City of Jacksonville Planning and Development Department identifying all existing and proposed uses within the Property.

**V. JUSTIFICATION FOR PLANNED UNIT DEVELOPMENT CLASSIFICATION FOR THIS PROJECT**

The proposed project is consistent with the general purpose and intent of the City of Jacksonville 2010 Comprehensive Plan and Land Use Regulations. The proposed project will be beneficial to the surrounding neighborhood and community.

A. Is more efficient than would be possible through strict application of the Zoning Code;

B. Is compatible with surrounding land uses and will improve the characteristics of the surrounding area;

C. Will promote the purposes of the City of Jacksonville 2010 Comprehensive Plan.

**VI. PUD REVIEW CRITERIA**

A. *Consistency with Comprehensive Plan.* Assuming final adoption of the companion semi-annual land use amendment, the subject property will be located in the

Public Building and Facilities land use category: The public utility and ancillary uses requested within this PUD application are primary, permitted uses within the PBF land use category. Accordingly, the proposed rezoning is consistent with the FLUMS adopted as part of the City's 2010 Comprehensive Plan.

Moreover, the proposed rezoning to PUD further the following policies adopted as part of the City's 2010 Comprehensive Plan:

*Policy 1.1.10* Promote the use of Planned Unit Developments (PUDs), cluster developments, and other innovative site planning and smart growth techniques in all commercial, industrial, and residential plan categories, in order to allow for appropriate combinations of complementary land uses, and innovation in site planning and design, subject to the standards of this element and all applicable local, regional, State and federal regulations.

*Policy 1.1.20* Future development orders, development permits and plan amendments shall maintain compact and compatible land use patterns, maintain an increasingly efficient urban service delivery system and discourage urban sprawl.

*Policy 1.2.6* The City shall ensure through the implementation of Chapter 654, Ordinance Code (Code of Subdivision Regulations) that suitable lands and/or easements are available for the provision of utility and transportation facilities necessary to support proposed development, and implementation improvements with minimum land use, social and environmental disruption. Consider the location and timing of new public facility construction in requests for Future Land Use Map series amendments.

*Policy 1.2.12* Encourage developments to participate in recovered water reuse programs when such programs are established in the project's service area.

*Policy 3.2.29* The City shall continue to update its comprehensive inventory and mapping of industrial lands to identify and protect existing strategically located industrial lands for future expansion and economic development. These areas are crucial to the long term economic well-being of the City and are identified on the Industrial Preservation Map (Map L-23) as "Industrial Sanctuary" or "Areas of Situational Compatibility".

*Policy 3.2.30* The area shown on the Industrial Preservation Map (Map L-23) as "Industrial Sanctuary" or "Areas of Situational Compatibility" are presumed to be appropriate for land use map amendments to industrial categories, subject to a case-by-case review of consistency with State and regional plans and the Comprehensive Plan.

B. *Consistency with the Concurrency Management System.* The Property will be developed in accordance with the rules of the City of Jacksonville Concurrency Management System Office (CMSO), and it has been assigned City Development Number 4121.167.

C. *Allocation of Residential Land Use.* N/A

D. *Internal Compatibility/Vehicular Access.* The PUD will ensure that

appropriate and effective transitions of external and internal uses are in place, along with adequate and safe vehicular access to and from the subject property.

E. *External Compatibility/Intensity of Development.* The proposed development is located within an area where various industrial, utility, commercial, railroad and other professional / institutional uses are currently in place.

F. *Recreation/Open Space.* The site will contain approximately 137 acres of open space.

G. *Impact on Wetlands.* Any development impacting protected wetlands will be permitted pursuant to local, state and federal permitting requirements.

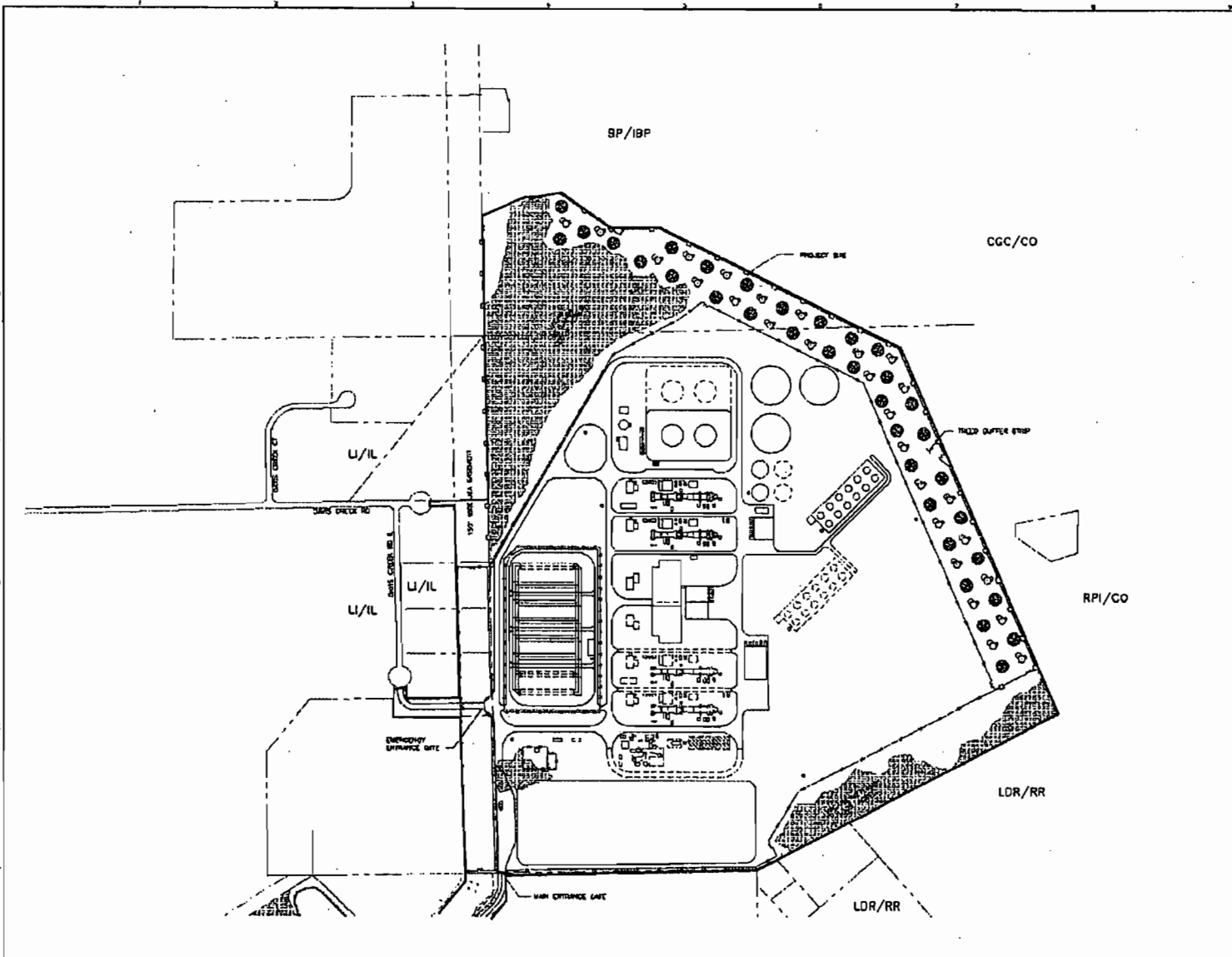
H. *Listed Species Regulations.* A listed species survey was previously submitted to the Planning and Development Department with the application for amendment to the Future Land Use Map.

I. *Off-Street Parking & Loading Requirements.* The PUD shall allow for at least 40 parking spaces as more fully depicted and illustrated in the Site Plan. There is no off- street parking planned for this Project.

J. *Sidewalks, Trails, and Bikeways.* External sidewalks shall not be provided.

K. *Stormwater Retention.* An approximately 8-acre stormwater retention pond shall be developed on-site, as provided in the attached Site Plan.

L. *Utilities.* The JEA and/or the City of Jacksonville shall provide water, sewer, and electrical needs as appropriate.



TOTAL GROSS ACREAGE	151.10 ACRES	100%
AMOUNT OF EACH DIFFERENT LAND USE BY ACREAGE	0 ACRES	0%
TOTAL NUMBER AND TYPE OF DWELLING UNITS BY EACH TYPE OF HOME	0 ACRES	0%
TOTAL AMOUNT OF ACTIVE RECREATION AND/OR OPEN SPACE	0 ACRES	0%
TOTAL AMOUNT OF PAVED OPEN SPACE	737.01 ACRES	48%
AMOUNT OF PUBLIC AND PRIVATE RIGHTS-OF-WAY	0 ACRES	0%
MAXIMUM COVERAGE OF BUILDINGS AND TRANSPORTATION AT GRADE LEVEL	22.10 ACRES	14%

GENERATION FACILITY/WORKER BLOCK  
 CHASE 1 - COMBINED CYCLE PLANT  
 TOTAL EQUIPMENT FOOTPRINT AREA IS 346 ACRES OR 143,000 S.F.  
 ENCLOSED OCCUPIED BUILDING AREA IS 1.2 ACRES OR 54,000 S.F.  
 CHASE 2 - COMBINED CYCLE (2012 BUILD OUT)  
 TOTAL EQUIPMENT AREA IS 2.81 ACRES OR 127,300 S.F.  
 ENCLOSED OCCUPIED BUILDING AREA IS .31 ACRES OR 1,146 S.F.  
 EXIST. FACILITIES SYSTEMS ZONE  
 TOTAL EQUIPMENT AREA IS 10.81 ACRES OR 443,000 S.F.  
 ENCLOSED OCCUPIED BUILDING AREA IS .81 ACRES OR 36,200 S.F.  
 TOTAL  
 TOTAL EQUIPMENT AREA IS 19.84 ACRES OR 814,300 S.F.  
 TOTAL ENCLOSED BUILDING AREA IS 2.31 ACRES OR 100,824 S.F.  
 ADMIN/CONTROL/MAINTENANCE BUILDING  
 29,290 SQ FT  
 WAREHOUSE  
 16,000 SQ FT  
 WASTE TREATMENT BUILDING  
 9,000 SQ FT  
 STEAM PUMPS NO 3  
 22,200 SQ FT  
 STEAM PUMPS NO 6 (FUTURE)  
 20,300 SQ FT  
 SUBSTATION CONTROL BUILDING  
 3,160 SQ FT  
 GROUND STORAGE  
 400 SQ FT

GENERAL LEGEND	
- - - - -	FUTURE FACILITY
-----	PROPERTY LINE

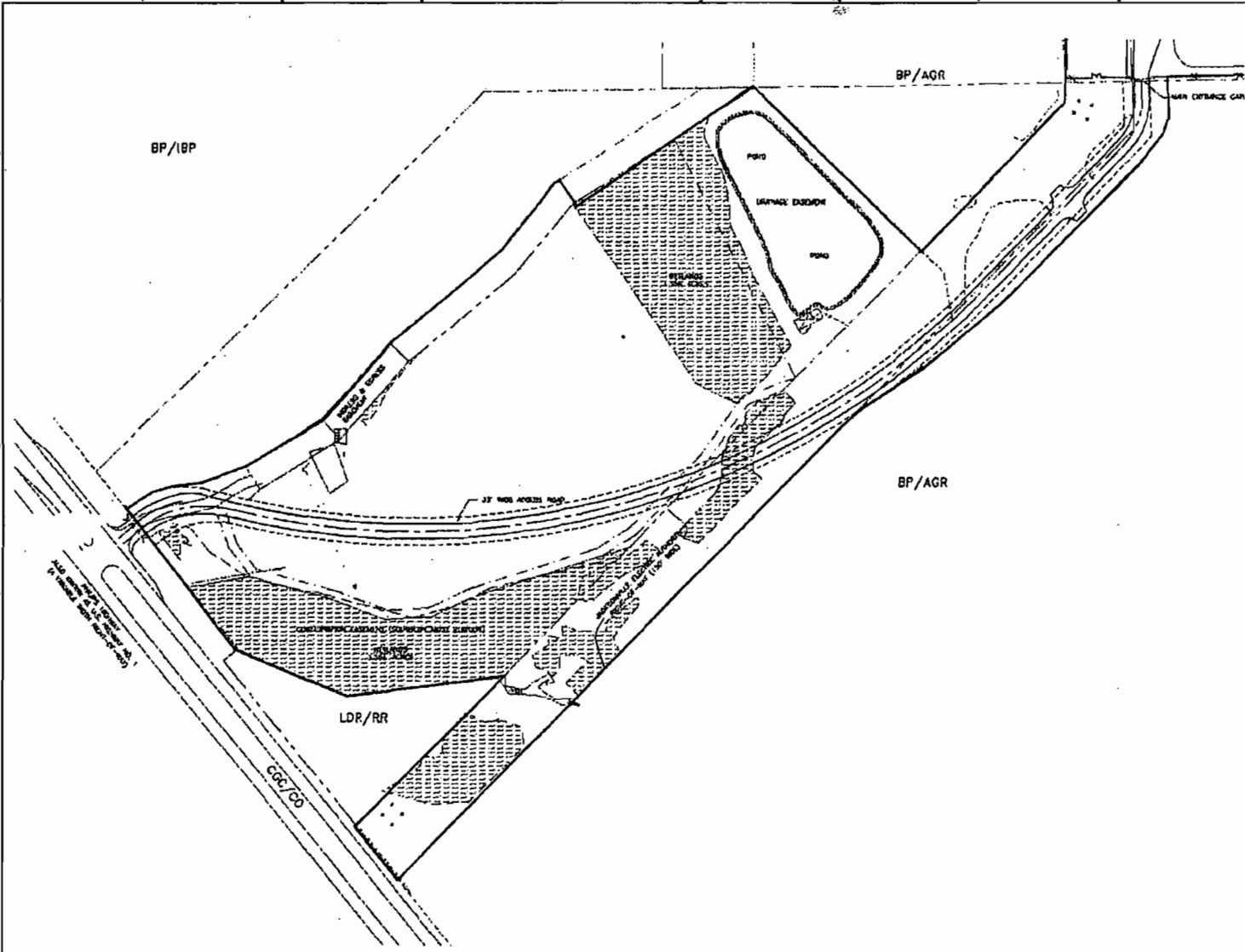
NOTES

1.

FOR PERMITTING USE ONLY

NO.	DATE/NO.	BY	DESCRIPTION	SCALE	PROJECT NO.	DATE	DESIGNER	DATE	PROJECT NAME	PROJECT NUMBER	DATE	REVISION NUMBER
1	01/11/2008	JEA	PERMITTING GATE	1"=200'	160167	01/11/2008	JEA	01/11/2008	GREENLAND ENERGY CENTER	160167	01/11/2008	0
2	01/11/2008	JEA	REVISIONS AND EDITING OF PPH	1"=200'	160167	01/11/2008	JEA	01/11/2008	SITE ARRANGEMENT - COMBINED CYCLE UNITS 1, 2 & 3	160167	01/11/2008	0





GENERAL LEGEND	
---	PROPERTY LINE
---	UTILITY FACILITY

NOTES

1.

FOR PERMITTING USE ONLY

						JEA GREENLAND ENERGY CENTER		PROJECT NUMBER 180167		DRAWING NUMBER DS-0006		REV 0	
DATE: 11/11/11		DRAWN: DAE		CHECKED: BAE		SITE ARRANGEMENT - COMBINED CYCLE UNITS 1, 2 & 3		ISSUE:		REFERENCE Dwg NUMBER:		JED:	

### 10.3 Land Use Plan Descriptions

A copy of the Jacksonville Planning and Development Department Future Land Use Element of the Jacksonville 2010 Comprehensive Plan applicable to the GEC site is included following this page. The City of Jacksonville 2010 Comprehensive Plan Future Land Use Element also provides that “[i]n addition to the specific uses permitted in each land use category depicted on the FLUMs, as defined in this element, the following uses will be allowed in all plan categories subject to standards and criteria in the Land Development Regulations:

1. Roadways, public and private community facilities and essential services serving the area;
2. Parks and open spaces;
3. Conservation and other natural areas; and
4. Agriculture, silviculture, and similar other low intensity open space uses.”

Application 2008A-002-3-13-537 for semi-annual land use amendment to the future land use map series - 2010 Comprehensive Plan - was submitted March 4, 2008, for non-residential use (utility station) of the site. The Land Use and Zoning Committee of the Planning and Development Department approved this amendment (to Public Buildings and Facilities) through Resolution 2008-390-A dated June 24, 2008.

***10.3.1 Excerpts from 2010 Comprehensive Plan***

***Future Land Use Element  
Jacksonville, Florida***

## 2010 COMPREHENSIVE PLAN

# FUTURE LAND USE ELEMENT



May 2008

*The Honorable John Peyton*  
Mayor

*Brad Thoburn Director of Planning &*  
*Development*

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**JACKSONVILLE PLANNING AND DEVELOPMENT DEPARTMENT**  
128 E. Forsyth Street, Suite 700, Jacksonville, Florida 32202

CITY OF JACKSONVILLE  
The Honorable John Peyton, Mayor

CITY COUNCIL MEMBERS 2007-2011

The Honorable Ronnie Fussell	At-Large, Group 1
Vacant	At-Large, Group 2
The Honorable Stephen Joost	At-Large, Group 3
The Honorable Kevin Hyde	At-Large, Group 4
The Honorable Glorious Johnson	At-Large, Group 5
The Honorable Clay Yarborough	District 1
The Honorable William Bishop	District 2
The Honorable Richard Clark	District 3
The Honorable Don Redman	District 4
The Honorable Art Shad	District 5
The Honorable Jack Webb	District 6
The Honorable Johnny Gaffney	District 7
The Honorable Denise Lee	District 8
The Honorable Warren Jones	District 9
The Honorable Mia Jones	District 10
The Honorable Ray Holt	District 11
The Honorable Daniel Davis	District 12
The Honorable Arthur Graham	District 13
The Honorable Michael Corrigan	District 14

## **INTRODUCTION**

Pursuant to the requirements of Chapter 163, Part II, Florida Statutes (F.S.) and Chapter 9J-5, Florida Administrative Code (FAC), the City of Jacksonville adopted the 2010 Comprehensive Plan, which included a Housing Element, on September 1990. Section 163.3191, F.S. requires that the plan be updated periodically. Prior to the update of the plan, the local governments are required to prepare an Evaluation and Appraisal Report (EAR) on the adopted plan. The City of Jacksonville's EAR was submitted to the Florida Department of Community Affairs for review on September 1, 1997 and determined to be sufficient on October 31, 1997.

The EAR for the 2010 Comprehensive Plan comprises the 1990-1995 period. The EAR summarizes the condition of the element at the time of adoption of the 2010 Comprehensive Plan (1990) and the conditions at the time of preparation of the EAR (1995), analyzes the changes since adoption, identifies the success or failure in implementing the policies and recommendations in the plan and the reasons thereof, analyzes the impact of any unforeseen problems or opportunities presented, and identifies the mandatory statutory and rule changes since the adoption of the Plan. Based on this analysis, the report makes recommendations for revisions to update the Plan.

The update of the Future Lane Use Element, presented in the following pages, reflects all the changes recommended in the EAR. Objectives and policies requiring only one time action by the City, which have already been implemented and require no further action, have been deleted. Other more ongoing policies in which action recommended in the adopted plan has been completed but should continue, and policies which have been partially implemented, have been modified appropriately. Finally, some new policies have been added as recommended in the EAR and mandated by updates to the Florida Statutes and Florida Administrative Code. Various editorial and other appropriate organizational name changes have been made as well.

In addition to the aforementioned revisions, the Background Report of this document has also been updated to support the amended Goals, Objectives and Policies.

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Low Density Residential (LDR)

This category permits housing developments in a gross density range of up to seven (7) dwelling units per acre when full urban services are available to the site. Generally, single-family detached housing will be the predominant land use in this category, although mobile homes, patio homes and multi-family dwellings may also be permitted in appropriate locations. Mixed use developments utilizing "Traditional Neighborhood Design" (TND) concept, which are predominantly residential but include a broad mixture of supporting recreational, commercial, public facilities and services are also allowed subject to the standards and criteria in the Land Development Regulations. Minimum lot size shall be half acre per dwelling unit when both centralized potable water as well as wastewater are not available. The lot size shall be reduced to 1/4 acre per dwelling unit if either one of these services are not available. It is not intended to permit the maximum allowable density throughout the area depicted for this category on the Future Land Use Map series. Land Development Regulations shall include several development districts, each with different density range, which will be permitted in this category to permit a varied physical environment.

In addition to the secondary and supporting uses for all residential land use categories listed heretofore, borrow pits, animals other than household pets, foster care homes, community residential homes and drive through facilities in conjunction with a permitted use may also be allowed in the LDR category subject to the standards and criteria in the Land Development Regulations.

Residential-Professional-Institutional (RPI)

This is a mixed use category primarily intended to accommodate office, limited commercial retail and service establishments, institutional and medium density residential uses. Large scale institutional uses, which require supporting residential and office components, are also permitted; as are office-professional uses as well as mixed use developments utilizing the "Traditional Neighborhood Design" (TND) concept, which are predominantly residential but also include a broad mixture of supporting recreational, commercial, public facilities and services, subject to the standards and criteria in the Land Development Regulations.

In addition to the secondary and supporting uses for all commercial land use categories listed heretofore, veterinarians, filling stations, off street parking, nursing homes, residential treatment facilities, day care centers, and other institutional uses such as libraries, public/private schools, colleges and universities, cemeteries, mausoleums but not funeral homes



or mortuaries, private clubs, art galleries, museums, theaters and related uses may also be permitted when sited in compliance with this and other elements of the 2010 Comprehensive Plan and all applicable Land Development Regulations. The location, type, scale and density/intensity of the supporting and secondary uses shall be compatible with the overall character of the existing, as well as the proposed future development of the area.

This category permits housing and mixed use developments in a density range of up to twenty (20) dwelling units per gross acre when full urban services are available to the site. Generally, low rise multi-family dwellings such as apartments condominiums, townhomes and row houses will be the predominant land use in this category, although cluster and patio home mixed use projects, single family dwellings, Single Room Occupancies (SROs), and supporting neighborhood commercial retail, professional offices and institutional uses may also be developed in appropriate locations. The scale of individual commercial/residential buildings or developments will depend upon locational criteria established in the Land Development Regulations and on the Functional Highway Classification System Map.

New single-use developments in RPI may include only residential, office or ancillary transitional uses. Retail uses are not permitted as a single use in RPI. New mixed use developments may not include more than 50% of any single use.

Ancillary transitional uses may include the following:

- 1 Off-street parking facilities, as defined by the City's Land Development Regulations and subject to the restrictions below.
- 2 Stormwater facilities, as defined by the Infrastructure Element of the 2010 Comprehensive Plan.
- 3 Open spaces as defined in the Future Land Use Element of the 2010 Comprehensive Plan.

These uses may be shared and do not count as primary uses. They may fully occupy a parcel designated RPI only when the RPI serves as a transition between more and less intense uses, and the facilities are ancillary to the function of one of the adjacent uses; provided, however, that off-street parking facilities in the RPI land use category shall only serve primary uses also in an RPI land use category.

### *Community/General Commercial (C/GC)*

Community/general commercial uses are generally developed in nodal patterns and serve large areas of the City, which include a diverse set of neighborhoods with a combined service population of at least 25,000 people or 10,000 dwelling

units. Community/general commercial nodes will generally be located within a fifteen minute drive time of the service population. Such uses may only be developed within the commercial and commercially dominated mixed use plan categories of this element.

This type of development includes outlets and establishments that offer a wide range of goods and services including general merchandise, apparel, food and related items. Neighborhood commercial scale uses and projects may be part of a community/general commercial node. Community/general commercial centers are generally developed with a variety or small department store(s) as its primary anchor. General commercial uses include business and professional offices, financial institutions highway commercial such as auto repair and sales, mobile home/motor home rental and sales, off street parking lots and garages, boat storage and sales, hotel, motel, fast food establishments, commercial recreational and entertainment facilities such as carnivals or circuses, theaters, shooting galleries, skating rinks, athletic complexes, arenas, auditoriums, racetracks, and similar other types of commercial developments. Adult entertainment facilities are allowed by right only in Zoning District CCG-2. In addition, warehousing, light manufacturing and fabricating could be permitted provided it is part of a retail sales or service establishment, and the use must be located on a road classified as collector or higher on the Functional Highway Classification Map. Commercial uses will comprise 70 to 90 percent of the land area of the category, while warehousing, light manufacturing and fabricating would constitute the remaining 10 to 30 percent. These uses may be developed as freestanding uses within the area of the Community/General Commercial node, or as separate general commercial projects.

In addition to secondary and supporting uses allowed in all commercial categories, multi-family uses, nursing homes, group care facilities, trade schools and colleges, hospitals, medical centers, sanitariums, museums, criminal justice facilities, art galleries, exhibition and trade facilities and similar other institutional uses, dude ranches, riding academies, private camps, camping grounds, shooting ranges, fishing and hunting camps, fairgrounds, race tracks, stadiums and arenas, transit stations, bus and other transportation terminals (but not freight or truck terminals), personal property storage establishments, crematoria, blood donation and plasma centers, building trade contractors, rescue missions, residences in conjunction with a permitted use, and day labor pools etc. may also be allowed within the Community/General Commercial land use category. Single family and multi-family residences as part of a mixed use development and those which were originally designed and legally built as single or multi-family residences prior to adoption of the Comprehensive Plan are allowed within this category, as long as there is not an adopted Neighborhood Action Plan recommending against them. No new residential use will be more than 90% of the land area of a parcel of greater than 50 acres. Residential uses shall generally not be the sole use within the CGC land use category but may be greater than the commercial uses.

Land development regulations shall include standards for minimum setbacks and buffer zones between different types of uses allowed in this category, as well as locational criteria for such uses.

Not all potential uses are routinely acceptable anywhere within this land use category. Each potential primary or secondary use must be evaluated for compliance with this and other elements of the 2010 Comprehensive Plan as well as applicable Land Development Regulations. The location, type, scale and density/intensity of the supporting and secondary uses shall be compatible with the overall character of the existing, as well as the proposed future development of the area.

Nodal development patterns at highway intersections are preferred, and generally all new community/general commercial uses will be developed in this pattern. An exception to this standard may occur in areas where commercial infill can occur on commercially designated sites and where infill would create a more compact use pattern than development of new commercial nodes in the same area.

The standards to be prepared as Land Development Regulations and the criteria herein only designate locations that may be considered for community commercial uses. Consideration does not guarantee the approval of a particular retail or office commercial use in any given location. Community commercial uses should abut a roadway classified as an arterial or higher facility on the adopted highway functional classification system map, which is part of the 2010 Comprehensive Plan. Sites with two or more boundaries on a transportation right-of-way will be considered preferred locations for these uses.

#### Business Park (BP)

This mixed land use category is primarily intended to accommodate low to moderate intensity office and industrial parks, which are generally developed as commercial subdivisions. Land uses permitted in this category include business/professional offices including banks and financial institutions, research and development activities, radio and T.V. studios, light manufacturing, fabrication and assembly, service establishments, major institutions, light industrial, and warehousing uses carried out in completely enclosed structures with no open storage. Commercial offices comprise 70 to 90 percent of the land area in this category, while service, major institutional and light industrial uses constitute the remaining 10 to 30 percent. A portion of the land area in this category, not to exceed 25 percent, may be devoted to hotels, motels, restaurants, and similar supporting commercial uses.

In addition to the secondary and supporting uses allowed in all industrial

categories, communication facilities, utilities, off-street parking lots, vocational trade, technical or industrial schools, private clubs, churches, day care centers, nursing homes and similar other public facilities meeting the performance standards and criteria in the Land development Regulations will also be allowed in this category. The location, type, scale and density/intensity of the supporting and secondary uses shall be compatible with the overall character of the existing, as well as the proposed future development of the area. Residential uses may be allowed within this category including single and multi-family residences, which were originally designed and legally built as single and multi-family residences prior to adoption of the Comprehensive Plan, and newly constructed units, live/work lofts, and other mixed use projects as long as they are outside any airport environ where residential uses are not allowed as identified in the Land Development Regulations and in the policies listed under Objective 2.5 of this element, outside the Coastal High Hazard Area and within a density range of 1 to 20 units per acre. Newly constructed units in the Business Park land use category shall be for workforce persons and shall be allowed only if this site is located outside of an Industrial Sanctuary and is a component of mixed use development.

Business parks shall be located in areas designated for this category on the FLUMs. The standards as in the Land Development Regulations and the criteria herein only designate locations that may be considered for business parks. Consideration does not guarantee the approval of a particular site for business parks in any given location. Site access to roads classified as arterial or higher on the adopted Highway Functional Classification System Map, which is part of the 2010 Comprehensive Plan, is preferred except for sites located within the Jacksonville DDA's jurisdictional boundaries.

#### Light Industrial (LI)

This category includes industrial uses which have fewer objectionable impacts such as noise, odor, toxic chemical and wastes. Types of primary uses include light assembly and manufacturing, packaging, processing including scrap processing, manufacturing of paints, enamels and allied products but not the manufacturing of the resins and other components from which such products are made, concrete batching plants, storage/warehousing including bulk storage of liquids, research and development activities, transportation terminals including freight terminals, radio/T.V. studios, transmission and relay towers, yard waste composting, recycling facilities, business/professional offices, medical clinics, veterinarians, vocational/trade schools and building trade contractors. Secondary uses include railroad yards, truck terminals, bus and rail stations, solid waste management facilities including composting and recycling operations, institutional uses, and public facilities such as trade and technical schools, health clinics, fire stations, utility plants, churches and day care centers; commercial, retail and service establishments, broadcasting studios including transmitters, telephone and cellular phone towers, business as well as professional offices including

veterinarians, filling stations, restaurants and similar other supporting commercial uses. The location, type, scale and density/intensity of the supporting and secondary uses shall be compatible with the overall character of the existing, as well as the proposed future development of the area. Residential uses allowed within this category may include single and multifamily residences which were originally designed and legally built as single and multi-family residences prior to adoption of the Comprehensive Plan, but shall not permit new residential units except as otherwise provided for in the Land Development Regulations as accessory uses.

Light industrial uses shall be located in areas designated for such use on the FLUMs. The standards in the Land Development Regulations and the criteria herein only designate locations that may be considered for light industrial uses. Consideration does not guarantee the approval of a particular light industrial use in any given location. Site access to roads classified as collectors or higher on the adopted highway functional classification system map, which is part of the 2010 Comprehensive Plan, is preferred except for sites located within the Jacksonville DDA's jurisdictional boundaries.

Light industrial uses serving as complementary or supporting uses serving other primary land use categories may be permitted in mixed use planned unit developments (PUDs) outside the areas depicted for such use on the FLUMs.

#### **PUBLIC BUILDINGS AND FACILITIES (PBF)**

This is a broad land use category that is intended to identify major public use or community service activities. Uses include all lawful government activities, public buildings and grounds, schools, colleges and universities, criminal justice facilities, military installations, transportation facilities including airports, train stations, terminals etc.; along with ancillary and accessory uses such as warehouses, general aviation uses, hotels, motels, restaurants, car rental agencies, public/private institutions, churches, hospitals, including professional offices, medical clinics, pharmacies, and other uses normally associated therewith, private clubs, sale and service of alcoholic beverages in conjunction with a permissible use, major public utilities, and off street parking lots. Nursing homes, group care homes, homes for the aged or orphans and other uses normally associated therewith are also permitted within this land use category. All types of public facilities; i.e., institutional, communication and utilities, and transportation are combined into one category on the FLUMs. Only major existing plants and facilities are depicted.

Secondary uses in this category include recreation and open space such as ball parks, stadiums arenas and equestrian facilities, etc.; sale and service of alcoholic beverages in conjunction with a permitted activity, off street parking lots, silviculture activities, conservation areas, sanitary landfills, construction and

demolition debris landfills, yard waste composting facilities including the mulching plant and similar other uses.

Siting public/semi-public facilities that are allowed in commercial, light and heavy industrial, residential and institutional categories as supporting uses will not require plan amendment. Some major uses, however, because of their scale and potential community impacts, may only be sited in this plan category. Not all potential primary or secondary uses are permissible anywhere within this land use category. Each potential use must be evaluated for compliance with the provisions of this and other elements of the 2010 Comprehensive Plan, and all applicable Land Development Regulations. The location, type, scale and density/intensity of the supporting and secondary uses shall be compatible with the overall character of the existing, as well as the proposed future development of the area.

Activities that provide community service functions vary in character and locational need. A primary consideration in locating these uses is to ensure that each use will function as it is intended, as an important part of the urban service delivery system. The standards to be prepared as Land Development Regulations and the criteria herein only designate locations that may be considered for public/semi-public uses, and do not apply to military bases or other uses that do not directly serve the citizens of the City. Consideration does not guarantee approval of a particular use in any given location. With the exception of utility substations and other similar non-trip generating uses, community and regional serving public/semi-public sites should abut a roadway classified as a collector or higher facility on the adopted highway functional classification system map, which is part of the 2010 Comprehensive Plan.

***10.3.2 Resolution 2008-390-A***

***Adopted 6/24/08***

1 Introduced by the Land Use and Zoning Committee:



3 Attachment

4 **RESOLUTION 2008-390-A**

5 A RESOLUTION APPROVING A PROPOSED SEMI-ANNUAL  
6 REVISION TO THE FUTURE LAND USE MAP SERIES OF THE  
7 2010 COMPREHENSIVE PLAN BY CHANGING THE FUTURE  
8 LAND USE DESIGNATIONS FROM BUSINESS PARK (BP),  
9 RESIDENTIAL-PROFESSIONAL-INSTITUTIONAL (RPI),  
10 COMMUNITY/GENERAL COMMERCIAL (CGC), LIGHT  
11 INDUSTRIAL (LI), AND LOW DENSITY RESIDENTIAL  
12 (LDR) TO PUBLIC BUILDINGS AND FACILITIES (PBF) ON  
13 APPROXIMATELY 159.16 ACRES OF LAND LOCATED IN  
14 COUNCIL DISTRICT 13 NORTH OF ST. AUGUSTINE ROAD  
15 ON THE EAST SIDE OF PHILIPS HIGHWAY BETWEEN DAVIS  
16 CREEK ROAD AND ST. AUGUSTINE ROAD AND OWNED BY  
17 JEA, AS MORE PARTICULARLY DESCRIBED HEREIN,  
18 PURSUANT TO APPLICATION NUMBER 2008A-002, FOR  
19 TRANSMITTAL TO THE STATE OF FLORIDA'S VARIOUS  
20 AGENCIES FOR REVIEW; PROVIDING AN EFFECTIVE DATE.

21  
22 **WHEREAS**, pursuant to the provisions of Section 650.402(b),  
23 *Ordinance Code*, Application Number 2008A-002, requesting a revision to  
24 the Future Land Use Map series of the *2010 Comprehensive Plan* to change  
25 the future land use designations from Business Park (BP), Residential-  
26 Professional-Institutional (RPI), Community/General Commercial (CGC),  
27 Light Industrial (LI), and Low Density Residential (LDR) to Public  
28 Buildings and Facilities (PBF) has been filed by Karl J. Sanders,  
29 Esquire on behalf of JEA, the owner of certain real property located in  
30 Council District 13, as more particularly described in Section 2 and  
31 referenced therein as the "Subject Property"; and



1           **WHEREAS**, the Planning and Development Department reviewed the  
2 proposed revision and application, held a public information workshop  
3 on this proposed amendment to the *2010 Comprehensive Plan*, with due  
4 public notice having been provided, and having reviewed and considered  
5 all comments received during the public workshop, has prepared a  
6 written report and rendered an advisory recommendation to the Council  
7 with respect to this proposed amendment; and

8           **WHEREAS**, the Planning Commission, acting as the Local Planning  
9 Agency (LPA), held a public hearing on this proposed amendment, with  
10 due public notice having been provided, reviewed and considered all  
11 comments received during the public hearing and made its recommendation  
12 to the City Council; and

13           **WHEREAS**, the Land Use and Zoning (LUZ) Committee held a public  
14 hearing on this proposed amendment pursuant to Chapter 650, Part 4,  
15 *Ordinance Code*, and having considered all written and oral comments  
16 received during the public hearing, has made its recommendation to the  
17 Council; and

18           **WHEREAS**, the City Council held a public hearing on this proposed  
19 amendment with public notice having been provided, pursuant to Section  
20 163.3184, *Florida Statutes*, and Chapter 650, Part 4, *Ordinance Code*,  
21 and having considered all written and oral comments received during the  
22 public hearing, the recommendations of the Planning and Development  
23 Department, the Planning Commission and the LUZ Committee, desires to  
24 transmit this proposed amendment through the State's Pilot Program for  
25 amendment review to the Florida Department of Community Affairs  
26 ("DCA"), as the State Land Planning Agency, the Northeast Florida  
27 Regional Council, the Florida Department of Transportation, the St.  
28 Johns River Water Management District, the Florida Department of  
29 Environmental Protection, the Florida Fish and Wildlife Conservation  
30 Commission, the Department of State's Bureau of Historic Preservation,

1 and the Department of Agriculture and Consumer Affairs; now, therefore  
2 **BE IT RESOLVED** by the Council of the City of Jacksonville:

3 **Section 1. Purpose and Intent.** The Council hereby approves  
4 for transmittal to the DCA, a proposed semi-annual revision to the  
5 Future Land Use Map series of the 2010 Comprehensive Plan changing the  
6 future land use designations from Business Park (BP), Residential-  
7 Professional-Institutional (RPI), Community/General Commercial (CGC),  
8 Light Industrial (LI), and Low Density Residential (LDR) to Public  
9 Buildings and Facilities (PBF), pursuant to Application Number 2008A-  
10 002.

11 **Section 2. Subject Property Location and Description.** The  
12 approximately 159.16 acres of land are located in Council District 13  
13 north of St. Augustine Road on the east side of Philips Highway between  
14 Davis Creek Road and St. Augustine Road (R. E. numbers 168060-0000,  
15 168060-0020, 168060-0030, 168060-0040, 168153-0000, and 168155-0620),  
16 as more particularly described in **Exhibit 1** and graphically depicted in  
17 **Exhibit 2**, both of which are **attached hereto** and incorporated herein by  
18 this reference (Subject Property).

19 **Section 3. Owner and Applicant Description.** The Subject  
20 Property is owned by JEA. The applicant is Karl J. Sanders, Esquire, 6  
21 East Bay Street, Suite 500, Jacksonville, Florida 32202; (904) 633-  
22 7979.

23 **Section 4. Effective Date.** This resolution shall become  
24 effective upon signature by the Mayor or upon becoming effective  
25 without the Mayor's signature.

26  
27 Form Approved:

28           /s/          Shannon K. Eller            
29 Office of General Counsel  
30 Legislation Prepared by: Robert K. Riley  
31 G:\SHARED\LEGIS.CC\2008\res\SEMI ANNUAL\2008-390.doc

# RESOLUTION 2008-390

## Legal Description

A PORTION OF SECTION 8, TOGETHER WITH A PORTION OF SECTION 17, IN TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS BEGIN AT A P-K NAIL SET IN CONCRETE THE SOUTHWESTERLY CORNER OF SAID SECTION 17, SAID CORNER ALSO BEING SITUATE ON THE NORTHERLY LINE OF SAID MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH RANGE 28 EAST, THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY LINE OF SAID SECTION 17, 19 12 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B 4603 AT THE SOUTHWEST CORNER OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322 OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY, THENCE NORTH 87 DEGREES 13 MINUTES 45 SECONDS EAST ALONG THE SOUTH LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 916 41 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B 4603 AT THE SOUTHEAST CORNER OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322; THENCE NORTH 00 DEGREES 13 MINUTES 54 SECONDS WEST ALONG THE EAST LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 953 17 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B 4603 AT THE NORTHEAST CORNER OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322; THENCE SOUTH 89 DEGREES 50 MINUTES 06 SECONDS WEST ALONG THE NORTH LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 933.11 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B 4603 AT THE NORTHWEST CORNER OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, ALSO BEING A POINT ON THE WEST LINE OF SAID SECTION 17, THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST ALONG THE WEST LINE OF SAID SECTION 17, 194 99 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B. 4603, THENCE NORTH 89 DEGREES 50 MINUTES 30 SECONDS EAST DEPARTING SAID EAST LINE OF SECTION 17, 150.00 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B. 4603, THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, 175.02 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B 4603; THENCE SOUTH 89 DEGREES 50 MINUTES 06 SECONDS WEST, 150 00 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603, SAID POINT BEING ON THE AFORESAID WEST LINE OF SECTION 17, THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG SAID WEST LINE OF SECTION 17, 1072.21 FEET TO A THREE INCH IRON PIPE FILLED WITH CONCRETE, SAID THREE INCH IRON PIPE BEING THE NORTHWESTERLY CORNER OF SAID SECTION 17, ALSO BEING THE SOUTHWESTERLY CORNER OF SAID SECTION 8; THENCE NORTH 00 DEGREES 54 MINUTES 07 SECONDS WEST, ALONG SAID WEST LINE OF SECTION 8, 487 08 FEET TO A POINT SITUATE ON SAID LINE; THENCE NORTH 89 DEGREES.05 MINUTES 53 SECONDS EAST, DEPARTING FROM SAID WEST LINE OF SECTION 8, 808 87 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B 4603; THENCE SOUTH 63 DEGREES 14 MINUTES 36 SECONDS EAST, 1224 67 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L B 4603, THENCE SOUTH 22 DEGREES 53 MINUTES 22 SECONDS EAST, 1581.57 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B 4603, THENCE SOUTH 54 DEGREES 01 MINUTES 50 SECONDS WEST, 1579 55 FEET TO A THREE INCH IRON PIPE FILLED WITH CONCRETE, SAID THREE INCH IRON PIPE BEING SITUATE ON THE AFORESAID NORTH LINE OF THE MARY ANN DAVIS GRANT, SECTION 37, THENCE SOUTH 89 DEGREES 03 MINUTES 31 SECONDS WEST, ALONG SAID NORTH LINE OF THE MARY ANN DAVIS GRANT, SECTION 37, 1178 19 FEET TO THE POINT OF BEGINNING

RESOLUTION 2008-390

Legal Description

DDI PARCEL

WETLANDS PARCEL

A PORTION OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, GUYAL COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS. COMMENCE AT A NAIL SET IN CONCRETE AT THE SOUTHWESTERLY CORNER OF SAID SECTION 17, THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY BOUNDARY LINE OF SAID SECTION 17, 367.34 FEET TO THE POINT OF BEGINNING, THENCE CONTINUE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY BOUNDARY LINE OF SAID SECTION 17, 146.21 FEET TO A POINT SITUATE ON LAST SAID LINE, THENCE NORTH 84 DEGREES 39 MINUTES 47 SECONDS EAST, DEPARTING FROM SAID WESTERLY BOUNDARY LINE OF SECTION 17, 64.44 FEET, THENCE NORTH 87 DEGREES 02 MINUTES 13 SECONDS EAST, 24.32 FEET, THENCE NORTH 25 DEGREES 30 MINUTES 45 SECONDS EAST, 27.27 FEET, THENCE NORTH 29 DEGREES 52 MINUTES 10 SECONDS EAST, 31.18 FEET; THENCE SOUTH 72 DEGREES 55 MINUTES 10 SECONDS EAST, 14.26 FEET, THENCE SOUTH 03 DEGREES 47 MINUTES 29 SECONDS WEST, 23.43 FEET; THENCE SOUTH 29 DEGREES 51 MINUTES 40 SECONDS EAST, 19.90 FEET; THENCE SOUTH 74 DEGREES 49 MINUTES 33 SECONDS EAST, 28.26 FEET; THENCE SOUTH 39 DEGREES 16 MINUTES 39 SECONDS EAST, 31.26 FEET, THENCE SOUTH 48 DEGREES 45 MINUTES 39 SECONDS EAST, 28.80 FEET, THENCE SOUTH 77 DEGREES 21 MINUTES 03 SECONDS EAST, 35.79 FEET, THENCE SOUTH 42 DEGREES 12 MINUTES 12 SECONDS EAST, 37.84 FEET; THENCE SOUTH 64 DEGREES 06 MINUTES 55 SECONDS WEST, 51.92 FEET, THENCE SOUTH 85 DEGREES 04 MINUTES 10 SECONDS WEST, 36.53 FEET, THENCE SOUTH 58 DEGREES 24 MINUTES 50 SECONDS WEST, 50.21 FEET; THENCE NORTH 89 DEGREES 41 MINUTES 37 SECONDS WEST, 47.65 FEET, THENCE SOUTH 76 DEGREES 18 MINUTES 11 SECONDS WEST, 92.71 FEET TO THE POINT OF BEGINNING.

# RESOLUTION 2008-390

## Legal Description

### DRIVING RANGE

OFFICIAL RECORDS BOOK 11213. PAGES 700-702

### PARCEL "A"

A PORTION OF THE MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS FOR A POINT OF REFERENCE COMMENCE AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY, AS DESCRIBED IN DEED RECORDED IN THE OFFICIAL RECORDS OF SAID COUNTY IN VOLUME 2081, PAGE 43, WITH THE NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY - US HIGHWAY No 1 (A 150 FOOT RIGHT-OF-WAY AT THIS POINT) AND RUN NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY, A DISTANCE OF 472 03 FEET TO AN ANGLE POINT IN LAST MENTIONED RIGHT-OF-WAY LINE, RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 40 00 FEET TO AN ANGLE POINT IN SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY (A 190 FOOT RIGHT-OF-WAY AT THIS POINT) AND THE POINT OF BEGINNING FROM THE POINT OF BEGINNING THUS DESCRIBED RUN THENCE NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 315 00 FEET TO A POINT, RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 20 00 FEET TO A POINT OF CURVATURE, RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF A CURVE, SAID CURVE BEING CONCAVE SOUTHERLY AND HAVING A RADIUS OF 133.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 71 DEGREES 44 MINUTES 13 SECONDS EAST, 86 87 FEET TO A POINT OF REVERSE CURVE, RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF SAID CURVE, SAID CURVE BEING CONCAVE NORTHERLY, AND HAVING A RADIUS OF 210 00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 75 DEGREES 05 MINUTES 58 SECONDS EAST, 113.65 FEET TO A POINT ON SAID CURVE; RUN THENCE NORTH 48 DEGREES 05 MINUTES 25 SECONDS EAST, NOT TANGENT TO LAST MENTIONED CURVE, A DISTANCE OF 50.99 FEET TO A POINT; RUN THENCE NORTH 59 DEGREES 24 MINUTES 01 SECONDS EAST, A DISTANCE OF 209 52 FEET TO A POINT, RUN THENCE NORTH 42 DEGREES 22 MINUTES 10 SECONDS EAST, A DISTANCE 231.33 FEET TO A POINT; RUN THENCE NORTH 51 DEGREES 16 MINUTES 58 SECONDS EAST, A DISTANCE OF 303.96 FEET TO A POINT, RUN THENCE NORTH 41 DEGREES 03 MINUTES 34 SECONDS EAST, A DISTANCE OF 204.90 FEET TO A POINT; RUN THENCE NORTH 58 DEGREES 45 MINUETS 24 SECONDS EAST, A DISTANCE OF 477 75 FEET TO THE SOUTHWESTERLY CORNER OF GOVERNMENT LOT 1, SECTION 18, TOWNSHIP 4 SOUTH, RANGE 28 EAST, RUN THENCE SOUTH 44 DEGREES 29 MINUTES 19 SECONDS EAST, A DISTANCE OF 514 87 FEET TO A POINT ON PREVIOUSLY MENTIONED NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY RECORDED IN OFFICIAL RECORDS VOLUME 2081, PAGE 43, RUN THENCE SOUTH 45 DEGREES 30 MINUTES 41 SECONDS WEST ALONG SAID NORTHWESTERLY LINE, A DISTANCE OF 1329 68 FEET TO A POINT, RUN THENCE SOUTH 85 DEGREES 10 MINUTES 37 SECONDS WEST, A DISTANCE OF 347 06 FEET TO A POINT, RUN THENCE NORTH 66 DEGREES 09 MINUTES 35 SECONDS WEST, A DISTANCE OF 260 22 FEET TO THE POINT OF BEGINNING

RESOLUTION 2008-390

Legal Description

Legal Description

JEA T-LINE PROPERTY

A part of Mary Ann Davis Grant, Section 37, Township 4 South, Range 28 East, Duval County, Florida, more particularly described as follows: For a Point of Beginning, commence at the intersection of the Northerly line of said Mary Anne Davis Grant, Section 37, and the Easterly line of Section 18, Township 4 South, Range 28 East, thence run S 1° 21' 52" E. a distance of 105.02 feet to a point; thence run S. 44° 13' 11" W. a distance of 2596.21 feet to the Northeasterly right-of-way line of the Florida East Coast Railroad; thence run N. 40° 59' 52" W. along said railroad right-of-way, a distance of 150.52 feet to a point; thence run N. 44° 13' 11" E. a distance of 2520.66 feet to a point; thence run N. 1° 21' 52" W. a distance of 43.14 feet to the aforesaid Northerly line of Mary Ann Davis Grant, Section 37, thence run N. 89° 04' 55" E. along the Northerly line of said Grant, a distance of 150 feet to the Point of Beginning.

Excepting from the above described lands that portion of Philips Highway (U.S. Highway No. 1).

RESOLUTION 2008-390

Legal Description

**WELL SITE 4 (RE# 168060-0040)**

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17, THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1072.21 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 150.00 FEET; THENCE SOUTH 01°04'49" EAST, A DISTANCE OF 175.02 FEET; THENCE NORTH 89°59'36" WEST, A DISTANCE OF 150.00 FEET TO A POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, A DISTANCE OF 175.00 FEET TO THE POINT OF BEGINNING.

**WELL SITE 5 (RE# 168060-0030)**

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17, THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1442.20 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 933.11 FEET; THENCE SOUTH 00°04'00" EAST, A DISTANCE OF 753.17 FEET; THENCE SOUTH 89°59'35" WEST, A DISTANCE OF 212.47 FEET; THENCE SOUTH 00°00'25" EAST, A DISTANCE OF 209.65 FEET; THENCE SOUTH 87°23'39" WEST, A DISTANCE OF 703.52 FEET TO A POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, ALONG SAID SECTION LINE, A DISTANCE OF 348.20 FEET; THENCE NORTH 76°28'00" EAST, A DISTANCE OF 92.71 FEET; THENCE SOUTH 89°31'48" EAST, A DISTANCE OF 47.65 FEET; THENCE NORTH 58°34'39" EAST, A DISTANCE OF 50.21 FEET; THENCE NORTH 64°16'44" EAST, A DISTANCE OF 36.53 FEET; THENCE NORTH 64°16'44" EAST, A DISTANCE OF 51.92 FEET; THENCE NORTH 42°02'23" WEST, A DISTANCE OF 37.84 FEET; THENCE NORTH 77°11'14" WEST, A DISTANCE OF 35.79 FEET; THENCE NORTH 48°35'50" WEST, A DISTANCE OF 28.80 FEET; THENCE NORTH 39°06'50" WEST, A DISTANCE OF 31.26 FEET; THENCE NORTH 74°39'44" WEST, A DISTANCE OF 28.26 FEET; THENCE NORTH 29°41'51" WEST, A DISTANCE OF 19.90 FEET; THENCE NORTH 03°57'18" EAST, A DISTANCE OF 23.43 FEET; THENCE NORTH 72°45'21" WEST, A DISTANCE OF 14.26 FEET; THENCE SOUTH 30°01'59" WEST, A DISTANCE OF 31.18 FEET; THENCE SOUTH 25°40'34" WEST, A DISTANCE OF 27.27 FEET; THENCE SOUTH 87°12'02" WEST, A DISTANCE OF 24.32 FEET; THENCE SOUTH 84°49'36" WEST, A DISTANCE OF 64.44 FEET TO A

RESOLUTION 2008-390

Legal Description

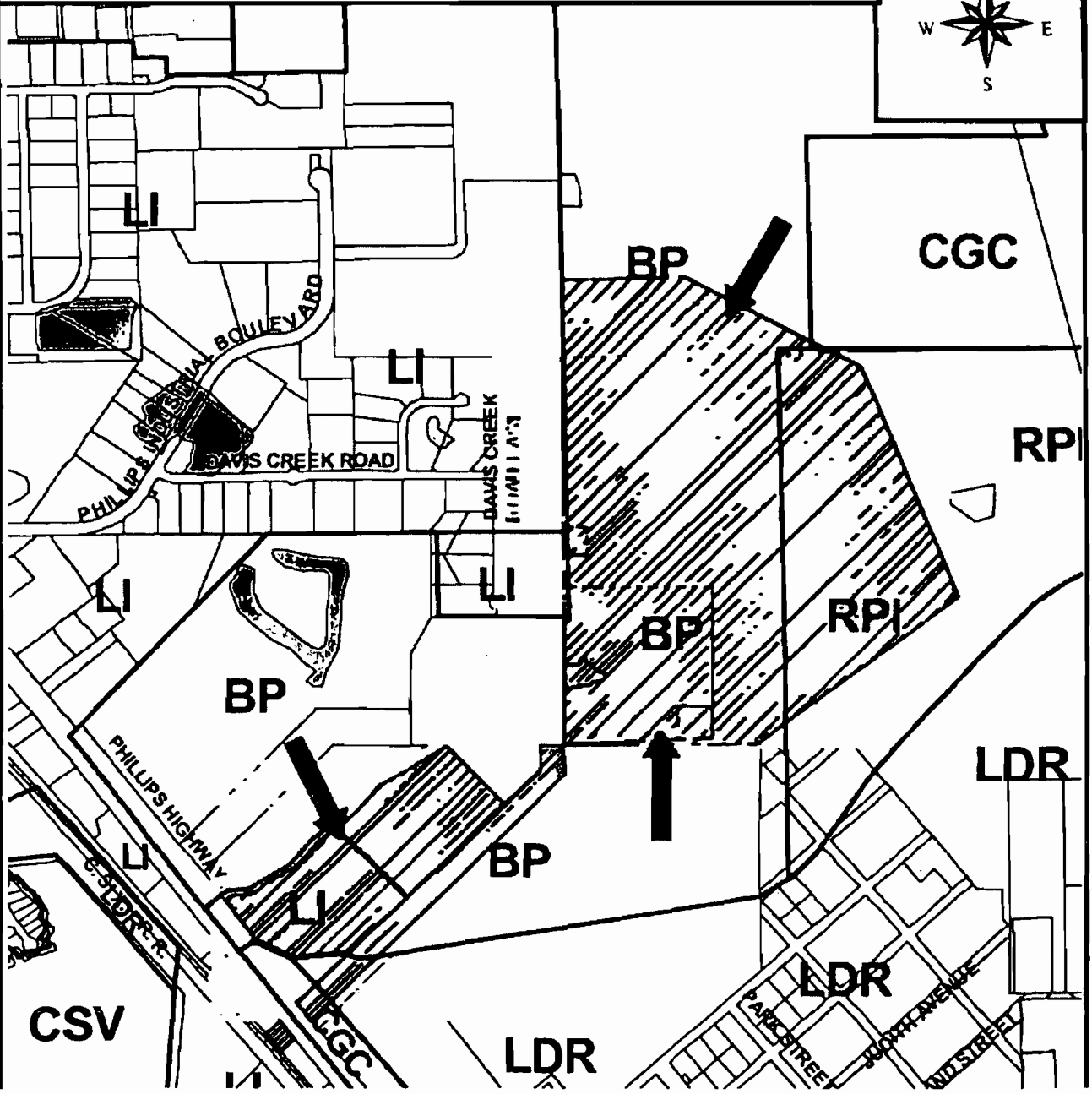
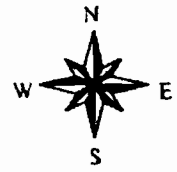
POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, ALONG SAID SECTION LINE, A DISTANCE OF 500.60 FEET TO THE POINT OF BEGINNING.

**WELL SITE 6 (RE# 168060-0020)**

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17; THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1442.20 FEET; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 933.11 FEET; THENCE SOUTH 00°04'00" EAST, A DISTANCE OF 753.17 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 00°04'00" EAST, A DISTANCE OF 200.00 FEET; THENCE SOUTH 87°23'39" WEST, A DISTANCE OF 212.89 FEET; THENCE NORTH 00°00'25" WEST, A DISTANCE OF 209.65 FEET; THENCE NORTH 89°59'35" EAST, A DISTANCE OF 212.47 FEET TO THE POINT OF BEGINNING.



# CURRENT LAND USE MAP



## Request for Semi-Annual Land Use Amendment to Future Land Use Map Series



Map Date: May 12, 2008

**From:** Business Park (BP), Residential-Professional-Institutional (RPI), Community/General Commercial (CGC), Light Industrial (LI), and Low Density Residential (LDR)

**To:** Public Buildings and Facilities (PBF)

**Planning District:** 3

**Identification Number:** 2008A-002 - 3 - 13 - 537

**Council District:** 13

**Resolution 2008-390:** Exhibit 2 (Page 1 of 1)

***10.3.3 Proposed Semi-Annual  
Future Land Use Map (FLUM) Amendment***

***Resolution 2008-390***

**PROPOSED SEMI-ANNUAL  
FUTURE LAND USE MAP (FLUM) AMENDMENT**



**RESOLUTION 2008-390**

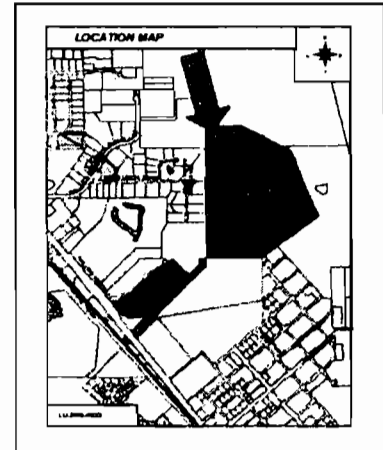
**APPLICATION 2008A-002-3-13-537**

**APPLICANT'S INFORMATION:**

Karl J. Sanders, Esquire  
6 East Bay Street, Suite 500  
Jacksonville, FL 32202  
(904)665-4325

**PARCEL INFORMATION:**

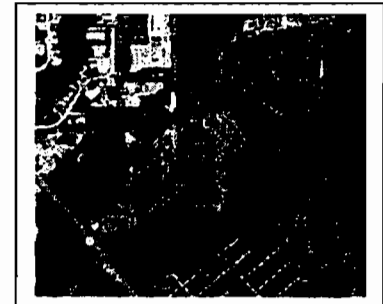
RE #: 168060-0000, 168060-0020, 168060-0030,  
168060-0040, 168153-0000 and 168155-0620  
Location: 12121 Phillips Highway  
Planning District: 3 - Southeast  
City Council District: 13  
Council Member: The Honorable Art Graham  
Acreage: 159.16 acres  
Street Access: Phillips Highway  
NAP/Vision Plan Area: US-1 Corridor Study



Current FLUE Category: BP, RPI, LI, CGC, and LDR  
Proposed FLUE Category: PBF

Current Zoning District: IBP, CO, IL, PUD, and RR  
Proposed Zoning District: PUD

Existing Land Utilization: Undeveloped Land  
Proposed Land Utilization: Power Generating Facility



**Recommendation: APPROVAL**

**Supporting Criteria: Key Issues**

- ⇒ The proposed amendment promotes the use of Planned Unit Developments (PUDs) for new non-residential development (FLUE Policy 1.1.10).
- ⇒ The proposed amendment maintains an increasingly efficient urban service delivery system (FLUE Policy 1.1.20).
- ⇒ The proposed amendment promotes the development of a new utility station to support a growing population (FLUE Policy 1.2.6).
- ⇒ The proposed amendment promotes the use of reclaimed water reuse (FLUE Policy 1.2.12).

- ⇒ The proposed amendment is located within an Industrial Situational Compatibility Area and the proposed development would contribute to the long term economic well-being of the City (FLUE Policy 3.2.29).
- ⇒ The proposed amendment encourages the creation and relocation of new businesses as well as the expansion of existing businesses in the northeast Florida region (Strategic Regional Policy Plan Goal 2.3).
- ⇒ The proposed amendment encourages efficient development to occur in an area with the capacity to service new population and commerce (187.201(15)(b)(1) F.S.).

## **I. General Analysis**

### **Area Description**

The subject property is located at 12121 Phillips Highway, in the Southeast Planning District. The subject property is currently undeveloped land and is comprised of 159.16 acres. The applicant proposes a Future Land Use Amendment from Business Park (BP), Residential-Professional-Institutional (RPI), Community General Commercial (CGC), Light Industrial (LI), and Low Density Residential (LDR) to Public Buildings and Facilities (PBF) and a companion rezoning from Industrial Business Park (IBP), Commercial Office (CO), Industrial Light (IL), Planned Unit Development (PUD), and Residential Rural (RR) to Planned Unit Development (PUD) to allow for the development of a new power generating facility.

A 1.30 acre site located approximately 1/4 mile southeast of the proposed site was the subject of a small scale land use amendment, Ordinance 2004-0005-E, from LDR to CGC. Ordinance 2004-0005-E amended the site's Future Land Use Category to CGC to permit the development of a retail neighborhood village. The subject property is located in a rapidly growing area of the City. The subject site is located approximately 315 feet northeast of the CSX railroad line. The development of a new power generating facility would help to meet the electrical needs of the growing community.

As illustrated in Attachment C and in Attachment G, the surrounding land use designations, zoning districts and existing uses are as follows, respectively:

- North: Business Park (BP) / Industrial Business Park (IBP) / Undeveloped Land
- East: Residential-Professional-Institutional (RPI) and Low Density Residential (LDR) / Commercial Office (CO) and Residential Rural (RR) / Undeveloped Land
- South: Business Park (BP), Low Density Residential (LDR), and Community General Commercial (CGC) / Agriculture (AGR), Residential Rural (RR), and Commercial Office (CO) / Single-Family Homes, Undeveloped Land, CSX Railroad, and a Tree Farm
- West: Light Industrial (LI) and Business Park (BP) / Industrial Business Park (IBP), Agriculture (AGR), and Planned Unit Development (PUD) / Undeveloped Land and Industrial Uses

According to the 2006 Annual Statistical Package, the Southeast Planning District had a population of 195,721 in 2000, a 34% increase over 1990. The population of that Planning District is projected to increase to 248,764 in 2011, to 287,128 in 2021, and to 320,648 in

2031. In 2005, the District had 5,851 residential permits, including 2,718 single-family houses, 2,217 condominiums, 526 apartments, 386 multi-family dwellings, and 4 mobile homes. The energy needs of the rapidly-growing population of the District would be well-served by development of a new power generating facility, as allowed in the PBF Future Land Use category.

The subject property is located in an area designated as being within an Industrial Situational Compatibility Zone on the Industrial Preservation Map (Map L-23). The proposed amendment to the PBF Future Land Use Category and the companion rezoning to PUD will help to meet the electrical needs of the region's growing population and will contribute to the long-term economic well-being of the City. The proposed amendment was presented before the Industrial Technical Advisory Committee (ITAC) on June 2, 2008, at which time the committee unanimously recommended approval.

The subject property is accessed from Phillips Highway, which is classified as a four-lane principal arterial roadway.

### **Project Description**

The applicant proposes a Future Land Use Amendment from BP, RPI, LI, CGC, and LDR to PBF and a rezoning from IBP, CO, IL, PUD, and RR to PUD for a 159.16 acre site to allow for the development of a new power generating facility that is to be called Greenland Energy Center (GEC). The companion rezoning application has not been submitted, but will be processed in 2008 during the ordinance round of this Semi-Annual Future Land Use Amendment series.

The proposed PBF Future Land Use category precludes residential development; therefore, school enrollment will not be affected.

According to the Capital Improvements Element of the 2010 Comprehensive Plan, the site is located within the "Suburban Area" of the City.

## **II. Plan Consistency**

### **2010 Comprehensive Plan Consistency**

The proposed amendment is consistent with the following Policies of the 2010 Comprehensive Plan, Future Land Use Element:

Policy 1.1.10      Promote the use of Planned Unit Developments (PUDs), cluster developments, and other innovative site planning and smart growth techniques in all commercial, industrial, and residential plan categories, in order to allow for appropriate combinations of complementary land uses, and innovation in site planning and design, subject to the standards of this element and all applicable local, regional, State and federal regulations.

- Policy 1.1.20 Future development orders, development permits and plan amendments shall maintain compact and compatible land use patterns, maintain an increasingly efficient urban service delivery system and discourage urban sprawl.
- Policy 1.2.6 The City shall ensure through the implementation of Chapter 654, Ordinance Code (Code of Subdivision Regulations) that suitable lands and/or easements are available for the provision of utility and transportation facilities necessary to support proposed development, and implementation improvements with minimum land use, social and environmental disruption. Consider the location and timing of new public facility construction in requests for Future Land Use Map series amendments.
- Policy 1.2.12 Encourage developments to participate in recovered water reuse programs when such programs are established in the project's service area.
- Policy 3.2.29 The City shall continue to update its comprehensive inventory and mapping of industrial lands to identify and protect existing strategically located industrial lands for future expansion and economic development. These areas are crucial to the long term economic well-being of the City and are identified on the Industrial Preservation Map (Map L-23) as "Industrial Sanctuary" or "Areas of Situational Compatibility".
- Policy 3.2.30 The area shown on the Industrial Preservation Map (Map L-23) as "Industrial Sanctuary" or "Areas of Situational Compatibility" are presumed to be appropriate for land use map amendments to industrial categories, subject to a case-by-case review of consistency with State and regional plans and the Comprehensive Plan.

According to the Category Description of the Future Land Use Element (FLUE), the Business Park (BP) Category is primarily intended to accommodate low to moderate intensity office and industrial parks generally developed as commercial subdivisions. Also permitted in this category are business/professional offices, research and development activities, radio and T.V. studios, light manufacturing, fabrication and assembly, service establishments, light industrial and warehousing uses. The Residential-Professional-Institutional (RPI) Category permits housing and mixed use developments in a density range of up to twenty (20) dwelling units per acre when full urban services are available to the site. Permitted uses generally include professional business offices, institutional uses, limited retail uses, and low rise multi-family dwellings.

According to the Category Description of the FLUE, the Light Industrial (LI) Category includes industrial uses which have fewer objectionable impacts such as noise, odor, toxic chemicals and wastes. The category permits uses such as wholesaling, warehousing, storage, distribution, light manufacturing, business and professional offices, bulk and outside storage yards, service establishments catering to commerce and industry, indoor scrap processing, building trade contractors, transportation terminals for freight, trucking, and shipping, retail

sales of heavy machinery, farm and building materials, printing and similar establishments, banks, medical clinics, and retail outlets in conjunction with wholesaling establishments.

The CGC category is a commercial land use category that permits outlets and establishments offering a wide range of goods and services. Uses typically found in the CGC category include general merchandise, apparel, food, professional and business offices and financial institutions. The LDR category permits housing developments in a gross density range of up to seven (7) dwelling units per acre when full urban services are available to the site. Generally, single-family detached housing will be the predominant land use in this category, although patio homes and multifamily dwellings may also be permitted in appropriate locations.

The Land Use Category of Public Buildings and Facilities (PBF) is a broad category that is intended to identify major public use or community service activities. Uses include all lawful government activities, public buildings and grounds, schools, colleges and universities, recreation community centers, criminal justice facilities, military installations, transportation facilities including airports, train stations, terminals etc.; along with ancillary and accessory uses such as warehouses, general aviation uses, hotels, motels, restaurants, car rental agencies, public/private institutions, churches, hospitals, including professional offices, medical clinics, pharmacies, and other uses normally associated therewith, private clubs, sale and service of alcoholic beverages in conjunction with a permissible use, major public utilities, and off street parking lots.

This subject site proposes non-residential development and is part of a proposed PUD rezoning, consistent with FLUE Policy 1.1.10. The subject property has access to full urban services, including mass transit, and is located in a developed area of the City. Therefore, development of the site aids in maintaining a compact land use pattern and helps to maintain an increasingly efficient urban service delivery system, consistent with FLUE Policy 1.1.20.

The proposed site is located along an existing JEA transmission corridor that will be utilized in order to minimize impacts on the environment and the community. In addition, the proposed development will make use of reclaimed water and recovered water reuse programs for non-sanitary purposes. The subject site is located in an area designated on the Industrial Preservation Map (Map L-23) as being within an Industrial Situational Compatibility Zone. The proposed amendment would allow for the development of a new, clean-burning power generating facility that would assist in meeting the future electrical needs of the City and supporting the rapidly growing population of the region. Therefore the proposed amendment is consistent with FLUE Policies 1.2.6, 1.2.12, 3.2.29, and 3.2.30.

### **Neighborhood Action Plan/Vision Plan Consistency**

The proposed amendment is located within the boundaries of the US-1 Corridor Study. According to the Study, the Corridor can be primarily defined as a commercial and industrial center. The Study recommends improving infrastructure, attracting new businesses, and improving parcel conditions to accommodate the rapid growth occurring in the area. The proposed amendment for the development of a new power generating facility would help to improve the Corridor's infrastructure and meet the electrical needs of the growing population. Therefore, this amendment is consistent with the US-1 Corridor Study.

### **Strategic Regional Policy Plan Consistency**

The proposed amendment is consistent with the following Goal of the Strategic Regional Policy Plan, Economic Development Element:

Goal 2.3        An environment that is conducive to the creation and relocation as well as the expansion of existing businesses in the northeast Florida region.

The proposed amendment would allow for the expansion of an existing business in the northeast Florida region. The new power generating facility would also create new employment opportunities in the area in a manner consistent with this policy.

### **State Comprehensive Plan Consistency**

The proposed amendment is consistent with the following Policy of the State Comprehensive Plan, Land Use Element:

187.201(15)(b)(1) F.S.    Promote state programs, investments, and development and redevelopment activities which encourage efficient development and occur in areas which will have the capacity to service new population and commerce.

The proposed land use change would encourage development to occur along an existing commercial and industrial corridor with the capacity to service new populations and employment centers in a manner consistent with this policy.

## **III. Specific Mitigation of Potential Impacts**

### **Archaeological Sensitivity**

According to the Duval County Preliminary Site Sensitivity Map, the subject property is located within an area of Mixed Low, Medium, and High sensitivity for the presence of archaeological resources. Projects that move forward through the Site Review process will be required to perform a Professional Archaeological Reconnaissance Survey and possibly a Phase 1 archaeological survey if in an area of high sensitivity. If archaeological resources are found during future development/redevelopment of the site, Section 654.122 of the Code of Subdivision Regulations should be followed.

### **Wetlands**

The applicant provided a wetlands survey map that depicted the location, type, and acreages of the wetlands found on the property (see Attachment F, Wetlands Map). The proposed development must meet the requirements of Goal 4 of the Conservation/Coastal Management Element (CCME) to achieve no further net loss of the natural functions of the



City's remaining wetlands, improve the quality of the City's wetland resources over the long-term and improve the water quality and fish and wildlife values of wetlands.

**Goal 4** To achieve no further net loss of the natural functions of the City's remaining wetlands, improve the quality of the City's wetland resources over the long-term and improve the water quality and fish and wildlife values of wetlands.

**Objective 4.1** The City shall protect and conserve the natural functions of its existing wetlands, including estuarine marshes.

### **Transportation**

The results of the transportation impact analysis are set out in Table A (Attachment E). This analysis utilizes a methodology approved by the Florida Department of Transportation and is based upon the comparison of what potentially could be built on that site (as set out in Attachment B) versus the maximum development potential agreed to by the applicant.

### **Industrial Preservation**

The subject site is located within a designated "Area of Industrial Situational Compatibility" as depicted on the Industrial Preservation Map (Map L-23 of the Future Land Use Map series). At the Industrial Technical Advisory Committee meeting held on June 2, 2008, the Committee reviewed and voted unanimously 4-0 to recommend approval of the proposed land use amendment (Resolution 2008-390). This review is required under Ordinance 2007-398-E.

### **2010 Comprehensive Plan: Impacts Analysis Methodology**

Potential impacts of a proposed land use map amendment have been analyzed by comparing the maximum residential density permitted for each land use category that allows residential, or the Development Impact Standards, versus the maximum development as limited by an asterisk on the Annotated Future Land Use Map for the subject site. Where development standards were used, they are set out in Attachment B: *Development Standards for Impact Assessment*. These standards produce development potentials shown on the attached *Impacts and Existing Conditions* analysis. The calculations to determine the water and sewer flows contained in this report and/or this spreadsheet have been established by the City of Jacksonville Planning and Development Department and have been adopted by JEA solely for the purpose of preparing this report and/or this spreadsheet. The method of calculating water and sewer flows in order to properly size infrastructure shall continue to be based on JEA's Water, Sewer and Reuse for New Development Projects document (latest edition). In addition, the proposed amendments and/or their companion rezonings are distributed to agencies listed in Attachment A: *Data Source List* for their input regarding the potential impacts of the proposed land use map amendment.

## **IV. Procedural Compliance and Recommendation**

### **Signs, Notices and Preview Workshop**

Upon site inspection by the Planning and Development Department on April 9, 2008, the required notices of public hearing signs were posted. Forty-nine (49) notices were mailed out to adjoining property owners informing them of the proposed land use change and pertinent public hearing and meeting dates.

There was no opposition expressed at the Preview Workshop held by the Planning and Development Department on April 21, 2008.

A community meeting was held on April 15, 2008 by the Jacksonville Electric Authority (JEA) in order to address any concerns and answer any questions from the community pertaining to the proposed amendment.

### **Recommendation**

The Planning and Development Department recommends **APPROVAL** of this application based on its consistency with the 2010 Comprehensive Plan, Strategic Regional Policy Plan, and State Comprehensive Plan.

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**Natural Features**

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*Elevation* 10 to 35 Feet  
*Soils* (22) evergreen-wescosnett complex, depressional, 0 to 2 percent slopes; (24) hurricane and ridgewood soil, 0 to 5 percent slopes; (35) lynn haven fine sand, 0 to 2 percent slopes; (36) mandarin fine sand, 0 to 2 percent slopes; (46) ortega fine sand, 0 to 5 percent slopes; (62) rutlege mucky fine sand, 0 to 2 percent slopes, frequently flooded  
*Vegetation* Extractive, shrub and brushland, longleaf pine, coniferous plantations, bay swamps, mixed wetland hardwoods, wetland forested mix, and freshwater marshes  
*Flood Zones* Zones FW, AE, and X5  
*Wetlands* Mixed wetland hardwoods, freshwater marshes, and wetland forested mix  
*Wildlife* None

---

**Land Use Analysis**

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*Existing Use* Undeveloped Land  
*Current Development Potential* 1,650,531 square feet of business park uses, 815,007 square feet of office uses, 8,537 square feet of commercial uses, 206,474 square feet of light industrial uses, and 5 single-family dwelling units  
*Proposed Development Potential* 2,079,900 square feet of institutional uses  
*Current Population Projection* 13 people  
*Proposed Population Projection* 0 people

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**Special Designated Areas**

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*Aquatic Preserve*  YES  NO  
*Airport Environ Zone*  YES  NO  
*Industrial Preservation Area*  YES  NO Industrial Situational Compatibility  
*Historic/Archaeological Preserve*  YES  NO  
*Archaeological Sensitivity*  YES  NO High, Medium, and Low Sensitivity  
*Historic District*  YES  NO  
*Coastal High Hazard Area*  YES  NO  
*Groundwater Aquifer Recharge Area*  YES  NO  
*Wellhead Protection Zone*  YES  NO

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**Public Facilities**

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*Water Provider* JEA  
*Impact* Possible decrease in demand of 35,881 gpd. LOS maintained.  
*Sewer Provider* JEA  
*Impact* Possible decrease in demand of 26,910 gpd. LOS maintained.  
*Roadway Impact* Possible decrease of 1,190 Peak Hour and 10,670 Average Daily Trips. LOS maintained.  
*Mass Transit* Served by JTA Mass Transit Route W.S. 50  
*Drainage Basin/Sub-basin* Big Davis Creek  
*Recreation & Parks* Greenland Park  
*Solid Waste* Possible decrease of 1,284 tons per year. LOS maintained.

**Source: See Data Source List, Attachment A**

**ATTACHMENT A**  
**DATA SOURCE LIST**

For Review  
Of  
**Semi-Annual Land Use Amendments  
To The  
2010 Comprehensive Plan**

**Natural Features**

United States Geological Service Topographical Maps  
United States Department of Agriculture, Natural Resource Conservation Service.  
Federal Emergency Management Agency  
St. Johns River Water Management District  
City of Jacksonville Planning and Development Department

**Land Use Analysis**

Development Standards for Impact Assessment of Land Use Categories on FLUMS, City of Jacksonville Planning and Development Department and Florida Department of Community Affairs, 1998.

**Specially Designated Areas**

Florida Department of Environmental Protection  
City of Jacksonville Planning and Development Department  
City of Jacksonville Planning and Development Department, Historic Preservation Section  
Northeast Florida Regional Planning Council  
Florida Department of Community Affairs  
St. Johns River Water Management District  
City of Jacksonville Department of Regulatory and Environmental Services

**Public Facilities**

JEA  
Duval County School Board  
City of Jacksonville Planning and Development Department, Transportation Planning Section/ MPO  
Jacksonville Transportation Authority (JTA)  
City of Jacksonville Public Works Department, Drainage Division  
City of Jacksonville Public Works Department, Traffic Engineer  
City of Jacksonville Parks, Recreation, and Entertainment Department  
St. Johns River Water Management District

## ATTACHMENT B

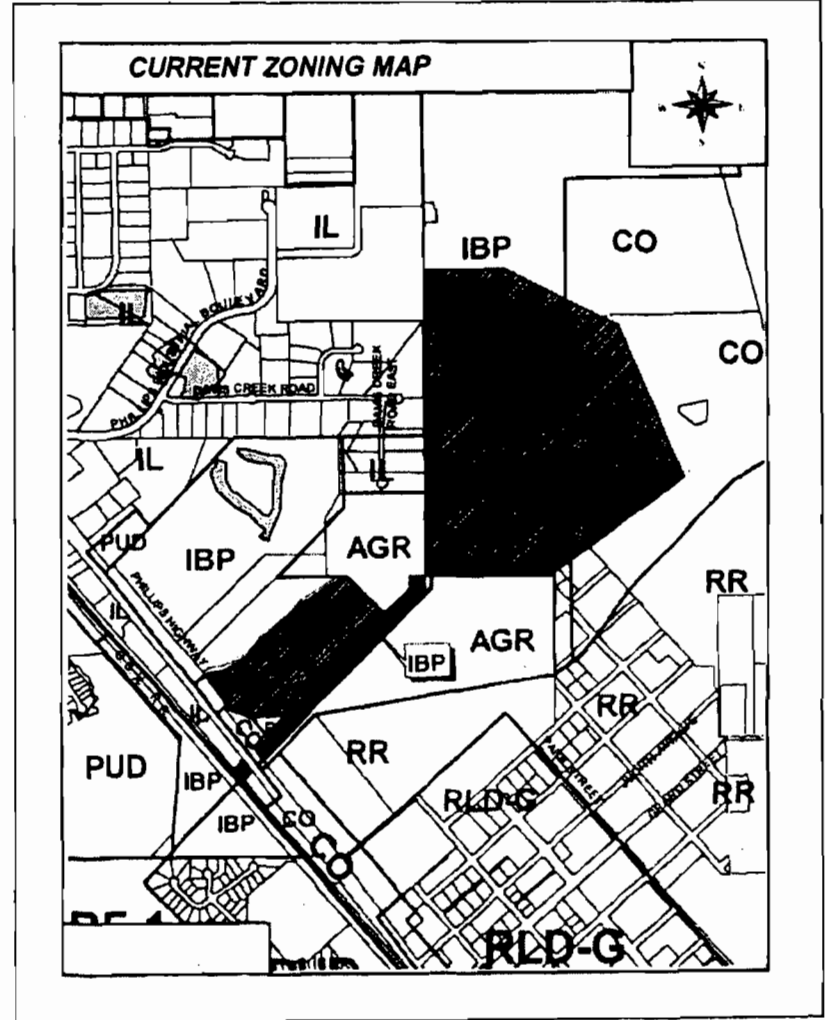
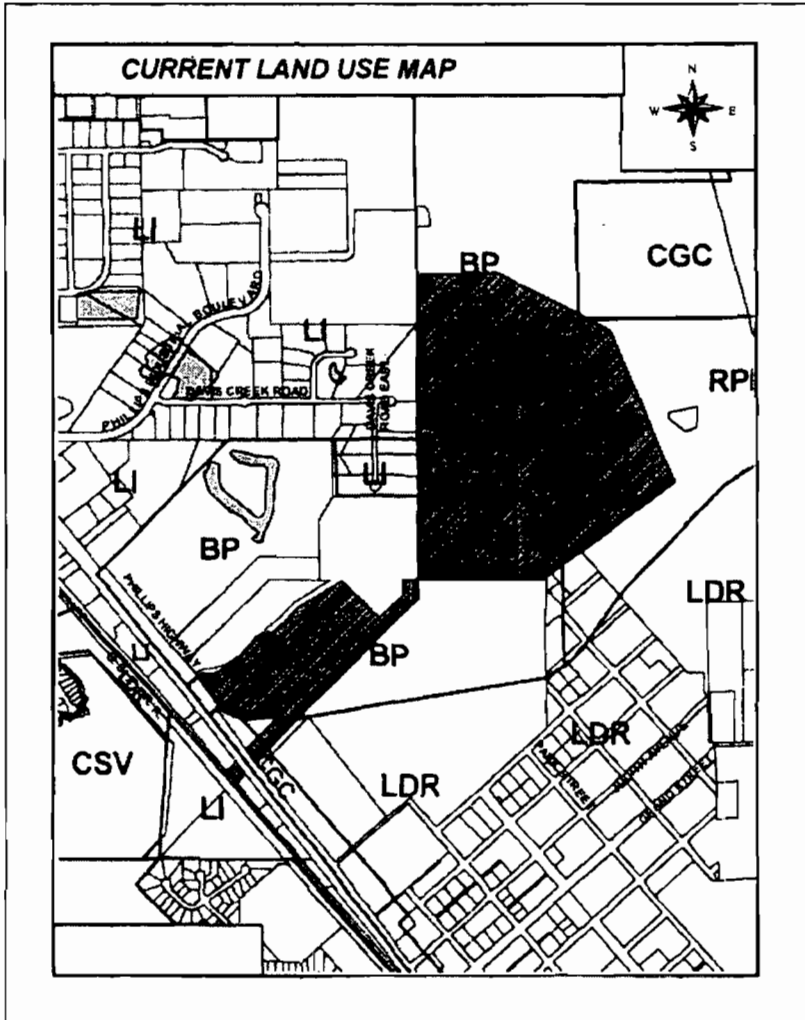
### DEVELOPMENT STANDARDS FOR IMPACT ASSESSMENT OF LAND USE CATEGORIES ON FLUMS

<u>LAND USE CATEGORY</u>	<u>SITE DEVELOPMENT POTENTIAL</u>
AGRICULTURE (iv) - [AGR(iv)]	1 Dwelling Unit Per 2.5 Acres (Up to 40 Acre Lot)
AGRICULTURE (iii) - [AGR(iii)]	1 Dwelling Unit Per 10 Acres (40+ to 160 Acre Lot)
AGRICULTURE (ii) - [AGR(ii)]	1 Dwelling Unit Per 40 Acres (160+ to 640 Acre Lot)
AGRICULTURE (i) - [AGR(i)]	1 Dwelling Unit Per 100 Acres (640+ Acres Lot)
RURAL RESIDENTIAL (RR)	2 Dwelling Units Per Acre (With Water and Sewer)
	1 Dwelling Unit Per Acre (With no Water and Sewer)
LOW DENSITY RESIDENTIAL (LDR)	5 Dwelling Units Per Acre
MEDIUM DENSITY RESIDENTIAL (MDR)	15 Dwelling Units Per Acre
HIGH DENSITY RESIDENTIAL (HDR)	45 Dwelling Units Per Acre
RECREATION/PROFESSIONAL/INSTITUTIONAL (RPI)	0.5 FAR (Non-Residential)
NEIGHBORHOOD COMMERCIAL (NC)	0.45 FAR
COMMUNITY/GENERAL COMMERCIAL (CGC)	0.35 FAR
REGIONAL COMMERCIAL (RC)	0.4 FAR
CENTRAL BUSINESS DISTRICT (CBD)	Per Approved DRI
BUSINESS PARK (BP)	0.35 FAR
LIGHT INDUSTRIAL (LI)	0.4 FAR
HEAVY INDUSTRIAL (HI)	0.4 FAR
WATER DEPENDENT-WATER RELATED (WD-WR)	0.25 FAR
MULTI-USE (MU)	Per Approved Development Plan/Policy
PUBLIC BUILDINGS & FACILITIES (PBF)	0.3 FAR
RECREATION AND OPEN SPACE (ROS)	0.15 FAR

Residential Densities> Single-Family: 2.66 Population/Dwelling Unit; Multi-Family: 2.35 Population/Dwelling Unit

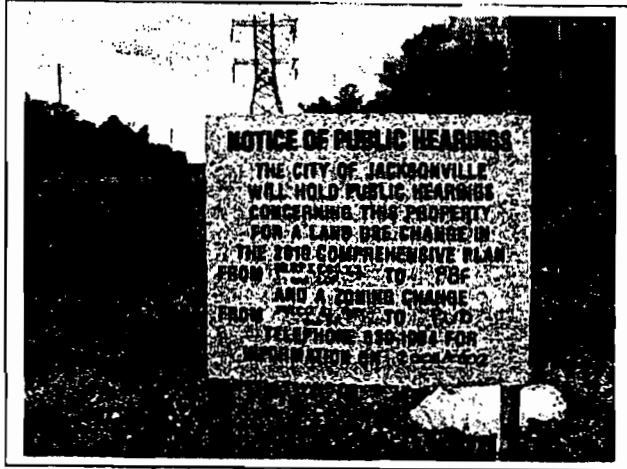
Source: City of Jacksonville Planning and Development Department

# ATTACHMENT C



## ATTACHMENT D

Photo of Sign Posted on Subject Site



View of Existing JEA Transmission Line Located on Subject Site



### Site Pictures

View of Access to Subject Site via Phillips Highway



View Looking North of Subject Site down Phillips Highway



# ATTACHMENT E

Produced by: Planning and Development Department J LEE  
 Application Number: 2008A-002  
 Ordinance Number: \_\_\_\_\_ Date: 5/16/2008

**Table A**

**Trip Generation Estimation**

**Section 1**

Existing Development	Number of Acres	ITE Land Use Code	Existing Number of Units (X)	Independent Variable (Units)	Estimation Method (Rate or Equation)	Gross Trips	Less Internal Trips	Less Pass-By Trips	Net New PM Peak Trip Ends	Net New Daily Trip Ends
Undeveloped	159.2							0	0	0
<b>Total Section 1</b>									0	0

**Section 2**

Current Land Use	Number of Acres	ITE Land Use Code	Potential Number of Units (X)	Independent Variable (Units)	Estimation Method (Rate or Equation)	Gross Trips	Less Internal Trips	Less Pass-By Trips	Net New PM Peak Trip Ends	Net New Daily Trip Ends
BP/IBP	159.2	110	1,857,005	1,000 SF of GLA	$T = 0.98(X)$	1820	0.00%	0.00%	1,820	
					$T = 7.47(X) - 101.92$	13,770	0.00%	0.00%		13,770
RPVCO		710	815,007	1,000 SF of GLA	$T = 1.12(X) + 78.81$	992	0.00%	0.00%	992	
					$\ln(T) = 0.77 \ln(X) + 3.65$	6,711	0.00%	0.00%		6,711
LDR/RR		210	5	DU	$\ln(T) = 0.90 \ln(X) + 0.53$	7	43.00%	0.00%	4	
					$\ln(T) = 0.92 \ln(X) + 2.71$	66	43.00%	0.00%		38
CGC/CO		820	8,537	1,000 SF of GLA	$\ln(T) = 0.66 \ln(X) + 3.4$	123	4.90%	65.00%	37	
					$\ln(T) = 0.65 \ln(X) + 5.83$	1,372	4.90%	65.00%		412
<b>Total Section 2</b>									2,853	20,931

**Section 3**

Proposed Land Use	Number of Acres	ITE Land Use Code	Potential Number of Units (X)	Independent Variable (Units)	Estimation Method (Rate or Equation)	Gross Trips PM/Daily	Less Internal Trips	Less Pass-By Trips	Net New PM Peak Trip Ends	Net New Daily Trip Ends
PBF/PUD	159.2	710	1,414,741	1,000 SF of GLA	$T = 1.12(X) + 78.81$	1663	0.00%	0.00%	1,663	
					$\ln(T) = 0.77 \ln(X) + 3.65$	10,261	0.00%	0.00%		10,261
<b>Total Section 3</b>									1,663	10,261
<b>Net New Trips = Section 3 - Section 2 - Section 1</b>									-1,190	-10,670

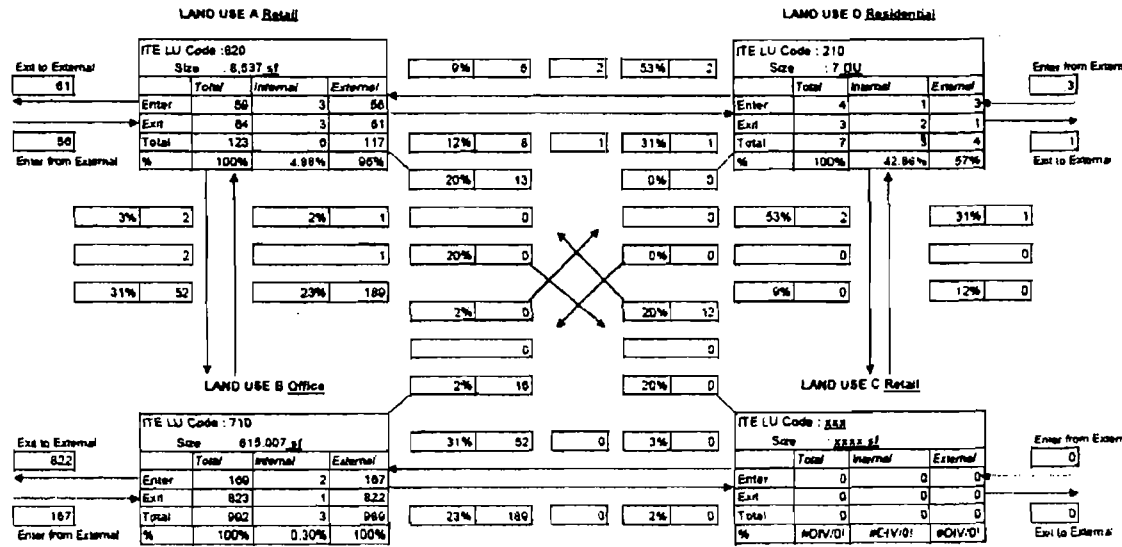


# ATTACHMENT E Continued

Analyst: J Lee  
Date: 6/4/2008

## MULTI-USE DEVELOPMENT TRIP GENERATION AND INTERNAL CAPTURE SUMMARY

2008A-002  
2008



	LAND USE A	LAND USE B	LAND USE C	LAND USE D	TOTAL
Enter	56	167	0	3	226
Exit	61	822	0	1	884
Total	117	989	0	4	1110
Single-Use Trip Gen. Est.	123	992	0	7	1122

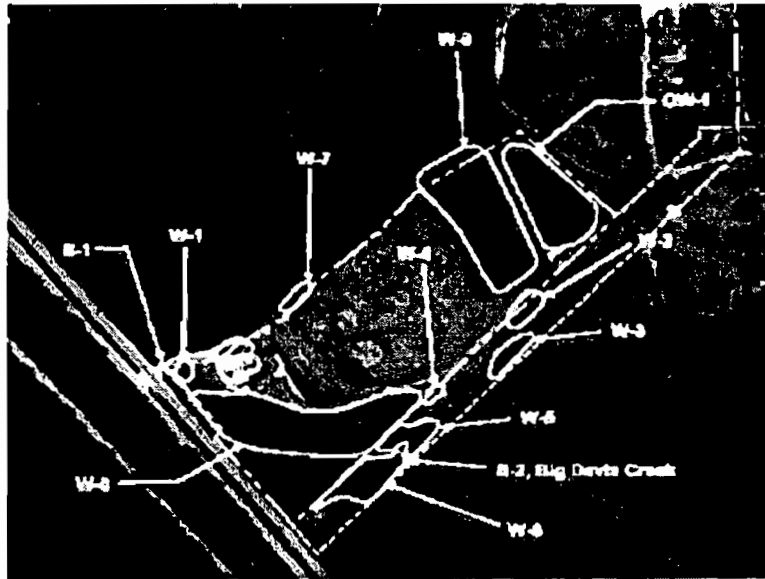
Internal Capture  
1.07%

130 154  
83 154

internalTRIPGEN7 ORIGIN.XLS

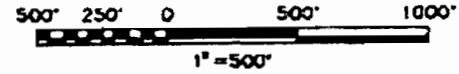
# ATTACHMENT F

MCR44608 ACAD 10.1s (LMS Tech)  
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### LEGEND

- PROPERTY BOUNDARY
- T-LINE ROW



		RD	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PGZ	APP
<b>BLACK &amp; VEATCH</b> CORPORATION	<b>JEA</b> SOUTHEAST GENERATING STATION			PROJECT DRAWING NUMBER <b>148570-SS-0003</b>		REV <b>A</b>			
	CONTRACTOR <b>BLACK &amp; VEATCH CORPORATION</b>	DESIGNER <b>JJM</b>	<b>WETLANDS AND STREAMS</b>			DATE <b>03/20/2008</b>			



***10.3.4 Jacksonville Application for Semi-Annual Land Use Amendment to  
the Future Land Use Map Series - 2010 Comprehensive Plan***



**APPLICATION FOR SEMI-ANNUAL LAND USE AMENDMENT TO THE FUTURE LAND USE MAP SERIES - 2010 COMPREHENSIVE PLAN**

**FOR OFFICIAL PLANNING & DEVELOPMENT DEPARTMENT USE ONLY**

Date Submitted: \_\_\_\_\_ JP&DD Application Number: \_\_\_\_\_

Land Use Resolution No.: \_\_\_\_\_ Land Use Ordinance No.: \_\_\_\_\_

1<sup>st</sup> City Council Public Hearing: \_\_\_\_\_ Planning Commission's LPA Public Hearing: \_\_\_\_\_

LUZ Committee's Public Hearing: \_\_\_\_\_ 2nd City Council Public Hearing: \_\_\_\_\_

Before completing this application form, applicants are advised to carefully read the instructions accompanying this application. If space provided is not adequate, provide the information on a separate page, number and reference it, and attach it with application. **Two (2) COMPLETE** applications must be typed or printed legibly in black or blue ink and submitted **UNSTAPLED** to Jacksonville Planning and Development Department, 128 East Forsyth Street, Florida Theatre Building, Suite 700, Jacksonville, Florida 32202.

**I. GENERAL INFORMATION ON APPLICANT/AGENT**

A. Applicant's Name: Karl J. Sanders, Esq.  
 Applicant's Company Name: Edwards, Cohen, Sanders, Dawson & Manqu, P.A.  
 Applicant's Mailing Address: 6 E. Bay Street, Suite 500

Applicant's City: Jacksonville State: Florida Zipcode: 32202 -  
 Daytime Phone Number: ( 904 ) 633 - 7979 Fax Number: ( 904 ) 633 - 9026  
 Applicant's Email Address: ksanders@edcolaw.com

B. Property Owner Name(s): JEA c/o Eileen Connolly  
 Property Owner(s) Mailing Address: 21 W. Church Street, CC-6

Property Owner(s) City: Jacksonville State: FL Zipcode: 32202 -  
 Daytime Phone Number: ( 904 ) 665 - 4325 Fax Number: ( 904 ) 665 - 4153

**II. DESCRIPTION OF PROPERTY**

A. Amount of Acreage for Amendment (rounded to the nearest hundredth of an acre): 159.45

B. Property Location 168060-0000; 168060-0020; 168060-0030;  
 1) Property Appraiser's RE #s (in ascending order): 168060-0040; 168153-0000; and 168155-0620  
 2) General Location: Philips Highway (b/w Davis Creek Rd. and St. Augustine Rd.)  
 3) Property Address (If known): 12121 Philips Highway  
 4) Subdivision, Block and Lot (If known): N/A  
 5) Between Street/Major Features: Davis Creek Road and St. Augustine Rd.  
 6) Planning District: 3 7) Council District #: 13 8) Map Panel(s) #: 8617

**III. UTILITIES**

Indicate utilities to serve the site for potable water: JEA and sanitary sewer: JEA

**IV. LAND USE AMENDMENT / REZONING REQUEST INFORMATION**

- A. Current Utilization of Property (See Instructions): Vacant
- B. Current Site's FLUM Categories/Acreage: Category #1: BP Acreage: 108.26 Category #2: RPI Acreage: 37.42  
 Category #3: CGC Acreage: .56 Category #4: LI Acreage: 11.85 Category #5: LDR Acreage: 1.07
- C. Requested 2010 Comp Plan FLUM Designation: PBF
- D. Surrounding 2010 Comp Plan FLUM Designation(s): BP, RPI and LI
- E. Reason / Justification for Land Use Amendment: JEA is planning to construct and operate a new power generating facility in southeast Duval County, north of Bayard.

- F. Current Site's Zoning District Designation(s): District #1: IBP - Acreage: 108.26 District #2: CO - Acreage: 37.98  
 District #3: IL - Acreage: .41 District #4: PUD - Acreage: 11.44 District #5: RR - Acreage: 1.07
- G. Requested Zoning District Designation: PUD

**V. REQUIRED ATTACHMENTS FOR COMPLETE, FORMAL APPLICATION**

- Exhibit 1: Legal Description - Accurate legal description (may be either lot and block or metes and bounds) of specific property requested for land use change. (Use only JP&DD's Resolution & Ordinance Exhibit 1 Forms).
- Exhibit A: Property Ownership Affidavit - Notarized Letter(s). (One copy of the Warranty Deeds must be submitted separately as supplemental information.)
- Exhibit B: Agent Authorization - Notarized letter(s) designating the agent.

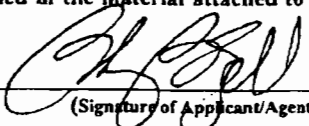
**VI. SUPPLEMENTARY INFORMATION THAT MAY BE REQUIRED WITH APPLICATION**

The applicant may be required to furnish additional information about the property relative to the following factors, where applicable:

- A. Soils.
- B. Natural Vegetation/Wildlife.
- C. Wetlands (type, location and amount of acreage to the nearest one-hundredth acre).
- D. Topography/Flood Prone Areas.
- E. Historic Resources/Sites and Significant Archaeological Sites.
- F. Aquifer Recharge Area.
- G. Other Support Data Required By Staff: \_\_\_\_\_

**VII. APPLICATION CERTIFICATION (Must be signed & dated)**

I, hereby, certify that I am the owner or the authorized agent of the owner(s) of the property described herein, that all answers to the questions in this application and all information contained in the material attached to and made a part of this application, are accurate and true to the best of my knowledge and belief.

  
 \_\_\_\_\_  
 (Signature of Applicant/Agent)

3/4/2008  
 \_\_\_\_\_  
 (Date)

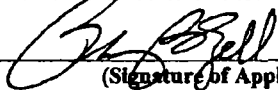
# SEMI-ANNUAL LAND USE APPLICATION CHECKLIST And CERTIFICATION For SUFFICIENCY

*The following listing below reflects the basic application package required for submission of a Semi-Annual Land Use Amendment application. Please check each box below for assurance of inclusion and attach this signed and dated checklist to the land use application. The applicant is encouraged to submit the rezoning application approximately one month prior to the JP&DD staff receiving the ORC Report from Florida DCA. Please note that a companion PUD rezoning application must be submitted to appropriate Land Use Planner.*

**Two (2) complete Sets of the Semi-Annual Land Use Application must be filed. The application form and required exhibits must be submitted on 8½ X 11 sized paper and clamped/paper-clipped (not stapled) in the following order:**

- Fully completed application form filled out in conjunction with the District Land Use Planner's assistance. In accordance with formatting procedures indicated in the application instruction manual, "Page \_\_ of \_\_" must be placed in the lower left corner of each and all pages of the application. The JP&DD staff will number all application pages just prior to forwarding the application on to the General Counsel and the City Council's Legislative Services Division. The staff will also number the application's appropriate Exhibit 1 pages.
- Exhibit 1 - A very clear, accurate and legible legal description of the property on both the "Resolution and Ordinance format" forms provided only by the JP&DD (Exhibit 1). (The legal description should not be a faint or distorted copy that is difficult to read or duplicate.) The entire legal description must be on these Exhibit 1 pages. Do not number Exhibit 1 Pages.
- Exhibit A - A notarized letter from each property owner(s) that involves a request for a land use change. One copy of the warranty deed(s) (reduced down to 8½ X 11 pages) must be submitted as supplemental information, but not attached to the formal application.
- Exhibit B - A notarized letter signed by the property owner(s) that provides authorization for the application's agent to represent owner(s) (if applicant is not the owner).
- Wetland map (if site contains wetlands) indicating exact location, acreage size, and types of wetlands found on site.
- Additional information found by JP&DD staff to be required during the Pre-Application Conference.

*I attest by my signature that all required information for this Semi-Annual Land Use Amendment Application is completed and duly attached in the above-prescribed order. If the package is found to be lacking the above requirements, I understand that the application will be returned for correct resubmission. I further acknowledge that if my application is found insufficient due to inaccurate or inadequate information past the sufficiency review deadline, my application would be deferred to a future application series once my application is found sufficient.*

  
\_\_\_\_\_  
(Signature of Applicant/Agent)

3/4/2008  
\_\_\_\_\_  
(Date)

### To Be Completed By Jacksonville Planning and Development's Staff

- Ownership and Applicant Information Found Sufficient.
- Application's Site Data (Acreages, Property Location, Land Use Categories & Zoning Districts) Found Sufficient.
- Application's Legal Descriptions and Series Maps Found Sufficient.
- Required Supplementary Information (Warranty Deed, Wetland & Wildlife Documentation) Found Sufficient.

\_\_\_\_\_  
(Sufficiency Signature By District Planner)

\_\_\_\_\_  
(Date Application Found Sufficient)

**ORDINANCE**  
**Legal Description**

**DDI PARCEL**

A PORTION OF SECTION 8, TOGETHER WITH A PORTION OF SECTION 17, IN TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT A P-K NAIL SET IN CONCRETE THE SOUTHWESTERLY CORNER OF SAID SECTION 17, SAID CORNER ALSO BEING SITUATE ON THE NORTHERLY LINE OF SAID MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH RANGE 28 EAST; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY LINE OF SAID SECTION 17, 19.12 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE SOUTHWEST CORNER OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322 OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY; THENCE NORTH 87 DEGREES 13 MINUTES 45 SECONDS EAST ALONG THE SOUTH LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 916.41 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE SOUTHEAST CORNER OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322; THENCE NORTH 00 DEGREES 13 MINUTES 54 SECONDS WEST ALONG THE EAST LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 953.17 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE NORTHEAST CORNER OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322; THENCE SOUTH 89 DEGREES 50 MINUTES 06 SECONDS WEST ALONG THE NORTH LINE OF SAID LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, 933.11 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603 AT THE NORTHWEST CORNER OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS VOLUME 12303, PAGE 2322, ALSO BEING A POINT ON THE WEST LINE OF SAID SECTION 17; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST ALONG THE WEST LINE OF SAID SECTION 17, 194.99 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 89 DEGREES 50 MINUTES 30 SECONDS EAST, DEPARTING SAID EAST LINE OF SECTION 17, 150.00 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, 175.02 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 89 DEGREES 50 MINUTES 06 SECONDS WEST, 150.00 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603, SAID POINT BEING ON THE AFORESAID WEST LINE OF SECTION 17; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG SAID WEST LINE OF SECTION 17, 1072.21 FEET TO A THREE INCH IRON PIPE FILLED WITH CONCRETE, SAID THREE INCH IRON PIPE BEING THE NORTHWESTERLY CORNER OF SAID SECTION 17, ALSO BEING THE SOUTHWESTERLY CORNER OF SAID SECTION 8; THENCE NORTH 00 DEGREES 54 MINUTES 07 SECONDS WEST, ALONG SAID WEST LINE OF SECTION 8, 487.08 FEET TO A POINT SITUATE ON SAID LINE; THENCE NORTH 89 DEGREES 05 MINUTES 53 SECONDS EAST, DEPARTING FROM SAID WEST LINE OF SECTION 8, 808.87 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 63 DEGREES 14 MINUTES 36 SECONDS EAST, 1224.67 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 22 DEGREES 53 MINUTES 22 SECONDS EAST, 1581.57 FEET TO A ONE HALF INCH IRON PIPE WITH IDENTIFICATION CAP NUMBER L. B. 4603; THENCE SOUTH 54 DEGREES 01 MINUTES 50 SECONDS WEST, 1579.55 FEET TO A THREE INCH IRON PIPE FILLED WITH CONCRETE, SAID THREE INCH IRON PIPE BEING SITUATE ON THE AFORESAID NORTH LINE OF THE MARY ANN DAVIS GRANT, SECTION 37; THENCE SOUTH 89 DEGREES 03 MINUTES 31 SECONDS WEST, ALONG SAID NORTH LINE OF THE MARY ANN DAVIS GRANT, SECTION 37, 1178.19 FEET TO THE POINT OF BEGINNING.



**ORDINANCE**  
**Legal Description**

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**DDI PARCEL**

**WETLANDS PARCEL**

A PORTION OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT A NAIL SET IN CONCRETE AT THE SOUTHWESTERLY CORNER OF SAID SECTION 17; THENCE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY BOUNDARY LINE OF SAID SECTION 17, 367.34 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 01 DEGREES 14 MINUTES 43 SECONDS WEST, ALONG THE WESTERLY BOUNDARY LINE OF SAID SECTION 17, 146.21 FEET TO A POINT SITUATE ON LAST SAID LINE; THENCE NORTH 84 DEGREES 39 MINUTES 47 SECONDS EAST, DEPARTING FROM SAID WESTERLY BOUNDARY LINE OF SECTION 17, 64.44 FEET; THENCE NORTH 87 DEGREES 02 MINUTES 13 SECONDS EAST, 24.32 FEET; THENCE NORTH 25 DEGREES 30 MINUTES 45 SECONDS EAST, 27.27 FEET; THENCE NORTH 29 DEGREES 52 MINUTES 10 SECONDS EAST, 31.18 FEET; THENCE SOUTH 72 DEGREES 55 MINUTES 10 SECONDS EAST, 14.26 FEET; THENCE SOUTH 03 DEGREES 47 MINUTES 29 SECONDS WEST, 23.43 FEET; THENCE SOUTH 29 DEGREES 51 MINUTES 40 SECONDS EAST, 19.90 FEET; THENCE SOUTH 74 DEGREES 49 MINUTES 33 SECONDS EAST, 28.26 FEET; THENCE SOUTH 39 DEGREES 16 MINUTES 39 SECONDS EAST, 31.26 FEET; THENCE SOUTH 48 DEGREES 45 MINUTES 39 SECONDS EAST, 28.80 FEET; THENCE SOUTH 77 DEGREES 21 MINUTES 03 SECONDS EAST, 35.79 FEET; THENCE SOUTH 42 DEGREES 12 MINUTES 12 SECONDS EAST, 37.84 FEET; THENCE SOUTH 64 DEGREES 06 MINUTES 55 SECONDS WEST, 51.92 FEET; THENCE SOUTH 85 DEGREES 04 MINUTES 10 SECONDS WEST, 36.53 FEET; THENCE SOUTH 58 DEGREES 24 MINUTES 50 SECONDS WEST, 50.21 FEET; THENCE NORTH 89 DEGREES 41 MINUTES 37 SECONDS WEST, 47.65 FEET; THENCE SOUTH 76 DEGREES 18 MINUTES 11 SECONDS WEST, 92.71 FEET TO THE POINT OF BEGINNING.

**ORDINANCE**  
**Legal Description**

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**DRIVING RANGE**

OFFICIAL RECORDS BOOK 11213, PAGES 700-702

**PARCEL "A"**

A PORTION OF THE MARY ANN DAVIS GRANT, SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE COMMENCE AT THE INTERSECTION OF THE NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY, AS DESCRIBED IN DEED RECORDED IN THE OFFICIAL RECORDS OF SAID COUNTY IN VOLUME 2081, PAGE 43, WITH THE NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY - US HIGHWAY No. 1 (A 150 FOOT RIGHT-OF-WAY AT THIS POINT) AND RUN NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY, A DISTANCE OF 472.03 FEET TO AN ANGLE POINT IN LAST MENTIONED RIGHT-OF-WAY LINE; RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 40.00 FEET TO AN ANGLE POINT IN SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF PHILLIPS HIGHWAY (A 190 FOOT RIGHT-OF-WAY AT THIS POINT) AND THE POINT OF BEGINNING. FROM THE POINT OF BEGINNING THUS DESCRIBED RUN THENCE NORTH 37 DEGREES 19 MINUTES 30 SECONDS WEST ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 315.00 FEET TO A POINT; RUN THENCE NORTH 52 DEGREES 40 MINUTES 30 SECONDS EAST, A DISTANCE OF 20.00 FEET TO A POINT OF CURVATURE; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF A CURVE, SAID CURVE BEING CONCAVE SOUTHERLY AND HAVING A RADIUS OF 133.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 71 DEGREES 44 MINUTES 13 SECONDS EAST, 86.87 FEET TO A POINT OF REVERSE CURVE; RUN THENCE IN AN EASTERLY DIRECTION ALONG THE ARC OF SAID CURVE, SAID CURVE BEING CONCAVE NORTHERLY, AND HAVING A RADIUS OF 210.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 75 DEGREES 05 MINUTES 58 SECONDS EAST, 113.65 FEET TO A POINT ON SAID CURVE; RUN THENCE NORTH 48 DEGREES 05 MINUTES 25 SECONDS EAST, NOT TANGENT TO LAST MENTIONED CURVE, A DISTANCE OF 50.99 FEET TO A POINT; RUN THENCE NORTH 59 DEGREES 24 MINUTES 01 SECONDS EAST, A DISTANCE OF 209.52 FEET TO A POINT; RUN THENCE NORTH 42 DEGREES 22 MINUTES 10 SECONDS EAST, A DISTANCE 231.33 FEET TO A POINT; RUN THENCE NORTH 51 DEGREES 16 MINUTES 58 SECONDS EAST, A DISTANCE OF 303.96 FEET TO A POINT; RUN THENCE NORTH 41 DEGREES 03 MINUTES 34 SECONDS EAST, A DISTANCE OF 204.90 FEET TO A POINT; RUN THENCE NORTH 58 DEGREES 45 MINUTES 24 SECONDS EAST, A DISTANCE OF 477.75 FEET TO THE SOUTHWESTERLY CORNER OF GOVERNMENT LOT 1, SECTION 18, TOWNSHIP 4 SOUTH, RANGE 28 EAST; RUN THENCE SOUTH 44 DEGREES 29 MINUTES 19 SECONDS EAST, A DISTANCE OF 514.87 FEET TO A POINT ON PREVIOUSLY MENTIONED NORTHWESTERLY LINE OF A 150 FOOT WIDE JACKSONVILLE ELECTRIC AUTHORITY RIGHT-OF-WAY RECORDED IN OFFICIAL RECORDS VOLUME 2081, PAGE 43; RUN THENCE SOUTH 45 DEGREES 30 MINUTES 41 SECONDS WEST ALONG SAID NORTHWESTERLY LINE, A DISTANCE OF 1329.68 FEET TO A POINT; RUN THENCE SOUTH 85 DEGREES 10 MINUTES 37 SECONDS WEST, A DISTANCE OF 347.06 FEET TO A POINT; RUN THENCE NORTH 66 DEGREES 09 MINUTES 35 SECONDS WEST, A DISTANCE OF 260.22 FEET TO THE POINT OF BEGINNING.

**ORDINANCE \_\_\_\_\_**

**Legal Description**

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**JEA T-LINE PROPERTY**

A part of Mary Ann Davis Grant, Section 37, Township 4 South, Range 28 East, Duval County, Florida, more particularly described as follows: For a Point of Beginning, commence at the intersection of the Northerly line of said Mary Anne Davis Grant, Section 37, and the Easterly line of Section 18, Township 4 South, Range 28 East; thence run S 1° 21' 52" E. a distance of 105.02 feet to a point; thence run S. 44° 13' 11" W. a distance of 2596.21 feet to the Northeasterly right-of-way line of the Florida East Coast Railroad; thence run N. 40° 59' 52" W. along said railroad right-of-way, a distance of 150.52 feet to a point; thence run N. 44° 13' 11" E. a distance of 2520.66 feet to a point; thence run N. 1° 21' 52" W. a distance of 43.14 feet to the aforesaid Northerly line of Mary Ann Davis Grant, Section 37; thence run N. 89° 04' 55" E. along the Northerly line of said Grant, a distance of 150 feet to the Point of Beginning.

Excepting from the above described lands that portion of Philips Highway (U.S. Highway No. 1).

# ORDINANCE

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## Legal Description

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### WELL SITE 4 (RE# 168060-0040)

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17; THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1072.21 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 150.00 FEET; THENCE SOUTH 01°04'49" EAST, A DISTANCE OF 175.02 FEET; THENCE NORTH 89°59'36" WEST, A DISTANCE OF 150.00 FEET TO A POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, A DISTANCE OF 175.00 FEET TO THE POINT OF BEGINNING.

### WELL SITE 5 (RE# 168060-0030)

A PART OF SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FOR A POINT OF REFERENCE, COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 17, THENCE SOUTH 01°04'49" EAST ALONG THE WEST LINE OF SAID SECTION 17, A DISTANCE OF 1442.20 FEET TO THE POINT OF BEGINNING; THENCE DUE EAST, LEAVING SAID SECTION LINE, A DISTANCE OF 933.11 FEET; THENCE SOUTH 00°04'00" EAST, A DISTANCE OF 753.17 FEET; THENCE SOUTH 89°59'35" WEST, A DISTANCE OF 212.47 FEET; THENCE SOUTH 00°00'25" EAST, A DISTANCE OF 209.65 FEET; THENCE SOUTH 87°23'39" WEST, A DISTANCE OF 703.52 FEET TO A POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, ALONG SAID SECTION LINE, A DISTANCE OF 348.20 FEET; THENCE NORTH 76°28'00" EAST, A DISTANCE OF 92.71 FEET; THENCE SOUTH 89°31'48" EAST, A DISTANCE OF 47.65 FEET; THENCE NORTH 58°34'39" EAST, A DISTANCE OF 50.21 FEET; THENCE NORTH 64°16'44" EAST, A DISTANCE OF 36.53 FEET; THENCE NORTH 64°16'44" EAST, A DISTANCE OF 51.92 FEET; THENCE NORTH 42°02'23" WEST, A DISTANCE OF 37.84 FEET; THENCE NORTH 77°11'14" WEST, A DISTANCE OF 35.79 FEET; THENCE NORTH 48°35'50" WEST, A DISTANCE OF 28.80 FEET; THENCE NORTH 39°06'50" WEST, A DISTANCE OF 31.26 FEET; THENCE NORTH 74°39'44" WEST, A DISTANCE OF 28.26 FEET; THENCE NORTH 29°41'51" WEST, A DISTANCE OF 19.90 FEET; THENCE NORTH 03°57'18" EAST, A DISTANCE OF 23.43 FEET; THENCE NORTH 72°45'21" WEST, A DISTANCE OF 14.26 FEET; THENCE SOUTH 30°01'59" WEST, A DISTANCE OF 31.18 FEET; THENCE SOUTH 25°40'34" WEST, A DISTANCE OF 27.27 FEET; THENCE SOUTH 87°12'02" WEST, A DISTANCE OF 24.32 FEET; THENCE SOUTH 84°49'36" WEST, A DISTANCE OF 64.44 FEET TO A

ORDINANCE \_\_\_\_\_

Legal Description

POINT ON SAID SECTION LINE; THENCE NORTH 01°04'49" WEST, ALONG SAID SECTION LINE, A DISTANCE OF 500.60 FEET TO THE POINT OF BEGINNING.

WELL SITE 5 (RE# 168060-0020)

A PART SECTION 17, TOWNSHIP 4 SOUTH, RANGE 28 DUVAL  
COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS  
VS: POINT OF BEGINNING AT THE  
NORTHWEST CORNER OF SECTION 17, TOWNSHIP 4 SOUTH 01°04'49"  
EAST ALONG SAID SECTION LINE, A DISTANCE OF  
OF 933.00 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 00°00'00" WEST, A DISTANCE OF 753.17 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 00°00'00" WEST, A DISTANCE OF 200.00 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 87°23'30" WEST, A DISTANCE OF 200.00 FEET; THENCE NORTH 00°00'25" WEST, A DISTANCE OF 100.65 FEET; THENCE NORTH 39°59'35" EAST, A DISTANCE OF 12.00 FEET TO THE POINT OF BEGINNING.

**EXHIBIT A**

**Property Ownership Affidavit**

Date: JANUARY 29, 2008

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Ownership Certification

Ladies and Gentlemen:

I, H. J. SKELTON hereby certify that I am the authorized agent of D.D.I., Inc., a Florida corporation, the owner of the property described in the legal description attached as **Exhibit 1** in connection with filing applications for future land use map amendment and rezoning submitted to the Jacksonville Planning and Development Department.

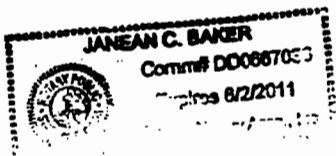
D.D.I., Inc., a Florida corporation

By: *H. J. Skelton*  
Name: H. J. SKELTON  
Title: VICE CHAIRMAN

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 29<sup>th</sup> day of JANUARY, 2008, by H. J. SKELTON the VICE CHAIRMAN of D.D.I., INC., a Florida corporation, on behalf of said corporation. He/~~She~~ is (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.



*Janean C. Baker*  
Notary Public, State of Florida  
Name: JANEAN C. BAKER  
My Commission Expires: 6/2/2011  
My Commission Number is: DD0667036

**EXHIBIT A**

**Property Ownership Affidavit**

Date: February 12, 2008

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Ownership Certification

Ladies and Gentlemen:

I, **DONALD L. BURCH, JR.**, Director of Real Estate Services for JEA, hereby certify that JEA is the owner of the property described in the legal description attached as **Exhibit 1** in connection with filing applications for future land use map amendment and rezoning submitted to the Jacksonville Planning and Development Department.

JEA, a body politic and corporate

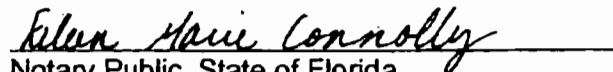
By:   
Name: Donald L. Burch, Jr.  
Title: Director, Real Estate Services

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 12<sup>th</sup> day of February, 2008, by **Donald L. Burch, Jr.**, Director of Real Estate Services for JEA, a body politic and corporate, on behalf of JEA, who (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

EILEEN MARIE CONNOLLY  
Notary Public, State of Florida  
My comm. exp. Sept. 2, 2008  
Comm. No. DD 352610

  
Notary Public, State of Florida  
Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
My Commission Number is: \_\_\_\_\_

**EXHIBIT "B"**  
**Agent Authorization**

Date: JANUARY 29, 2008

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Agent Authorization for the following site location:

RE # 168060-0000 – Philips Highway (between Davis Creek Road and  
Old St. Augustine Road

Ladies and Gentlemen:

You are hereby advised that the undersigned is the owner of the property described in **Exhibit 1** attached hereto. Said owner hereby authorizes and empowers the law firm of Edwards, Cohen, Sanders, Dawson & Mangu, P.A. to act as its agent to file applications for future land use map amendment and rezoning with respect to the above-referenced property and in connection with such authorization to file such applications, papers, documents, requests and other matters necessary for such requested change.

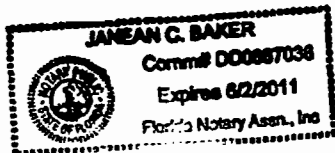
D.D.I., Inc., a Florida corporation

By: *H.J. Skelton*  
Name: H. J. SKELTON  
Title: VICE CHAIRMAN

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 29<sup>th</sup> day of JANUARY, 2008, by H. J. SKELTON the VICE CHAIRMAN of D.D.I., INC., a Florida corporation, on behalf of said corporation. He/~~She~~ is (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.



*Janean C. Baker*  
Notary Public, State of Florida  
Name: JANEAN C. BAKER  
My Commission Expires: 6/2/2011  
My Commission Number is: DD0667036



**EXHIBIT "B"**  
**Agent Authorization**

Date: February 12, 2008

City of Jacksonville  
City Council / Planning and Development Department  
117 West Duval Street, 4th Floor /  
128 East Forsyth Street, Florida Theatre Building, Suite 700  
Jacksonville, Florida 32202

Re: Agent Authorization for the following site location:

12121 Philips Highway - RE Nos. 168155-0620; 168153-0000; 168060-0030;  
168060-0020; 168060-0040 (between Davis Creek Road and Old St. Augustine  
Road

Ladies and Gentlemen:

You are hereby advised that the undersigned is owner of the property described in **Exhibit 1** attached hereto. Said owner hereby authorizes and empowers the law firm of Edwards, Cohen, Sanders, Dawson & Mangu, P.A. to act as its agent to file applications for future land use map amendment and rezoning with respect to the above-referenced property and in connection with such authorization to file such applications, papers, documents, requests and other matters necessary for such requested change.

JEA, a body politic and corporate

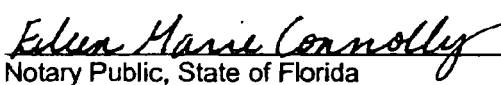
By:   
Name: Donald L. Burch, Jr.  
Title: Director, Real Estate Services

STATE OF FLORIDA

COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 12<sup>th</sup> day of February, 2008, by **Donald L. Burch, Jr.**, Director of Real Estate Services for JEA, a body politic and corporate, on behalf of JEA, who (check one)  is personally known to me or  has produced \_\_\_\_\_ as identification.

EILEEN MARIE CONNOLLY  
Notary Public, State of Florida  
My comm. exp. Sept. 2, 2008  
Comm. No. DD 352610

  
Notary Public, State of Florida  
Name: \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_  
My Commission Number is: \_\_\_\_\_



**BLACK & VEATCH**  
building a world of difference™

ENERGY • WATER • INFORMATION • GOVERNMENT

JEA  
Southeast Generating Station

B&V Project 148570  
February 29, 2008

Ms. Brenda Ezell  
Edwards Cohen  
6 E. Bay Street, Suite 500  
Jacksonville, Florida 32202

Subject: Site Survey

Dear Ms. Ezell:

Black & Veatch Corporation completed a wetland delineation, and vegetation and wildlife surveys of the proposed JEA Southeast Generating Station site near Jacksonville, in Duval County, Florida. The purpose of the surveys was to determine the presence and extent of jurisdictional wetlands pursuant to current federal and state methodologies, and characterize the ecological communities.

The property comprises approximately 129 acres located east of Philips Highway (US Highway 1) and south of State Highway 9A in southern Jacksonville. The property is bordered by developed land to the west (transmission corridor and industrial/commercial) and south (recycled yard waste material storage), and wooded/pine plantation areas to the north and east. The property was evaluated using current aerial photography, topographic maps, Natural Resources Conservation Service (NRCS) soils maps, and ground truthing to assess existing conditions for vegetation, soils, and hydrology. The approximate wetland boundaries are illustrated on the attached Figure 1.

The topography of the site is level to slightly rolling with drainage generally to the south to Big Davis Creek. According to USGS topographic mapping of the area, the site elevation varies from between about 25 to 35 feet NGVD.

Approximately 15 acres of wetlands occur on the property as identified on Figure 1. The largest, 13 acres, is located in the northwest corner (Wetland C) of the site. This moderate quality area supports a forest of sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), oak (*Quercus* spp.), and southern magnolia (*Magnolia grandiflora*). Ground cover includes such wetland plants as cinnamon fern (*Osmunda cinnamomea*), netted chain fern (*Woodwardia aerolata*), and rushes (*Juncus* spp.). Near the southwest corner of the site is a small, severely degraded, isolated, and low quality wetland depression (0.7 acre) (Wetland L). Invasive broomsedge (*Andropogon virginicus*) dominates this wetland, as well as other non-native plants. The southeast site boundary is adjacent to Big Davis Creek; a small, forested wetland is located (Wetland B) on this boundary. The area is slightly more than 1 acre in size. The heavily wooded area is of high quality and dominated by magnolia, pond pine (*Pinus serotina*), and sweetgum. Ground cover is similar to that in the larger wetland in the northeast corner of the site, but is generally more dense.

Edwards Cohen  
Ms. Ezell

B&V Project 148570  
February 29, 2008

Wetlands B and C are expected to be regulated by the U.S. Army Corps of Engineers (ACOE), Florida Department of Environmental Protection (FDEP), and St. Johns River Water Management District (SJRWMD). The degraded Wetland L is not expected to be regulated by ACOE since it is isolated (i.e., has no connection or outlet to regulated waters). FDEP and SJRWMD are expected to regulate Wetland L. At the present time, the proposed site plan avoids Wetlands B and C, but still provides adequate area/acreage for ultimate development. However, Wetland L will likely be impacted. Assuming the impacts to wetlands are minimal (less than 1 acre), it is anticipated that mitigation will be addressed through the purchase of mitigation credits from a regional mitigation bank.

Vegetation on the remainder of the site is upland in nature. Figure 1 illustrates the general vegetation areas of the site. The majority of the site is occupied by a previous planting of slash pine (*Pinus elliotii*) that has been cut. Within this area are a few scattered groves of live oak (*Quercus* sp.) but in general, few standing trees are left. The logging activity left an abundance of woody debris on the ground and resulted in grubbing much of the natural ground cover from the area. Although this is considered a low quality area, since there is minimal forage, water, and shelter, there are scattered gopher tortoise dens in the upland areas.

Slash pine plantings are located in the northern part of the site and in a narrow strip along the southern edge of the site. These are generally low quality areas due to lack of ground cover and high density of planting.

An area of oak-pine forest occupies an estimated 15-20 acres on the east side of the property. Dominant trees in this moderate to good quality area include red or turkey oak (*Quercus rubra*), live oak (*Quercus* sp.) and scattered long leaf pine (*Pinus palustris*). Ground cover is sparse, as expected in this type of area, where herbaceous cover is more common in canopy openings.

Along the southern most edge of the property is a strip of upland, mostly oak woodland. The topography drops off quickly into an area of forested woodland (Wetland B) along Big Davis Creek. The upland is covered by a tangle of vines, small trees and shrubs that is difficult to walk through.

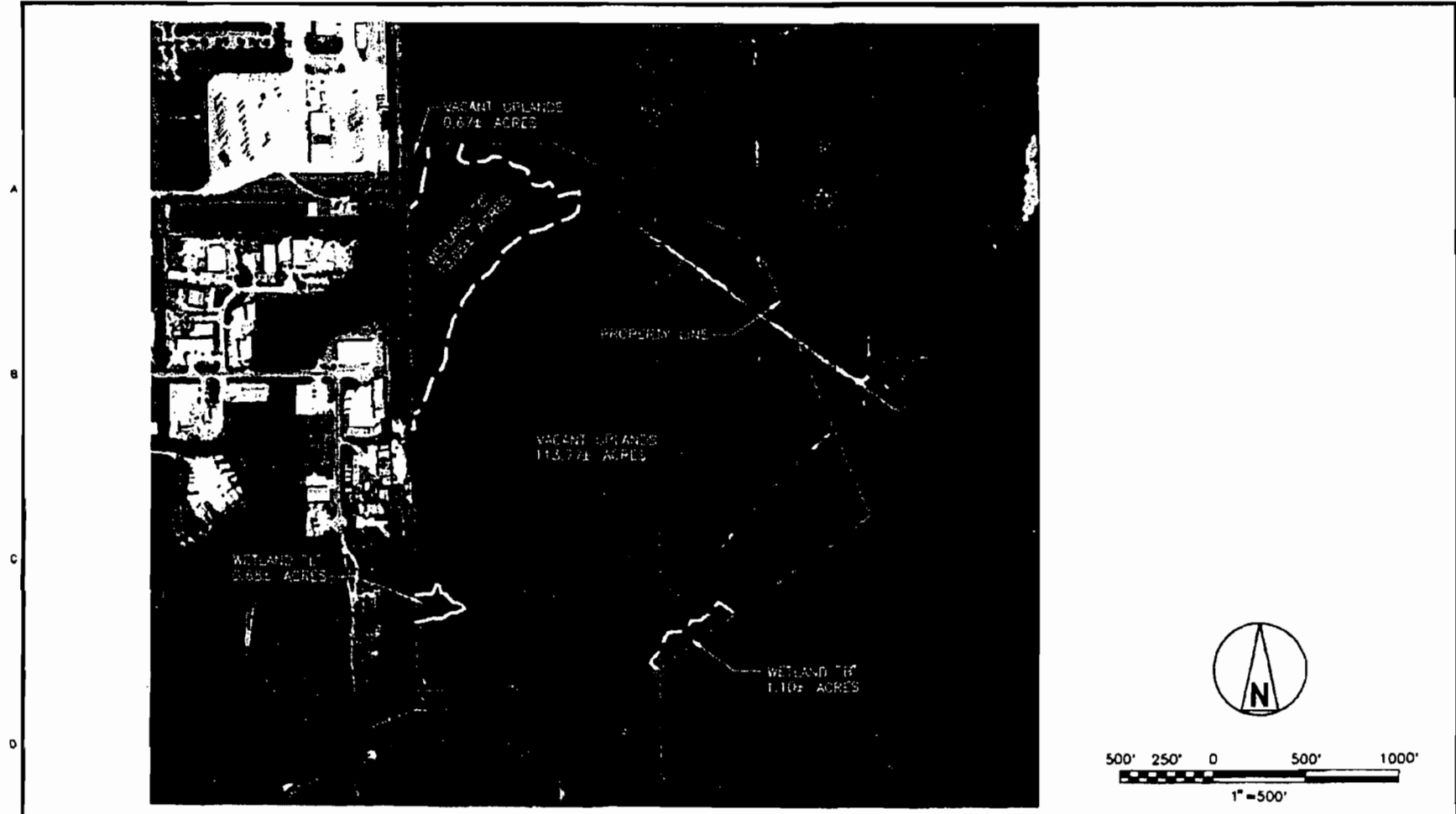
Wildlife value of the site as a whole is considerably diminished due to clearing activities, the presence of pine plantings, and industrial activities to the west and south. Wildlife using this area presumably remains in the perimeter areas where cover is available. The notable exception is the presence of gopher tortoise mentioned in the pine clearing areas where logging debris does not severely hinder movement about the habitat. Evidence of deer (tracks) was observed. Other than birds and squirrels, no other wildlife was observed.

Very truly yours,

BLACK & VEATCH

  
J. Michael Soltys  
Permitting Manager

1 2 3 4 5 6 7



MCRN4606 ACAD 16.1s (LMS Tech)  
 A1ASL012 B1 1=1  
 02/29/08 14:36:09

										<b>BLACK &amp; VEATCH CORPORATION</b>		<b>JEA</b> SOUTHEAST GENERATING STATION		PROJECT		DRAWING NUMBER		REV
																148570-SS-0001		A
A	02-29-08	INITIAL ISSUE	JKM	MJT	MJT	JMS	ENGINEER	MJT	DRAWN	JKM	PLOT PLAN WETLANDS		CODE					
NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP	CHECKED	DATE	02-29-08			AREA					

## **10.4 State Permits and Applications**

As a proposed steam electric generating site, JEA must obtain site certification to construct and operate the combined cycle facility in accordance with the Florida Electrical Power Plant Siting Act. The following applications have been prepared to support agency review of this request.

### **10.4.1 Joint Environmental Resource Permit (ERP) Application**

The FDEP-Northeast District Office is reviewing (submitted on June 19, 2008) the proposed stormwater management system and potential environmental impacts associated with the construction and operation of the simple cycle project, which has been designed for ultimate site build-out. The application has been assigned File No. 16-289373-001-EI. A Joint Environmental Resource Permit (ERP) Modification application has been prepared and included herein to address the proposed new access road from Philips Highway to the site. This application is included at the end of Section 10.4.

### **10.4.2 Notice of Intent to Use General Permit for Addition of a Major User of Reclaimed Water**

The FDEP issued General Permit Notice FL0023493-013-WF on June 30, 2008, approving the addition of GEC as a major user to a water reuse service area. General Permit Notice FL0023493-013-WF and JEA's application "Notice of Intent to Use General Permit for Addition of a Major User of Reclaimed Water," requesting to use up to 5.67 mgd of reuse water for the cooling tower and irrigation, are included at the end of Section 10.4.

### **10.4.3 Water and Sewer Permit Applications**

The FDEP permit for construction of an extension to the drinking water distribution system will be obtained prior to the proposed simple cycle facility construction. JEA will coordinate internally to secure connection to the reclaimed water and sanitary sewer systems prior to the proposed simple cycle facility construction.

### **10.4.4 Short-Term Dewatering Permit Application**

Dewatering of groundwater is considered a consumptive use of water and requires authorization from the SJRWMD. Dewatering will likely be required for the construction of some facilities supporting the conversion unit, such as the circulating water pipes to the cooling tower or deep foundations. Therefore, dewatering authorization will be required from the SJRWMD. A detailed dewatering plan will be provided for review post-certification prior to any dewatering activities.

#### **10.4.5 Generic Permit for Discharge of Produced Ground Water from Any Non-Contaminated Site Activity**

The FDEP, through the water quality statutes and rules at Chapter 62-621.300(2) FAC, regulates the point source discharge of non-contaminated groundwater to surface waters of the State if the discharge does not exceed listed screening values. The need for this permit has not been determined at this time.

#### **10.4.6 Florida Division of Historical Resources (DHR) Review**

In April 2008, in association with proposed construction and operation of the simple cycle facility, the DHR was requested to review the site and project area for known or potential cultural resources. The DHR indicated in July 2008 that there were no known historical resources onsite or within the project area listed on the NRHP. Five non-significant archaeological sites were identified within the property. It was DHR's opinion that significant historic resources were unlikely to be encountered within the project area. The review request letter and DHR response are included at the end of Section 10.4.

#### **10.4.7 Florida Fish and Wildlife Conservation Commission Review**

The Florida Fish and Wildlife Conservation Commission had previously reviewed the GEC site for potential impacts to significant ecological and wildlife resources located on or near the site during simple cycle project permitting. A copy of the transmittal letter for this request and agency responses are included at the end of Section 10.4.

The state listed (threatened) gopher tortoise was relocated from the site in summer/fall 2008 prior to simple cycle project construction under authorization of Relocation Permit WR08306. A copy of Standard Gopher Tortoise Relocation Permit WR08306 is included at the end of Section 10.4.

#### **10.4.8 Florida Natural Areas Inventory Review**

The Florida Natural Areas Inventory (FNAI) was requested to review the proposed project for significant potential impacts to natural areas located near the site. A copy of the transmittal letter request is included at the end of Section 10.4.

#### **10.4.9 Florida Department of Transportation Review**

The Florida Department of Transportation will review plans for improvements to the new access road connection to Philips Highway. Permit applications and Drawings 149588-CSTA-S3400, 149588-CSTA-S3401, 149588-CSTA-S3421, and 149588-CSTA-S3450 are included at the end of Section 10.4.

**10.4.10 Consumptive Uses of Water Permit Application**

The SJRWMD requires authorization for any use, diversion, or withdrawal of surface or groundwater that meets any one of seven criteria, unless expressly exempted. The GEC is designated as a Secondary User and will not directly permit, divert, or withdraw surface or groundwater. JEA has completed and included a Consumptive Uses of Water Permit Application for secondary use of more than 100,000 gallons of potable water per day supplied by JEA. The potable water will be used for minor process uses, potable/sanitary uses, and as backup for cooling tower makeup.

***10.4.1 Joint Environmental Resource Permit (ERP) Application***



SECTION A

FOR AGENCY USE ONLY

ACOE Application #	DEP/WMD Application #
Date Application Received	Date Application Received
Proposed Project Lat.	Fee Received \$
Proposed Project Long.	Fee Receipt #

**PART 1:**

Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?  yes  no

Is this application being filed by or on behalf of a government entity or drainage district?  yes  no

**PART 2:**

A. Type of Environmental Resource Permit Requested (check at least one). See Attachment 2 for thresholds and descriptions.

- Noticed General - include information requested in Section B.
- Standard General (Single Family Dwelling) - include information requested in Sections C and D.
- Standard General (all other Standard General projects) - include information requested in Sections C and E.
- Individual (Single Family Dwelling) - include information requested in Sections C and D.
- Individual (all other Individual projects) - include information requested in Sections C and E.
- Conceptual - include information requested in Sections C and E.
- Mitigation Bank Permit (construction) - include information requested in Sections C and F. (If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)
- Mitigation Bank (conceptual) - include information requested in Sections C and F.

B. Type of activity for which you are applying (check at least one)

- Construction or operation of a new system, other than a solid waste facility, including dredging or filling in, on or over wetlands and other surface waters.
  - Construction, expansion or modification of a solid waste facility.
  - Alteration or operation of an existing system which was not previously permitted by a WMD or DEP.
  - Modification of a system previously permitted by a WMD or DEP.  
 Provide previous permit numbers: \_\_\_\_\_
- |  |  |
|--|--|
| <input type="checkbox"/> Alteration of a system  | <input type="checkbox"/> Extension of permit duration                  |
| <input type="checkbox"/> Abandonment of a system | <input type="checkbox"/> Construction of additional phases of a system |
| <input type="checkbox"/> Removal of a system     |  |

C. Are you requesting authorization to use Sovereign Submerged Lands?

yes  no

(See Section G and Attachment 5 for more information before answering this question.)

D. For activities in, on, or over wetlands or other surface waters, check type of federal dredge and fill permit requested:

- |                                     |  |                                  |
|-------------------------------------|--|----------------------------------|
| <input type="checkbox"/> Individual | <input type="checkbox"/> Programmatic General      | <input type="checkbox"/> General |
| <input type="checkbox"/> Nationwide | <input checked="" type="checkbox"/> Not Applicable |                                  |

E. Are you claiming to qualify for an exemption?  yes  no

If yes, provide rule number if known. \_\_\_\_\_

<b>PART 3:</b>	
<b>A. OWNER(S) OF LAND</b>	<b>B. ENTITY TO RECEIVE PERMIT (IF OTHER THAN OWNER)</b>
Name	Name
Athena Mann	Jay Worley
Title and Company	Title and Company
VP Environmental Services, JEA	Director Environmental Programs, JEA
Address	Address
21 West Church Street	21 West Church Street, Tower 8
City, State, Zip	City, State, Zip
Jacksonville, FL 32202-3139	Jacksonville, FL 32202-3139
Telephone and Fax	Telephone and Fax
904-665-6252                      904-665-7376	904-665-8729                      904-665-7376
E-mail Address: (optional)	E-mail Address: (optional)
<b>C. AGENT AUTHORIZED TO SECURE PERMIT</b>	<b>D. CONSULTANT (IF DIFFERENT FROM AGENT)</b>
Name	Name
	Mike Soltys
Title and Company	Title and Company
	Permitting Manager, Black & Veatch
Address	Address
	11401 Lamar Avenue
City, State, Zip	City, State, Zip
	Overland Park, KS 66211
Telephone and Fax	Telephone and Fax
	913-458-7563                      913-458-2934
E-mail Address: (optional)	E-mail Address: (optional)
<b>PART 4: (Please provide metric equivalent for federally funded projects):</b>	
A. Name of Project, including phase if applicable: <u>JEA Greenland Energy Center Access Road</u>	
B. Is this application for part of a multi-phase project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
C. Total applicant-owned area contiguous to the project? <u>172</u> ac.; _____ ha.	
D. Total area served by the system: <u>12.4</u> ac.; _____ ha.	
E. Impervious area for which a permit is sought: <u>2.78</u> ac.; _____ ha.	
F. Volume of water that the system is capable of impounding: <u>2.26</u> ac. ft.; _____ m <sup>3</sup>	
G. What is the total area of work in, on, or over wetlands or other surface waters? <u>0.23</u> ac.; _____ ha.; _____ sq. ft.; _____ sq. m.	
H. Total volume of material to be dredged: <u>0</u> yd <sup>3</sup> ; _____ m <sup>3</sup>	
I. Number of new boat slips proposed: <u>0</u> wet slips; _____ dry slips <b>N/A</b>	

PART 5:

Project location (use additional sheets if needed):

County(ies) Duval

Section(s) 37

Township 04S

Range 28E

Section(s)

Township

Range

Section(s)

Township

Range

Land Grant name, if applicable: N/A

Tax Parcel Identification Number: 168155-0620, 168153-0000

Street Address Road or other location: 12121 Philips Highway

City, Zip Code, if applicable: Jacksonville, FL 32256-1788

PART 6: Describe in general terms the proposed project, system, or activity.

JEA proposes to construct a new access road to connect the entrance from U.S. Highway 1/Philips Highway to the Greenland Energy Center electric-generating facility in southern Jacksonville, Duval County, Florida. The project activity comprises approximately 12.4 acres for the access road. This ERP is requested for filling of 0.23 acre of wetland and construction of an attendant stormwater management system. The access road will be an above-grade, impervious surface roadway, with a proposed completion date of June 2012.

Wetlands impacts will be minimal. One Florida state-listed threatened species, the gopher tortoise, while present nearby, has not been found on the access road project area during surveys. No surface waters, sovereign submerged lands, critical habitat, or historic/archeological impacts are anticipated.

**PART 7:**

A. If there have been any pre-application meetings, including on-site meetings, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives.

Project pre-application meeting held at FDEP – Northeast District Office in Jacksonville on July 16, 2008.

Attendees were:

Name	Company
Jim Maher	FDEP
Kristin Bell	FDEP
Connie Webel	FDEP
Cindy Mulkey	FDEP
Jay Worley	JEA
Tim Hillman	Black & Veatch
Mike Tuttle	Black & Veatch
Mike Soltys	Black & Veatch

B. Please identify by number any MSSW/Wetland Resource/ERP/ACOE Permits pending, issued or denied for projects at the location, and any related enforcement actions.

<u>Agency</u>	<u>Date</u>	<u>No.\Type of Application</u>	<u>Action Taken</u>
FDEP-NE	11/02/2007	ERP Request for Determination of Permit Need	No permit required determination <b>(See section G, Attachment G-1)</b>
FDEP	05/08/2008	NPDES - NOI to use Generic Permit for Stormwater Discharge from Large and Small Construction Activities	Generic permit issued - DEP Document No. 62-621.300(4)(a) for Facility ID: FLR10GY43
FDEP-NE	06/19/2008	File No. ERP 16-289373-001-EI	Under review

C. Note: The following information is required for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit or an authorization to use state owned submerged lands. Please provide the names, addresses and zip codes of property owners whose property directly adjoins the project (excluding application) and/or (for proprietary authorizations) is located within a 500 ft. radius of the applicant's land. Please attach a plan view showing the owner's names and adjoining property lines. Attach additional sheets if necessary.

**See attached Property Owner Map (Drawing Number 148570-SS-0032)**

1. William E. Powell  
 219 N Newnan Street  
 Jacksonville, FL 32202-3227

2. Sphinx Management, Inc.  
 219 N Newnan Street  
 Jacksonville, FL 32202

PART 8:

A. By signing this application form, I am applying, or I am applying on behalf of the applicant, for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relieve me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of the applicant, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Athena Mann

Typed/Printed Name of Applicant (If no Agent is used) or Agent (If one is so authorized below)

\_\_\_\_\_  
 Signature of Applicant/Agent

\_\_\_\_\_  
 Date

VP – Environmental Services, JEA

**AN AGENT MAY SIGN ABOVE ONLY IF THE APPLICANT COMPLETES THE FOLLOWING:**

B. I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

_____ Typed/Printed Name of Applicant	_____ Signature of Applicant	_____ Date
--	---------------------------------	---------------

**Please note: The applicant's original signature (not a copy) is required above.**

**PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:**

C. I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Water Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor permitted work if a permit is granted.

<u>Athena Mann</u> Typed/Printed Name of Applicant	_____ Signature of Applicant	_____ Date
---	---------------------------------	---------------

VP – Environmental Services, JEA



## SECTION C

### Environmental Resource Permit Notice of Receipt of Application

Note: this form does not need to be submitted for noticed general permits.  
This information is required in addition to that required in other sections of the application. Please submit five copies of this notice of receipt of application and all attachments with the other required information. Please submit all information on 8 1/2" x 11" paper.

Project Name                    JEA Greenland Energy Center Access Road  
County                         Duval  
Owner                         JEA  
Applicant:                    JEA  
Applicant's Address:        21 West Church Street, Jacksonville, FL 32202

1.        Indicate the project boundaries on a USGS quadrangle map. Attach a location map showing the boundary of the proposed activity. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.

2.        Provide the names of all wetlands, or other surface waters that would be dredged, filled, impounded, diverted, drained, or would receive discharge (either directly or indirectly), or would otherwise be impacted by the proposed activity, and specify if they are in an Outstanding Florida Water or Aquatic Preserve:

Two unnamed wetlands within the Big Davis Creek watershed will be impacted (partially filled):  
Wetland 1 - small, disturbed, forested depression near Philips Highway (0.05 acre total/0.01 acre impact);  
Wetland 2 - small, herbaceous wetland in maintained transmission line right-of-way (0.54 acre total/0.22 acre impact). See attached drawing numbers 148570-SS-0020 Wetland Area 1 and 148570-SS-0012 Wetland Disturbance Access Road. No wetlands are in an Outstanding Florida Water or Aquatic Preserve.

3.        Attach a depiction (plan and section views), which clearly shows the works or other facilities proposed to be constructed. Use multiple sheets, if necessary. Use a scale sufficient to show the location and type of works.

4.        Briefly describe the proposed project (such as "construct dock with boat shelter", "replace two existing culverts", "construct surface water management system to serve 150 acre residential development"):

Construct stormwater management system and place fill material in wetlands for construction of access road.

5.        Specify the acreage of wetlands or other surface waters, if any, that are proposed to be filled, excavated, or otherwise disturbed or impacted by the proposed activity:

filled 0.23 ac.; 0 excavated ac.;

other impacts 0 ac.

6.        Provide a brief statement describing any proposed mitigation for impacts to wetlands and other surface waters (attach additional sheets if necessary):

JEA is proposing to place a conservation easement (passive mitigation) over Wetland 9 (~14 acres) on the Greenland Energy Center site, enhance Wetland 1, and create a forested wetland in the Big Davis Creek floodplain. Wetland 1 and the creation area will also be placed in conservation easement. See attached drawing 148570-SS-0024, Proposed Wetland Creation. See Section 4.4 of this SCA for additional details on the mitigation plans.

SECTION C - Continuation Page

1. (Cont'd) See Figure 2.1-1 Site Location Map in Section 2.1 of this SCA for access road shown on USGS quadrangle map.

3. (Cont'd) See drawing numbers 149588-CSTA-S3400, 149588-CSTA-S3401 and 149588-CSTA-S3450 in Appendix 3.8 of the SCA for depiction (plan and section views) of this proposed access road.

FOR AGENCY USE ONLY

Application Name:

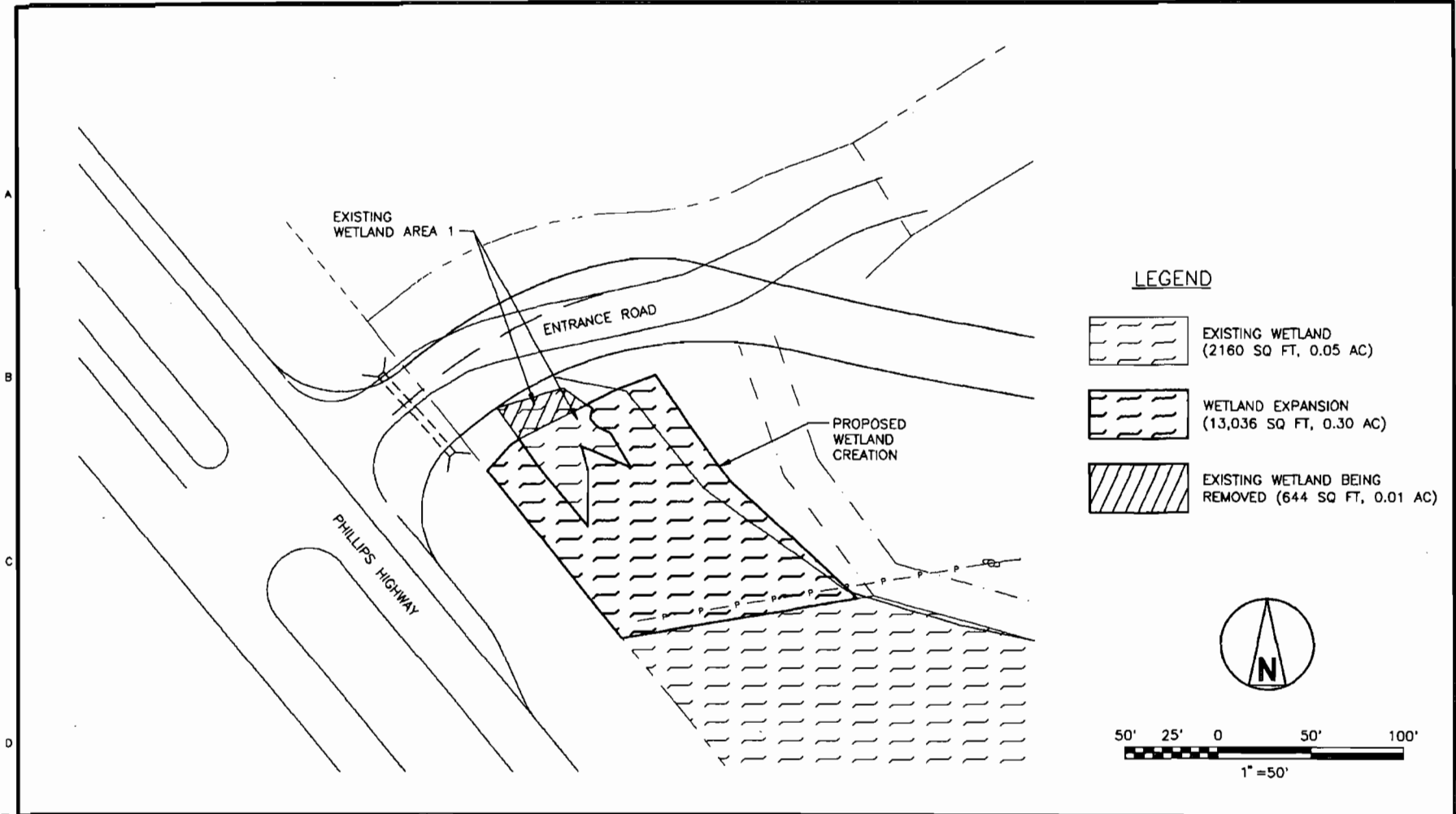
Application Number:

Office where the application can be inspected:

**Note to Notice recipient:** The information in this notice has been submitted by the applicant, and has not been verified by the agency. It may be incorrect, incomplete or may be subject to change.



1 2 3 4 5 6 7



RUM02825  
 A1ASL012  
 08/20/08 13:11:21  
 B1 1=1  
 ACAD 16.1s (LMS Tech)

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
E	08/20/08	GENERAL REVISIONS	MRR	MJT		JMS	
D	08/11/08	GENERAL REVISIONS	JKM	MJT		JMS	
C	07/18/08	SCA ISSUE	JKM	MJT		JMS	
B	06/10/08	WETLAND UPDATE	JKM	MJT		JMS	

**BLACK & VEATCH CORPORATION**

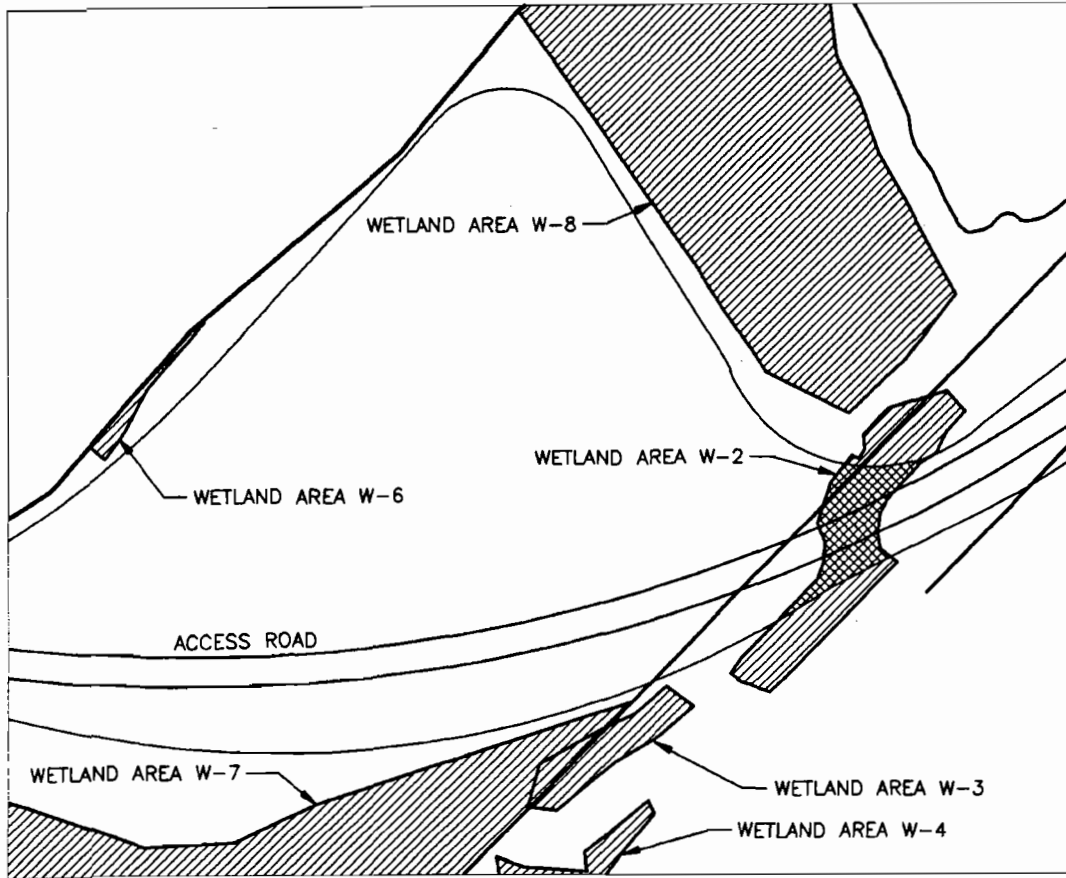
ENGINEER MJT      DRAWN JKM

CHECKED      DATE

JEA  
GREENLAND ENERGY CENTER

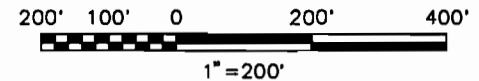
WETLAND AREA 1  
MITIGATION AREA

PROJECT	DRAWING NUMBER	REV
148570-SS-0020		E
CODE		
AREA		



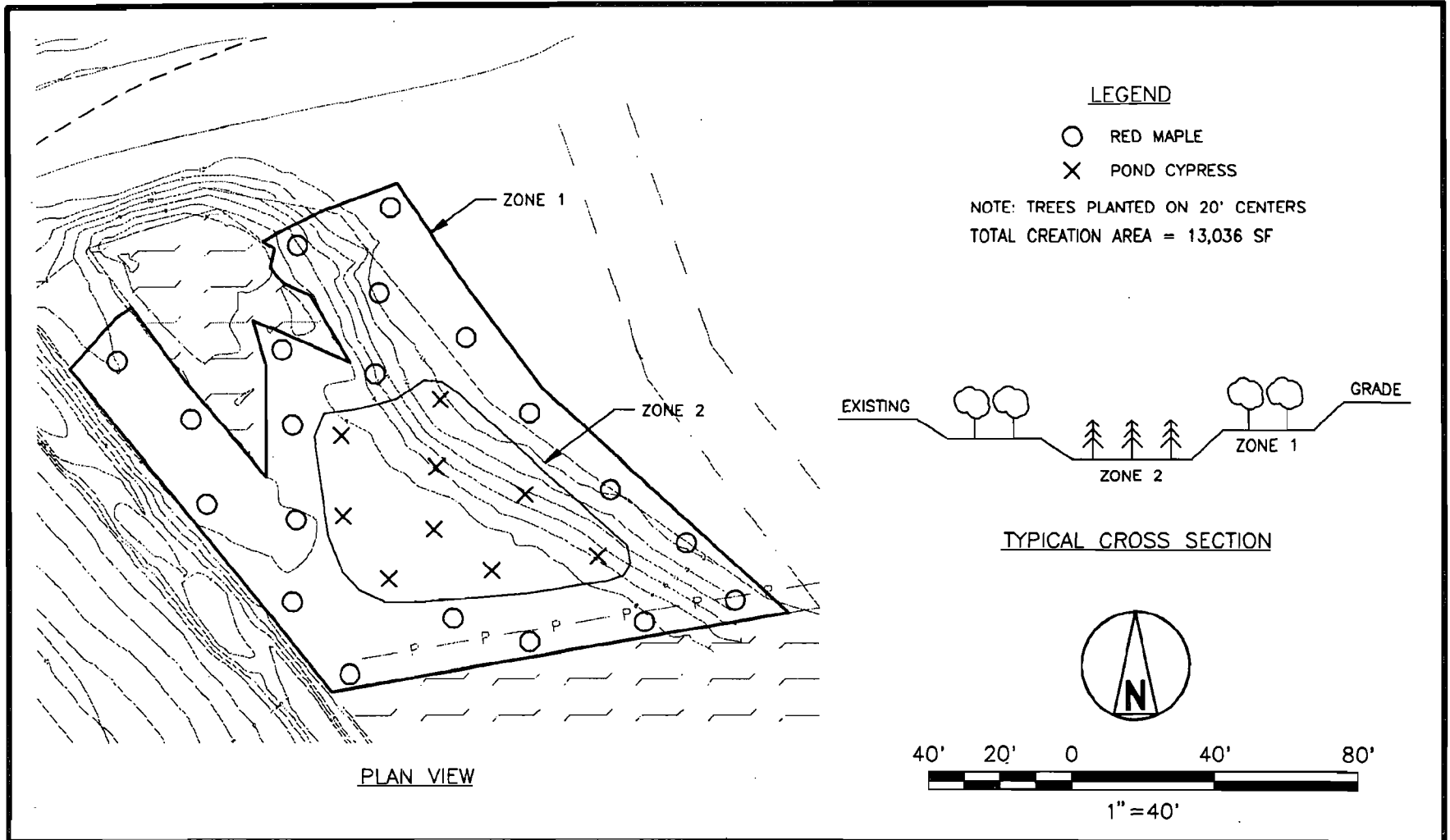
**DISTURBED AREAS**  
 WETLAND AREA W-2 - 0.22 ACRE IMPACT

- LEGEND**
- PROPERTY BOUNDARY
  - - - - - T-LINE ROW
  - - - - - ACCESS ROAD CONSTRUCTION LIMIT
  - ▨▨▨▨▨▨ WETLAND AREA
  - ▩▩▩▩▩▩ DISTURBED WETLAND AREA



I	09/10/08	GENERAL REVISION	JKM	MJT	JMS	G	08/11/08	GENERAL REVISION	JKM	MJT	JMS		
H	08/20/08	GENERAL REVISION	MRR	MJT	JMS	NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP

<b>BLACK &amp; VEATCH CORPORATION</b> ENGINEER MJT DRAWN JKM CHECKED DATE	<b>JEA</b> GREENLAND ENERGY CENTER WETLAND DISTURBANCE ACCESS ROAD	PROJECT	DRAWING NUMBER	REV
		148570-SS-0012	1	
		CODE		
		AREA		



							A	06-11-08	INITIAL ISSUE	JKM	MJT		JMS	
B	08-11-08	GENERAL REVISION	JKM	MJT	JMS		NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
<b>BLACK &amp; VEATCH CORPORATION</b>		<b>JEA</b> GREENLAND ENERGY CENTER							PROJECT      DRAWING NUMBER 148570-SS-0024			REV B		
ENGINEER		DRAWN		JKM		PROPOSED WETLAND CREATION							CODE	
CHECKED		DATE									AREA			

## SECTION E

### INFORMATION REQUESTED FOR STANDARD GENERAL, INDIVIDUAL AND CONCEPTUAL ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS NOT RELATED TO A SINGLE FAMILY DWELLING UNIT

Please provide the information requested below if the proposed project requires either a standard general, individual, or conceptual approval environmental resource permit and is not related to an individual, single family dwelling unit, duplex or quadruplex. The information listed below represents the level of information that is usually required to evaluate an application. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. Please submit all information that is required by the Department on either 8 1/2 in. X 11 in. paper or 11 in. X 17 in. paper. Larger drawings may be submitted to supplement but not replace these smaller drawings.

SEE ATTACHED PAGES

#### I. Site Information

- A. Provide a map(s) of the project area and vicinity delineating USDA/SCS soil types.
- B. Provide recent aerials, legible for photo interpretation with a scale of 1" = 400 ft, or more detailed, with project boundaries delineated on the aerial.
- C. Identify the seasonal high water or mean high tide elevation and normal pool or mean low tide elevation for each on site wetland or surface water, including receiving waters into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.
- D. Identify the wet season high water tables at the locations representative of the entire project site. Include dates, datum, and methods used to determine these elevations.

#### II. Environmental Considerations

- A. Provide results of any wildlife surveys that have been conducted on the site, and provide any comments pertaining to the project from the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service.
- B. Provide a description of how water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed.
- C. Provide a narrative description of any proposed mitigation plans, including purpose, maintenance, monitoring, and construction sequence and techniques, and estimated costs.
- D. Describe how boundaries of wetlands or other surface waters were determined. If there has ever been a jurisdictional declaratory statement, a formal wetland determination, a formal determination, a validated informal determination, or a revalidated jurisdictional determination, provide the identifying number.
- E. Impact Summary Tables:
  1. For all projects, complete Tables 1, 2 and 3 as applicable.
  2. For docking facilities or other structures constructed over wetlands or other surface waters, provide the information requested in Table 4.
  3. For shoreline stabilization projects, provide the information requested in Table 5.

#### III. Plans

Provide clear, detailed plans for the system including specifications, plan (overhead) views, cross sections (with the locations of the cross sections shown on the corresponding plan view), and profile (longitudinal) views of the proposed project. The plans must be signed and sealed by an appropriate registered professional as required by law. Plans must include a scale and a north arrow. These plans should show the following:

- A. Project area boundary and total land area, including distances and orientation from roads or other land marks;
- B. Existing land use and land cover (acreage and percentages), and on-site natural communities, including wetlands and other surface waters, aquatic communities, and uplands. Use the Florida Land Use Cover & Classification System (FLUCCS)(Level 3) for projects proposed in the South Florida Water Management District, the St. Johns River Water Management District, and the Suwannee River Water Management District and use the National Wetlands Inventory (NWI) for projects proposed in the Southwest Florida Water Management District. Also identify each community with a unique identification number which must be consistent in all exhibits.
- C. The existing topography extending at least 100 feet off the project area, and including adjacent wetlands and other surface waters. All topography shall include the location and a description of known benchmarks, referenced to NGVD. For systems waterward of the mean high water (MHW) or seasonal high water lines, show water depths, referenced to mean low water (MLW) in tidal areas or seasonal low water in non-tidal areas, and list the range between MHW and MLW. For docking facilities, indicate the distance to, location of, and depths of the nearest navigational channel and access routes to the channel.
- D. If the project is in the known flood plain of a stream or other water course, identify the following: 1) the flood plain boundary and approximate flooding elevations; and 2) the 100-year flood elevation and floodplain boundary of any lake, stream or other watercourse located on or adjacent to the site;
- E. The boundaries of wetlands and other surface waters within the project area. Distinguish those wetlands and other surface waters that have been delineated by any binding jurisdictional determination;
- F. Proposed land use, land cover and natural communities (acreage and percentages), including wetlands and other surface waters, undisturbed uplands, aquatic communities, impervious surfaces, and water management areas. Use the same classification system and community identification number used in III (B) above.
- G. Proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands;
- H. Proposed buffer zones;
- I. Pre- and post-development drainage patterns and basin boundaries showing the direction of flows, including any off-site runoff being routed through or around the system; and connections between wetlands and other surface waters;
- J. Location of all water management areas with details of size, side slopes, and designed water depths;
- K. Location and details of all water control structures, control elevations, any seasonal water level regulation schedules; and the location and description of benchmarks (minimum of one benchmark per structure);
- L. Location, dimensions and elevations of all proposed structures, including docks, seawalls, utility lines, roads, and buildings;
- M. Location, size, and design capacity of the internal water management facilities;
- N. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes, and rights-of-way and easements for the existing drainage system, if any;

- O. Receiving waters or surface water management systems into which runoff from the developed site will be discharged;
- P. Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions;
- Q. Location, grading, design water levels, and planting details of all mitigation areas;
- R. Site grading details, including perimeter site grading;
- S. Disposal site for any excavated material, including temporary and permanent disposal sites;
- T. Dewatering plan details;
- U. For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities, and fish cleaning stations;
- V. Location and description of any nearby existing offsite features which might be affected by the proposed construction or development such as stormwater management ponds, buildings or other structures, wetlands or other surface waters.
- W. For phased projects, provide a master development plan.

#### **IV. Construction Schedule and Techniques**

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should specifically include the following:

- A. Method for installing any pilings or seawall slabs;
- B. Schedule of implementation of temporary or permanent erosion and turbidity control measures;
- C. For projects that involve dredging or excavation in wetlands or other surface waters, describe the method of excavation, and the type of material to be excavated;
- D. For projects that involve fill in wetlands or other surface waters, describe the source and type of fill material to be used. For shoreline stabilization projects that involve the installation of riprap, state how these materials are to be placed, (i.e., individually or with heavy equipment) and whether the rocks will be underlain with filter cloth;
- E. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place (Note: a consumptive use or water use permit may be required);
- F. Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;
- G. Demolition plan for any existing structures to be removed; and
- H. Identify the schedule and party responsible for completing monitoring, record drawings, and as-built certifications for the project when completed.

#### **V. Drainage Information**

- A. Provide pre-development and post-development drainage calculations, signed and sealed by an appropriate registered professional, as follows:

1. Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basin;
  2. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table draw down;
  3. Receiving water elevations (normal, wet season, design storm);
  4. Design storms used including rainfall depth, duration, frequency, and distribution;
  5. Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);
  6. Stage-storage computations for any area such as a reservoir, close basin, detention area, or channel, used in storage routing;
  7. Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;
  8. Flood routings through on-site conveyance and storage areas;
  9. Water surface profiles in the primary drainage system for each required design storm event(s);
  10. Runoff peak rates and volumes discharged from the system for each required design storm event(s);
  11. Tail water history and justification (time and elevation); and
  12. Pump specifications and operating curves for range of possible operating conditions (if used in system).
- B. Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions;
- C. Provide the acreage, and percentages of the total project, of the following:
1. Impervious surfaces, excluding wetlands;
  2. Pervious surfaces (green areas, not including wetlands);
  3. Lakes, canals, retention areas, other open water areas; and
  4. Wetlands.
- D. Provide an engineering analysis of floodplain storage and conveyance (if applicable), including:
1. Hydraulic calculations for all proposed traversing works;
  2. Backwater water surface profiles showing upstream impact of traversing works;
  3. Location and volume of encroachment within regulated floodplain(s); and
  4. Plan for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.
- E. Provide an analysis of the water quality treatment system including:
1. A description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis; and

2. Construction plans and calculations that address stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria.

F. Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, two diskette copies, if available, and justification for model selection.

#### **VI. Operation and Maintenance and Legal Documentation**

A. Describe the overall maintenance and operation schedule for the proposed system.

B. Identify the entity that will be responsible for operating and maintaining the system in perpetuity if different than the permittee, a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance. If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system. If a property owner's association is the proposed operation and maintenance entity, provide copies of the articles of incorporation for the association and copies of the declaration, restrictive covenants, deed restrictions, or other operational documents that assign responsibility for the operation and maintenance of the system. Provide information ensuring the continued adequate access to the system for maintenance purposes. Before transfer of the system to the operating entity will be approved, the permittee must document that the transferee will be bound by all terms and conditions of the permit.

C. Provide copies of all proposed conservation easements, storm water management system easements, property owner's association documents, and plats for the property containing the proposed system.

D. Provide indication of how water and waste water service will be supplied. Letters of commitment from off-site suppliers must be included.

E. Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled by the applicant.

#### **VII. Water Use**

A. Will the surface water system be used for water supply, including landscape irrigation, or recreation.

B. If a Consumptive Use or Water Use permit has been issued for the project, state the permit number.

C. If no Consumptive Use or Water Use permit has been issued for the project, indicate if such a permit will be required and when the application for a permit will be submitted.

D. Indicate how any existing wells located within the project site will be utilized or abandoned.





TABLE 2  
 ON-SITE MITIGATION SUMMARY

MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVE		UPLAND PRESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
PROJECT TOTALS:												

CODES (multiple entries per cell not allowed): Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

COMMENTS:

TABLE 3  
 OFF-SITE MITIGATION SUMMARY

MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVE		UPLAND PRESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
PROJECT TOTALS:												

CODES (multiple entries per cell not allowed):  
 Target Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation



**Table 5: SHORELINE STABILIZATION**  
 IF YOU ARE CONSTRUCTING A SHORELINE STABILIZATION PROJECT, PLEASE PROVIDE THE  
 FOLLOWING:

Type of Stabilization Being Done	Length (in feet) of New	Length (in feet) of Replaced	Length (in feet) of Repaired	Length (in feet) of Removed	Slope: H: V:	Width of the Toe (in feet)
Vertical Seawall						
Seawall plus Rip-Rap						
Rip-Rap						
Rip-Rap plus Vegetation						
Other Type of Stabilization Being Done:						

Size of the Rip Rap: \_\_\_\_

Type of Rip Rap: \_\_\_\_

COMMENTS:

## SECTION E ATTACHMENT

### I. SITE INFORMATION

- a. Provide a map(s) of the project area and vicinity delineating USDA/SCS soil types;

*See Attachment E-1, USDA NRCS Soil Map (Drawing Number 148570-SS-0023).*

- b. Provide recent aerials, legible for photointerpretation with a scale of 1" = 400 ft, or more detailed, with project boundaries delineated on the aerial.

*See Attachment E-2, Plant Arrangement Aerial (Drawing Number 148570-SS-0008).*

- c. Identify the seasonal high water or mean high tide elevation and normal pool or mean low tide elevation for each on site wetland or surface water, including receiving waters into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.

*The Flood Rate Maps published by FEMA indicate that the access road is within the 100 year floodplain. Visual inspection indicates that there are typically no surface waters within the planned access road right of way. The water elevation for the wetlands is assumed to be at grade.*

- d. Identify the wet season high water tables at the locations representative of the entire project site. Include dates, datum, and methods used to determine these elevations.

*By field inspection, the wet season high groundwater elevation was found to be at approximately elevation 9 feet, National Geodetic Vertical Datum (NGVD) 29.*

### II. ENVIRONMENTAL CONSIDERATIONS

- a. Provide results of any wildlife surveys that have been conducted on the site, and provide any comments pertaining to the project from the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service.

*Vegetation and wildlife surveys, as well as a wetland delineation, have been conducted on the proposed project site and access corridor; species lists are included as Attachment E-3.*

*Copies of correspondence to the Florida Fish and Wildlife Conservation Commission (FFWCC), the US Fish and Wildlife Service (USFWS), and*

*the Florida Natural Areas Inventory (FNAI) are included in SCA Subsections 10.4.7, 10.1.4, and 10.4.8, respectively. In addition, the Florida Department of State's Division of Historical Resources was contacted regarding historic properties in the project area; refer to SCA Subsection 10.4.6.*

*Gopher tortoises (state threatened species) have been observed and located onsite but not in the access corridor.*

- b. Provide a description of how water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed.

*A portion of Wetland 1 (0.01 acre impact) and Wetland 2 (0.22 acre impact) will be filled for the access road; all other wetlands will remain undisturbed.*

*Water quantity and hydroperiod will be maintained in undisturbed areas by using pervious road materials and maintaining the existing drainage pattern (north to south). Water quality will be maintained during construction with silt fences, placed as shown on Drawing Number 149588-CSTE-S3920, Erosion Control Detail Sheet Layout, in SCA Appendix 3.8. Silt fences will prevent sediment and construction debris from reaching wetlands adjacent to the main site and corridors. All waste materials will be removed and properly disposed at reasonable intervals. Materials such as fuels and similar products will be stored appropriately to avoid spills and incidental releases to the environment. Fugitive dust emissions will be controlled with water sprays. Storm water discharges during operation will be below or equal to pre-development runoff rates per FDEP/SJRWMD regulations.*

- c. Provide a narrative description of any proposed mitigation plans, including purpose, maintenance, monitoring, and construction sequence and techniques, and estimated costs.

*JEA has proposed the wetlands Mitigation Plan described in Section 4.4.4.1 of this SCA.*

- d. Describe how boundaries of wetlands or other surface waters were determined. If there has ever been a jurisdictional declaratory statement, a formal wetland determination, a formal determination, a validated informal determination, or a revalidated jurisdictional determination, provide the identifying number.

*The project area was investigated in February 2008 for the presence of hydrophytic vegetation, hydric soils, and hydrologic indicators, by which the landward extent of wetland areas were determined. A formal wetland delineation was conducted by Black & Veatch and Norman Ecological*

***Consulting for the site and access road corridor, following the guidelines of the State (FAC 62-340) and Federal (1987 Corps Delineation Manual) in February 2008. See Attachment E-4, Wetland Survey Access Road (Drawing Number 148570-SS-0009).***

e. Impact Summary Tables:

1. For all projects, complete Table 1, 2 and 3 as applicable.

***Applicable tables have been completed and are part of this form.***

2. For docking facilities or other structures constructed over wetlands or other surface waters, provide the information requested in Table 4.

***Not applicable.***

3. For shoreline stabilization projects, provide the information requested in Table 5.

***Not applicable.***

### III. PLANS

Provide clear, detailed plans for the system including specifications, plan (overhead) views, cross sections (with the locations of the cross sections shown on the corresponding plan view), and profile (longitudinal) views of the proposed project. The plans must be signed and sealed by an appropriate registered professional as required by law. Plans must include a scale and a north arrow. These plans should show the following:

- a. Project area boundary and total land area, including distances and orientation from roads or other land mark.

***See Detail 1 of drawing 148570-SS-0008 in Attachment E-2.***

- b. Existing land use and land cover (acreage and percentages), and on-site natural communities, including wetlands and other surface waters, aquatic communities, and uplands. Use the Florida Land Use Cover & Classification System (FLUCCS) (Level 3) for projects proposed in the South Florida Water Management District, the St. Johns River Water Management District, and the Suwannee River Water Management District and use the National Wetlands Inventory (NWI) for projects proposed in the Southwest Florida Water Management District. Also identify each community with a unique identification number which must be consistent in all exhibits.

***All 12.4 acres of the proposed access road are currently designated as***



***FLUCCS code Driving Range (Golf)/182 and Transmission Line/832. See Figure 2.3-4, Vegetation Map in Section 2.3 of this SCA.***

- c. The existing topography extending at least 100 feet off the project area, and including adjacent wetlands and other surface waters. All topography shall include the location and a description of known benchmarks, referenced to NGVD. For systems waterward of the mean high water (MHW) or seasonal high water lines, show water depths, referenced to mean low water (MLW) in tidal areas or seasonal low water in non-tidal areas, and list the range between MHW and MLW. For docking facilities, indicate the distance to, location of, and depths of the nearest navigational channel and access routes to the channel.

***See Drawings 149588-CSTF-S3012 and S3013 within Appendix 3.8.***

- d. If the project is in the known flood plain of a stream or other water course, identify the flood plain boundary and approximate flooding elevation. Identify the 100-year flood elevation and floodplain boundary of any lake, stream, or other watercourse located on or adjacent to the site.

***See Attachment E-5, Drawing Number 148570-SS-0019 for the floodplain map of the area.***

- e. The boundaries of wetlands and other surface waters within the project area. Distinguish those wetlands and other surface waters that have been delineated by any binding jurisdictional determination.

***See Attachment E-4, Wetland Survey Access Road (Drawing Number 148570-SS-0009). No wetlands have yet received jurisdictional determination.***

- f. Proposed land use, land cover and natural communities (acreage and percentages), including wetlands and other surface waters, undisturbed uplands, aquatic communities, impervious surfaces, and water management areas. Use the same classification system and community identification number used in III (B) above.

***Proposed use and FLUCCS code of all 12.4 acres of the access road are Site Access Road/831..***

- g. Proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands.

***See Attachment E-4, Wetland Survey Access Road (Drawing Number 148570-SS-0009), Attachment E-6, Wetland Area 1 (Drawing Number 148570-SS-0020) and Attachment E-7, Wetland Disturbance Access Road (Drawing Number 148570-SS-0012). A total of 0.23 acre of wetlands will be permanently filled. No new connections to other surface waters or***

*wetlands are proposed.*

- h. Proposed buffer zones.

*See Appendix 3.8, Grading and Drainage Plans, Drawings Series 149588-CSTF-S3012 and S3013.*

- i. Pre and post-development drainage patterns and basin boundaries showing the direction of flows, including any off-site runoff being routed through or around the system; and connections between wetlands and other surface waters.

*See Attachment E-8, Drainage Patterns Pre-Development (Drawing Number 148570-SS-0016) and Attachment E-9, Drainage Patterns Post-Development (Drawing Number 148570-SS-0017).*

- j. Location of all water management areas with details of size, side slopes, and designed water depths.

*See Appendix 3.8, Grading and Drainage Plans, Drawings 149588-CSTF-S3012 and S3013.*

- k. Location and details of all water control structures, control elevations, any seasonal water level regulation schedules; and the location and description of benchmarks (minimum of one benchmark per structure).

*See Appendix 3.8, Grading and Drainage Plans, Drawings 149588-CSTF-S3012 and S3013.*

- l. Location, dimensions and elevations of all proposed structures, including docks, seawalls, utility lines, roads, and buildings.

*See Appendix 3.8, Grading and Drainage Plans, Drawings 149588-CSTF-S3012 and S3013.*

- m. Location, size, and design capacity of the internal water management facilities.

*See Appendix 3.8, Grading and Drainage Plans, Drawings 149588-CSTF-S3012 and S3013.*

- n. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes, and rights-of-way and easements for the existing drainage system, if any.

*No rights-of-way or easements will be required for water management purposes.*

- o. Receiving waters or surface water management systems into which runoff from the developed site will be discharged.

***Onsite discharge from the stormwater system runs through the unnamed creek to the north of the driving range and ultimately to Big Davis Creek.***

- p. Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions.

***Erosion and sediment control measures will be installed as necessary during construction to retard erosion and control sediment deposition as shown in Appendix 3.8, Erosion Control Drawing Plan - Area 2, Drawing 149588-CSTE- S3102.***

***Before construction begins, silt fence or other appropriate control measures will be installed around the perimeter of construction areas. Drawing Number 149588-CSTE-S3920 in Appendix 3.8 of this SCA shows silt fence details. Construction access ways and parking areas will be surfaced with aggregate to provide a stabilized subgrade. Erosion control measures will also include minimizing fugitive dust through periodic spraying of water.***

**Staging of Earthmoving Activities**

***Initial construction will remove all significant vegetation (trees, brush, etc.). The stormwater management facilities will be constructed concurrently with clearing activities. Topsoil will be removed and stockpiled for finished grading and site restoration after construction is completed. Temporary and permanent stabilization methods will be used on the access corridor. Two major stabilization methods that will be used are preserving existing vegetation where possible and disturbing only the area needed for construction. Disturbed portions of the site will be stabilized within seven days after construction activity has temporarily or permanently ceased, with one exception – when construction will resume within 21 days. Stabilization practices may include temporary or permanent seeding, mulching, geotextiles, or aggregate to reduce sediment tracking. Permanent seeding and mulching activities will begin within 30 days of final grading. All materials associated with seed shall comply with Section 570 of the Florida Department of Transportation (FDOT) “Standard Specifications for Road and Bridge Construction.” (2007).***

- q. Location, grading, design water levels, and planting details of all mitigation areas.

***JEA has proposed the wetlands Mitigation Plan described in Section 4.4.4.1 of this SCA.***

- r. Site grading details, including perimeter site grading.

***See Appendix 3.8 of this SCA, Grading and Drainage Plans, Drawings 149588-CSTF-S3012 and S3013.***

- s. Disposal site for any excavated material, including temporary and permanent disposal sites.

***Excavated wetland soils will be placed in the wetland creation area. Disposal of excavated dry soils will be determined by the contractor.***

- t. Dewatering plan details.

***Dewatering methods will be determined by the contractor. JEA will require the contractor to secure a short term dewatering permit for such activities.***

- u. For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities, and fish cleaning stations.

***Not applicable.***

- v. Location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and building or other structures) which might be affected by or affect the proposed construction or development.

***The areas "upstream" (north) of the corridor are lawn-like areas. The areas "downstream" (south) are developed areas (Philips Highway). Upstream areas should not affect project development. Downstream areas should not be affected by project development due to construction and operations stormwater management efforts.***

- w. For phased projects, provide a master development plan.

***The access road will not be a phased project.***

#### **IV. CONSTRUCTION SCHEDULE AND TECHNIQUES**

Provide a construction schedule, and a description of construction techniques, sequencing, and equipment. This information should specifically include the following:

***CONSTRUCTION SCHEDULE:***

***Install erosion and sediment control measures***

***Rough grade construction areas***

***Construct stormwater collection system***

***Finish road/impervious areas/final grading***

- a. Method for installing any pilings or seawall slabs;

*N/A*

- b. Schedule of implementation of a temporary or permanent erosion and turbidity control measures;

*Erosion and sediment control measures will be installed as necessary during construction. Silt fencing or other appropriate control measures will be placed around the perimeter of the construction area and maintained as needed. Stormwater runoff from the construction area will primarily be directed to the proposed adjacent stormwater wet detention ponds. Areas not draining to the ponds will be collected in diversion ditches equipped with hay bale dikes to aid in minimizing sediments flowing offsite. Hay bales will also be installed at curb inlets and culvert inlets.*

- c. For projects that involve dredging or excavation in wetlands or other surface waters, describe the method of excavation, and the type of material to be excavated;

*The top soil, including any organic materials, will be removed from Wetlands 1 and 2 and stockpiled onsite for use in the wetland creation area. Special care will be taken to not disrupt remaining wetlands.*

- d. For projects that involve fill in wetlands or other surface waters, describe the source and type of fill material to be used. For shoreline stabilization projects that involve the installation of riprap, state how these materials are to be placed, (i.e., individually or with heavy equipment), and whether the rocks will be underlain with filter cloth;

*The wetland areas that will remain after construction will not require fill material. Soils containing organic materials from existing wetlands in proposed fill areas will be removed and disposed of offsite or stockpiled onsite. Fill material will consist of suitable existing onsite cut material.*

- e. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place.

*Dewatering details will be determined at a later date. A short-term dewatering permit application will be submitted requesting the authority to dewater, as necessary. All discharge from dewatering activities will be directed to the onsite storm water management facilities for treatment prior to discharge.*

- f. Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;

*Trucks will be used for transporting the majority of materials to and from the work site. Access to the plant will be from Phillips Highway.*

*No adverse direct or secondary impacts to wildlife are expected from development or use of the access road. The corridor is entirely within the previously active driving range area and maintained transmission line corridor.*

- g. Demolition plan for any existing structures to be removed; and

*Construction of the access road will require the removal of the existing driving range facilities, including clubhouse and maintenance sheds. Debris will be removed to an authorized landfill.*

- h. Identify the schedule and party responsible for completing monitoring, record drawings, and as-built certifications for the project when completed.

*JEA will be monitoring the construction and providing construction management services at the site. JEA will be providing an owner's engineer (at this phase of the project one has not been selected) to provide management and coordination for the owner. EPC contractor will be the engineer of record and, therefore, will be providing certified as-built drawings. Conformed to Construction Record drawings will be completed 90 days after completion of all construction activities.*

## V. DRAINAGE INFORMATION

- a. Provide pre-development and post-development drainage calculations, signed and sealed by an appropriate registered professional, as follows:

*Except where noted otherwise, this information is included in the storm water system and hydraulic conveyance calculation sets provided in Appendix 3.8 of this SCA.*

1. Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basin;

*See Calculation 149588.52.5406.1101.05 for Pre-Development Stormwater flow patterns and Calculation 149588.52.5406.1101.06 for Post-Development Stormwater flow patterns within Appendix 3.8 of this SCA.*

2. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table drawdown;

***High Ground Water Table Elevation = 9 feet.***

3. Receiving water elevations (normal, wet season, design storm);

***The site discharge area is normally dry and drains to an unnamed tributary to Big Davis Creek to the south. The water will discharge from the site at approximately elevation 8 feet NGVD.***

4. Design storms used including rainfall depth, duration, frequency, and distribution;

***The site discharge has been verified for the 25-year frequency, 24-hour duration storm event as well as the Mean Storm event as directed by the St. Johns River Water Management District. The 100-year frequency, 24-hour duration storm was also used to verify the detention basins would not be overtopped.***

5. Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);

***See Calculation 149588.52.5406.1101.05 for Pre-Development Stormwater runoff discharge and calculation 149588.52.5406.1101.06 for Post-Development Stormwater runoff discharge within Appendix 3.8 of this SCA.***

6. Stage-storage computations for any area such as a reservoir, close basin, detention area, or channel, used in storage routing;

***See Calculation 149588.52.5406.1101.06 within Appendix 3.8 of this SCA.***

7. Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;

***See Calculation 149588.52.5406.1101.06 within Appendix 3.8 of this SCA.***

8. Flood routings through on-site conveyance and storage areas;

***See Appendix 3.8 of this SCA, Grading and Drainage Plans, Drawings 149588-CSTF-S3012 and S3013.***

9. Water surface profiles in the primary drainage system for each required design storm event(s);

*See Calculation 149588.52.5406.1101.06 within Appendix 3.8 of this SCA.*

10. Runoff peak rates and volumes discharged from the system for each required design storm event(s);

*See Calculation 149588.52.5406.1101.06 within Appendix 3.8 of this SCA.*

11. Tail water history and justification (time and elevation) and;

*As discussed in question #3, the discharge area is normally dry, therefore the stormwater discharge at the location is assumed to be normal depth for the channel.*

12. Pump specifications and operating curves for range of possible operating conditions (if used in system).

*Not applicable.*

- b. Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions;

*A double ring infiltrometer test was performed on the power plant site resulting in an average stabilized infiltration rate of 16.6 inches per hour. Results are indicated in Appendix G of the JEA Greenland Energy Center, Jacksonville, Florida, Geotechnical Report, Revision 0, May 2008, available upon request.*

*Soil boring logs are located in Appendix B of the Geotechnical Report.*

- c. Provide the acreage, and percentages of the total project, of the following:

1. Impervious surfaces, excluding wetlands.

*2.78 acres (22.4%)*

2. Pervious surfaces (green areas not including wetlands).

*8.65 acres (69.8%)*

3. Lakes, canals, retention areas, other open water areas.

*0.75 acres (6.0%)*



4. Wetlands.

*0.22 acres (1.8%)*

d. Provide an engineering analysis of floodplain storage and conveyance (if applicable), including:

1. Hydraulic calculations for all proposed traversing works;

*See Calculation 149588.52.5406.1101.06 within Appendix 3.8 of this SCA.*

2. Backwater water surface profiles showing upstream impact of traversing works;

*Not applicable.*

3. Location and volume of encroachment within regulated floodplain(s); and

*See Attachment E-5, New Entrance Road, Drawing Number 148570-SS-0019 for the floodplain map of the access road.*

4. Plan for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.

*The access road is currently within the 100 year floodplain. The floodplain storage lost by the construction of the access road will be compensated by reducing the grade to the north of the access road within the property boundary. See Drawings 149588-CSTF-S3012 and S3013 within Appendix 3.8 of this SCA for the grading plan of this area.*

e. Provide an analysis of the water quality treatment system including:

1. A description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis; and

*Two wet detention ponds will be utilized to provide water storage and treatment requirements. The first 2 ½ inches of storm water runoff from the impervious area will be treated by restricting the discharge, allowing only ½ of the required storage volume to discharge between 24 and 30 hours. The permanent pool volume is designed to allow at least a 21-day residence time during the wet season, 1 ½ times greater than the required 14-day residence time*

*in lieu of establishing a littoral zone. The pond length to width ratio is greater than 2:1, promoting good pollution removal efficiency.*

2. Construction plans and calculations that address stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria.

*See Appendix 3.8, Calculation 149588.52.5406.1101.06 and Grading and Drainage Plans, Drawings 149588-CSTF-S3012 and S3013.*

- f. Provide a description of the engineering methodology, assumptions, and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, two diskette copies, if available, and justification for model selection.

*See Calculation 149588.52.5406.1101.06 within Appendix 3.8 of this SCA.*

## **VI. OPERATION AND MAINTENANCE AND LEGAL DOCUMENTATION**

- a. Describe the overall maintenance and operation schedule for the proposed system.

*The storm water management system will be visually inspected weekly during construction and operation to identify problems and complete maintenance on an as needed basis.*

- b. Identify the entity that will be responsible for operating and maintaining the system in perpetuity if different than the permittee, a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long term maintenance. If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system. If a property owner's association is the proposed operation and maintenance entity, provide copies of the articles of incorporation for the association and copies of the declaration, restrictive covenants, deed restrictions, or other operational documents that assign responsibility for the operation and maintenance of the system. Provide information ensuring the continued adequate access to the system for maintenance purposes. Before transfer of the system to the operating entity will be approved, the permittee must document that the transferee will be bound by all terms and conditions of the permit.

*JEA will be responsible for operating and maintaining the storm water management system.*

- c. Provide copies of all proposed conservation easements, storm water management system easements, property owner's association documents, and plats for the property containing the proposed system.

*Conservation Easement under consideration by FDEP-NE District office..*

- d. Provide indication of how water and waste water service will be supplied. Letters of commitment from off-site suppliers must be included.

*Potable, reclaimed, and sanitary services will be provided by JEA.*

- e. Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled the applicant.

*Boundary surveys of the access road and the plant site have been previously provided to FDEP-NE District office. See Attachment E-10.*

## VII. WATER-USE

- a. Will the surface water system be used for water supply, including landscape irrigation, recreation, etc.?

*No.*

- b. If a Consumptive Use or Water Use permit has been issued for the project, state the permit number.

*Not Applicable.*

- c. If no Consumptive Use or Water Use permit has been issued for the project, indicate if such a permit will be required and when the application for a permit will be submitted.

*No Consumptive Use Permit will be required for this access road project. (Conversion project permit application is in Section 10.4.10 of this SCA.)*

- d. Indicate how any existing wells located within the project site will be utilized or abandoned.

*No existing wells are located on the project site.*

## VIII. SPECIAL BASIN INFORMATION      *NOT APPLICABLE*

- a. Wekiva River Hydrologic Basin-For projects within the Wekiva River Hydrologic Basin (basin boundary defined in Chapter 40C-41, F.A.C),

provide design analysis to demonstrate compliance with Wekiva River Hydrologic Basin criteria, including:

1. Location and volume of encroachment within the 100-year floodplain, and plan for compensating storage;
  2. Detailed erosion and sediment control plan when the project is within the Water Quality Protection Zone or if the project exceeds 120 acres;
  3. Estimated pre- and post-development ground water table levels when any part of the project is located within the Water Quantity Protection Zone;
  4. Delineation and assessment of the Riparian Habitat Protection Zone and impacts; and
  5. Submittal of the Local Government Notification form when any part of the system/project is within the Wekiva River Protection Area.
- b. Wekiva Recharge Protection Basin – For projects within the Wekiva Recharge Protection Basin (basin boundary defined in Chapter 40C-41, F.A.C.), provide design analysis to demonstrate compliance with Wekiva Recharge Protection criteria, including: pre- and post-development recharge from the project area.
- c. Econlockhatchee River Hydrologic Basin-For projects within the Econlockhatchee River Hydrologic Basin (basin boundary defined in Chapter 40C-41, F.A.C.), provide design analysis to demonstrate compliance with Econlockhatchee River Hydrologic Basin criteria, including:
1. Pre- and post-development runoff hydrograph for the mean annual and 25-year design storm;
  2. Location and volume of encroachment within the 100-year floodplain, and plan for compensating storage;
  3. Systems which serve a drainage area in excess of 10 acres must satisfy the Stormwater Management Standard; and
  4. Delineation and assessment of the Riparian Habitat Protection Zone and impacts.
- d. Upper St. Johns River Hydrologic Basin and Ocklawaha River Hydrologic Basin-For projects located within the Upper St. Johns River Hydrologic Basin or Ocklawaha River Hydrologic Basin (basin boundaries defined in Chapter 40C-41, F.A.C.); provide design analysis to demonstrate

compliance with the applicable Basin criteria, including:

1. Pre- and post-development runoff hydrograph analysis for the 10-year and 25-year design storm; and
  2. For systems using pump discharges, provide pre- and post-development total runoff volume for the 96-hour storm duration.
- e. Tomoka Rive Hydrologic Basin and Spruce Creek Hydrologic Basin - For projects within the Tomoka River Hydrologic Basin or Spruce Creek Hydrologic Basin (basin boundaries defined in Chapter 40C-41, F.A.C), provide design analysis to demonstrate compliance with the applicable Basin criteria, including:
1. Location and volume of encroachment within the 100-year floodplain, and plan for compensating storage;
  2. Estimated pre- and post-development ground water table levels when any part of the project is located within the Water Quantity Protection Zone; and
  3. Delineation and assessment of the Riparian Habitat Protection Zone and impacts.
- f. Karst Sensitive Areas Basin – For projects within the Karst Sensitive Areas Basin (basin defined in Chapter 40C-41, F.A.C.), provide design analysis to demonstrate compliance with Karst Sensitive Areas Basin criteria including:
1. Geologic borings and geologic sections through the retention basin area. A geologic boring should be performed at the point of maximum excavation within the basin;
  2. Location and description of limestone outcrops and any karst features, i.e., sinkholes or solution pipes which exist at the project site; and
  3. Inventory of existing wells within a 1000 foot radius of the stormwater basin.
- g. Lake Apopka Hydrologic Basin – For projects within the Lake Apopka Hydrologic Basin (basin boundary defined in Chapter 40C-41, F.A.C.) or that will discharge water to Lake Apopka or its tributaries provide design analysis to demonstrate compliance with the Lake Apopka Hydrologic Basin criteria, including: pre-development total phosphorus and post-development total phosphorus discharged from the project area.

**Table 1:  
PROJECT WETLAND (WL) AND OTHER SURFACE WATER (SW) SUMMARY**

WL & SW ID	WL & SW TYPE	WL & SW SIZE (+/-)	WL & SW NOT IMPACTED (+/-)	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION ID
				WL & SW TYPE	IMPACT SIZE	IMPACT CODE	WL & SW TYPE	IMPACT SIZE	IMPACT CODE	
<b>Access Road</b>										
<i>WL1</i>	<i>Forested</i>	<i>0.05 AC</i>	<i>0.04 AC</i>				<i>Forestd</i>	<i>0.01 AC</i>	<i>F</i>	
<i>SW1</i>	<i>Perennial</i>	<i>0.04 AC</i>	<i>0.04 AC</i>							
<i>OW1</i>	<i>Open Water</i>	<i>1.97 AC</i>	<i>1.97 AC</i>							
<i>WL2</i>	<i>Herbaceous,</i>	<i>0.54 AC</i>	<i>0.32 AC</i>				<i>Herb. isolated</i>	<i>0.22 AC</i>	<i>F</i>	
<i>SW2</i>	<i>Big Davis Creek</i>	<i>0.02 AC</i>	<i>0.02 AC</i>							
<i>WL3</i>	<i>Herbaceous</i>	<i>0.19 AC</i>	<i>0.19 AC</i>							

WL & SW ID	WL & SW TYPE	WL & SW SIZE	WL & SW NOT IMPACTED	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION ID
				WL & SW TYPE	IMPACT SIZE	IMPACT CODE	WL & SW TYPE	IMPACT SIZE	IMPACT CODE	
<i>Access Road (Continued)</i>										
<i>WL4</i>	<i>Herbaceous, contiguous</i>	<i>0.39 AC</i>	<i>0.39 AC</i>							
<i>WL5</i>	<i>Herbaceous, contiguous</i>	<i>0.76 AC</i>	<i>0.76 AC</i>							
<i>WL6</i>	<i>Herbaceous, contiguous</i>	<i>0.05 AC</i>	<i>0.05 AC</i>							
<i>WL7</i>	<i>Forested wetland</i>	<i>3.36 AC</i>	<i>3.36 AC</i>							
<i>WL8</i>	<i>Forested wetland</i>	<i>3.36 AC</i>	<i>3.36 AC</i>							
PROJECT TOTALS		<b><i>29.1 AC</i></b>	<b><i>28.4 AC</i></b>					<b><i>0.23 AC</i></b>		

Comments:

CODES (multiple entries per cell not allowed):

Wetland Type: from an established wetland classification system (see Section E, 111b.)

Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Reviewer: \_\_\_\_\_

**Table 2:  
PROJECT ON-SITE MITIGATION SUMMARY**

MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND RESERVE		UPLAND RESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
<i>Wetland 9</i>							13.6	<i>MH Forest</i>				
<i>Wetland 1</i>	0.2	MH Forest			0.04	<i>MH Forest</i>	0.04	<i>MH Forest</i>				
<b>PROJECT TOTALS</b>	0.2				0.04		13.64					

Comments:  
 CODES (multiple entries per cell not allowed):  
 Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

Reviewer: \_\_\_\_\_



**Table 3:  
PROJECT OFF-SITE MITIGATION SUMMARY**

MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND RESERVE		UPLAND RESERVE		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE
N/A												
PROJECT TOTALS												

Comments:  
 CODES (multiple entries per cell not allowed):  
 Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

Reviewer: \_\_\_\_\_

**Table 4:**

**If you are constructing a docking facility, please provide the following:  
 NOT APPLICABLE**

Structures	Type of Work*	Length**	Width**	Height**	Total Sq. ft. over water	# Proposed Slips	# Existing Slips
Docks/Piers/Number:							
Finer Piers/Number:							
Other Water Structures							
Total:							

**\*Type of Work = N-New; R-Replaced; O-Other; RR-Removed; A-Altered/Modified**

**\*\*In Feet**

**Use of**

**Structure:** \_\_\_\_\_

**Will the docking facility provide:**

Livaboard Slips? If yes, Number: \_\_\_\_\_

Fueling Facilities: If yes, Number: \_\_\_\_\_

Sewage Pump-out Facilities? If yes, Number: \_\_\_\_\_

Other Supplies or Services Required for Boating (excluding refreshments, bait and tackle)

\_\_\_\_\_ Yes \_\_\_\_\_ No

**Type of Materials for Docking and Pilings (i.e., CCA, pressure treated wood, plastic, or concrete):**

Pilings \_\_\_\_\_

Docking \_\_\_\_\_ Proposed Dock Plank Spacing (if applicable) \_\_\_\_\_

**Proposed Size (length and draft), Type, and Number of Boats Expected to Use or Proposed to be Mooring at the facility):**

**Table 5:  
SHORELINE STABILIZATION**

**If you are constructing a shoreline stabilization project, please provide the following:  
*NOT APPLICABLE***

Stabilization	Linear Ft. New	Linear Ft. Replaced	Linear Ft. Repaired	Linear Ft. Removed	Slope H: V:	Toe Width (ft)
Vertical Seawall						
Seawall + Rip Rap						
Rip Rap						
Rip Rap + Vegetation						
Other Shoreline Stabilization Type _____						

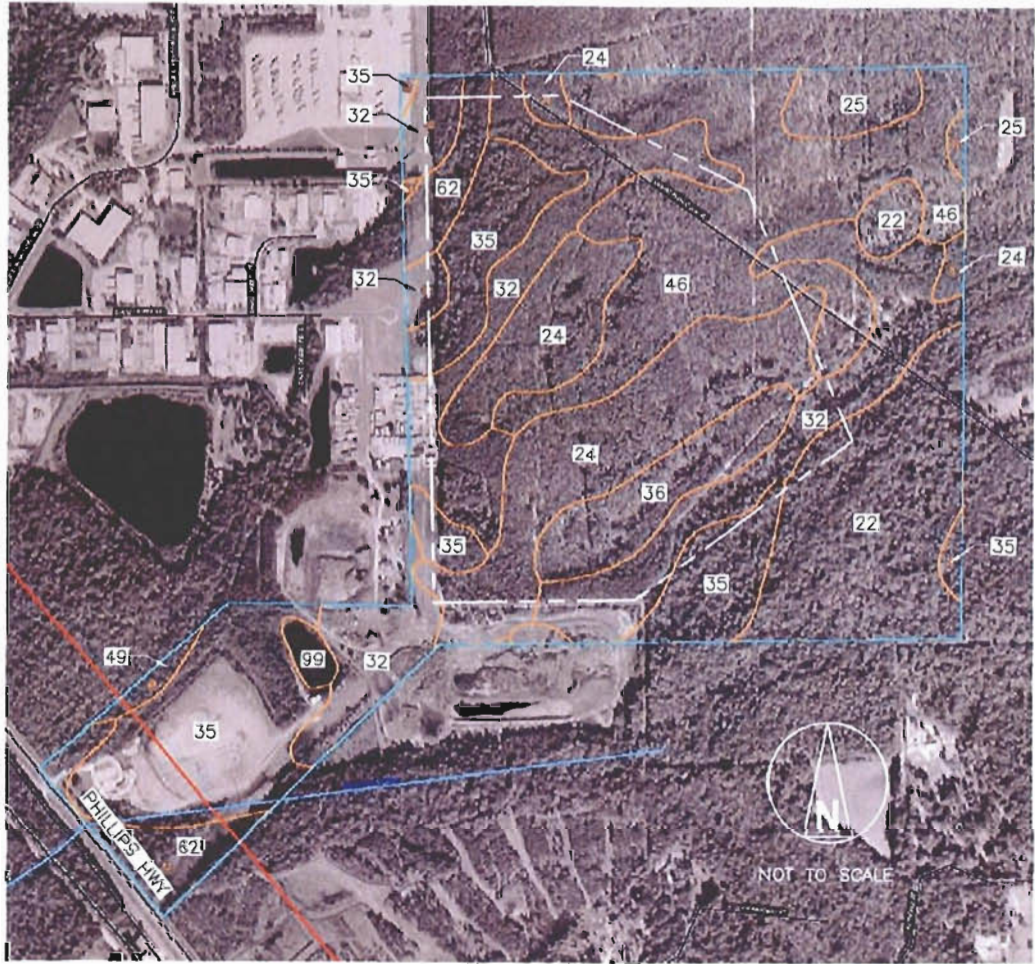
Size of Rip Rap

---

Type of Rip Rap

---

USDA NRCS Soil Map, Attachment E-1



**Map Unit Legend**

Duval County, Florida (FL031)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
22	Evergreen, Wiscasset complex, cypress soil, 0 to 2 percent slopes	38.5	12.9%
24	Fluviacene and Jacqwood soils, 0 to 5 percent slopes	47.7	16.0%
25	Karshaw fine sand, 0 to 5 percent slopes	7.1	2.4%
32	Loe fine sand, 0 to 2 percent slopes	83.4	28.4%
35	Lynn fine sand, 0 to 2 percent slopes	64.8	22.5%
36	Mandarin fine sand, 0 to 2 percent slopes	43.0	14.7%
46	Orlando fine sand, 0 to 5 percent slopes	55.3	18.7%
49	Panico silt, clayey sand, 0 to 1 percent slopes	1.0	0.3%
98	Shades of Turkey fine sand, 0 to 2 percent slopes, sparsely wooded	13.7	4.6%
99	Water	1.9	0.6%
Totals for Area of Interest (AOI)		298.3	100.0%

**LEGEND**

- — — — — PROPERTY BOUNDARY
- — — — — SOIL BOUNDARY

SOURCE OF MAP: NATURAL RESOURCES CONSERVATION SERVICE  
 WEB SOIL SURVEY URL: <http://websoilsurvey.nrcs.usda.gov>  
 COORDINATE SYSTEM: UTM ZONE 17N

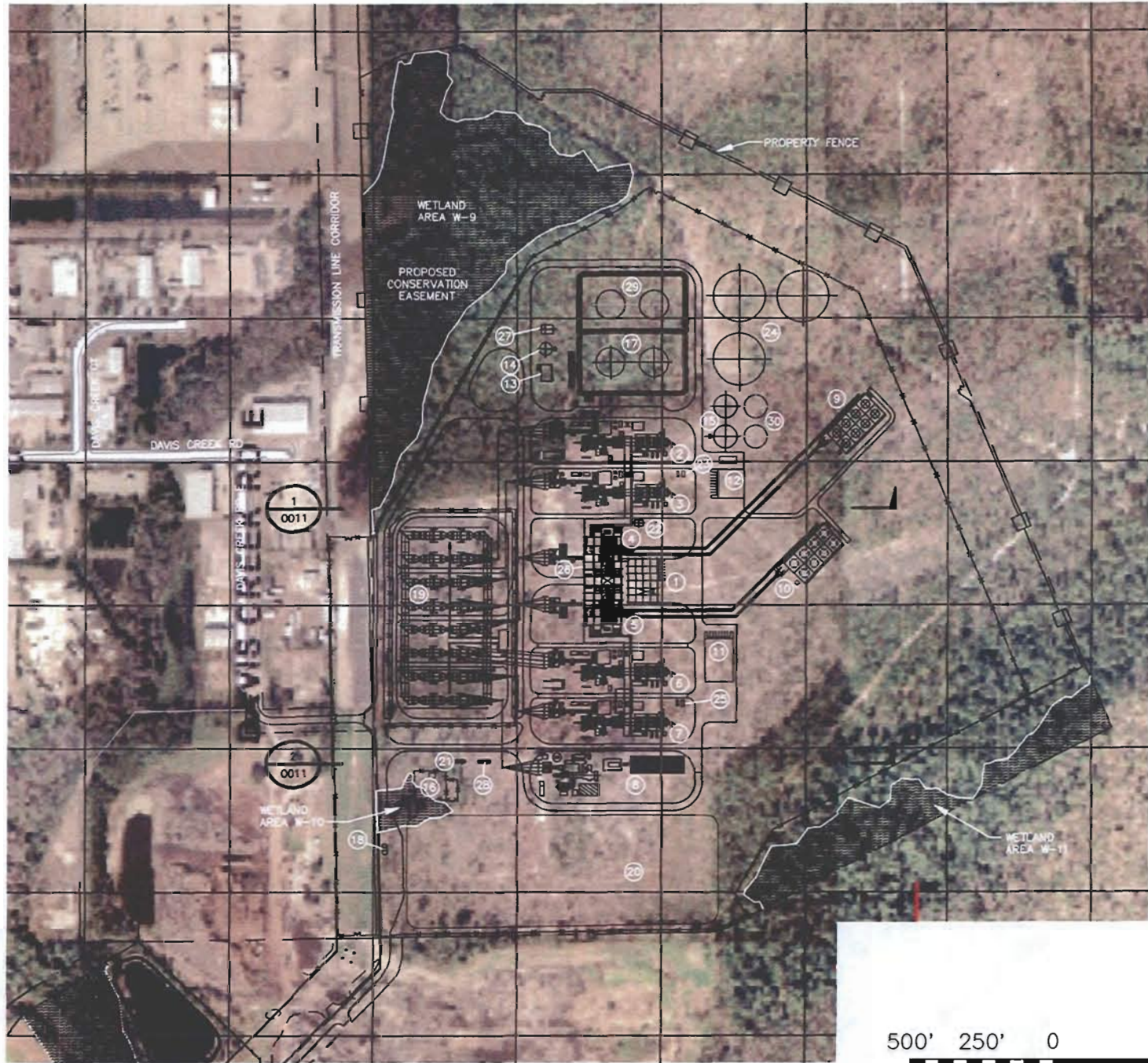
THIS PRODUCT IS GENERATED FROM THE USDA-NRCS CERTIFIED DATA AS OF THE VERSION DATE(S) LISTED BELOW.

SOIL SURVEY AREA: DUVAL COUNTY, FLORIDA  
 SURVEY AREA DATA: VERSION 5, NOV. 14, 2006

MCR44608 ACAD 16.1s (LMS Tech)  
 A1ASL012 B1 1=1  
 06/03/08 15:39:10

				<b>BLACK &amp; VEATCH CORPORATION</b>		JEA GREENLAND ENERGY CENTER		PROJECT 148570-SS-0023	DRAWING NUMBER A	REV A
A	06-03-2008	INITIAL REVIEW	JKM	MJT	JMS	SOIL MAP		CODE	<b>ATTACHMENT E-1</b>	
NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK			PDE		
			ENGINEER	MJT	DRAWN	JKM				
			CHECKED	DATE						

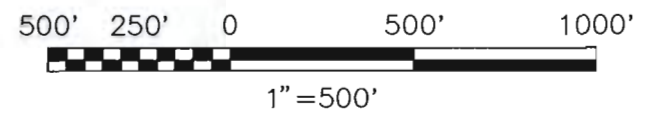
Plant Arrangement Aerial, Attachment E-2



FACILITIES LEGEND	
ITEM NO	DESCRIPTION
1	ADMIN/CONTROL/MAINTENANCE BUILDING (26,250 SF)
2	COMBUSTION TURBINE NO 1
3	COMBUSTION TURBINE NO 2
4	STEAM TURBINE NO 3
5	STEAM TURBINE NO 6
6	COMBUSTION TURBINE NO 4
7	COMBUSTION TURBINE NO 5
8	COMBUSTION TURBINE NO 7
9	COOLING TOWER
10	COOLING TOWER
11	WAREHOUSE (14,000 SF)
12	WATER TREATMENT BUILDING (9,000 SF)
13	AMMONIA STORAGE TANK & TRANSFER PUMPS
14	SERVICE / FIRE WATER TANK
15	DEMIN WATER TANKS - 3 DAY STORAGE (1,800,000 GAL TOTAL)
16	GAS METERING STATION
17	FUEL OIL TANKS W/CONTAINMENT (3,750,000 GAL TOTAL)
18	GUARD SHACK
19	230 KV SUBSTATION
20	DETENTION POND
21	FUEL GAS HEATER
22	DIESEL GENERATOR
23	OIL WATER SEPARATOR
24	REUSE SURGE TANK (5,000,000 GAL)
25	OIL WATER SEPARATOR
26	STEAM TURBINE BUILDING
27	FIRE PUMP BUILDING
28	FUEL GAS HEATER
29	FUEL OIL TANKS
30	DEMIN WATER TANKS

GENERAL LEGEND	
	6' HIGH CHAIN LINK SECURITY FENCE
	BARBED WIRE FENCE
	PROPERTY LINE



DETAIL 1  
SITE ACCESS ROAD

MCR44608 ACAD 16.1s (LMS Tech)  
 A1ASL012 B1 1=1  
 08/11/08 13:20:32

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
F	07/18/08	SCA ISSUE		JKM	MJT		JMS
E	06/10/08	WETLAND UPDATE		JKM	MJT		JMS
D	06/06/08	ENTRANCE ROAD UPDATE		JKM	MJT		JMS
C	05/30/08	ENTRANCE ROAD UPDATE		JKM	MJT		JMS

**BLACK & VEATCH CORPORATION**

ENGINEER: MJT      DRAWN: JKM

CHECKED: \_\_\_\_\_      DATE: \_\_\_\_\_

JEA  
GREENLAND ENERGY CENTER

PLANT ARRANGEMENT  
ULTIMATE SITE ARRANGEMENT

PROJECT	DRAWING NUMBER	REV
	148570-SS-0008	F
CODE		
AREA		

Vegetation and Wildlife Surveys, Attachment E-3



**Plants Observed at Proposed JEA Greenland Energy Center Site  
September 25, 2007, January 7-11, 2008, and February 20-22, 2008**

Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Acer rubrum L.</i>	Red Maple		x			OBL
<i>Alisma subcordatum</i>	Subcordate Water Plantain			x		OBL
<i>Ambrosia artemisiifolia</i>	Annual Ragweed			x	x	FACU
<i>Andropogon glomeratus</i>	Bushy Bluestem			x	x	FACW+
<i>Andropogon ternarius</i>	Silver Bluestem	x			x	FACU
<i>Andropogon virginicus</i>	Broom-sedge	x		x	x	FAC-
<i>Aristida spicata</i>	Pineland Three-awn Grass	x				FAC-
<i>Asimina reticulata</i>	Pawpaw	x				FACU
<i>Aster elliotii</i>	Elliott's Aster			x	x	OBL
<i>Baccharis halimifolia</i>	Groundsel-tree			x		FACW
<i>Bidens leucantha</i>	Spanish Needles			x	x	--
<i>Buchnera americana</i>	Blueheart	x			x	FAC
<i>Carex spp.</i>	Sedge		x	x	x	FAC-OBL
<i>Carphephorus corymbosus</i>	Coastal Plain Chaffhead	x				FACU
<i>Centella asiatica</i>	Asian Coinwort			x	x	OBL
<i>Cenchrus echinatus</i>	Southern Sandspur				x	UPL
<i>Centrostema virginianum</i>	Spurred Butterfly Pea				x	UPL
<i>Ceratiola ericoides</i>	Rosemary	x				UPL
<i>Chamaecrista fasciculata</i>	Partridge-pea	x			x	UPL
<i>Chamaecrista procumbens</i>	Partridge-pea	x			x	UPL
<i>Cnidoscolus stimulosus</i>	Spurge-Nettle				x	UPL
<i>Conradina grandiflora</i>	Cumberland Rosemary	x				UPL
<i>Conyza canadensis</i>	Horsetail				x	FACU
<i>Crotalaria angulata</i>	Rabbitbells	x			x	FACU
<i>Cynodon dactylon</i>	Bermudagrass				x	FACU
<i>Cyperus esculentus</i>	Nut Sedge			x	x	FAC
<i>Cyperus ligularis</i>	Flat Sedge			x	x	FACW
<i>Cyperus ovularis</i>	Flat Sedge			x	x	FAC
<i>Desmodium sp.</i>	Tick-clover				x	--
<i>Dichanthelium sp</i>	Panic Grass	x			x	--
<i>Digitaria ciliaris</i>	Southern Crabgrass				x	UPL
<i>Digitaria sanguinalis</i>	Hairy Crabgrass				x	FAC-
<i>Diodia virginiana</i>	Virginia Button-weed			x		FACW
<i>Elephantopus carolinianus</i>	Elephant's Foot		x			FAC
<i>Elephantopus elatus</i>	Florida Elephant's Foot	x				FAC
<i>Eleocharis sp.</i>	Spike Rush			x	x	OBL
<i>Eleusine indica</i>	India Goosegrass				x	FACU
<i>Eragrostis elliotii</i>	Elliott's Lovegrass		x			FACW
<i>Erechtites hieracifolia</i>	Fireweed			x	x	FAC-
<i>Erigeron vernus</i>	Early Whitetop Fleabane			x		OBL
<i>Eryngium aromaticum</i>	Fragrant Eryngium	x				FACW?
<i>Eupatorium capillifolium</i>	Dog Fennel				x	FACU
<i>Eupatorium morhii</i> ( <i>E. recurvans</i> )	Coastal Plain Thorough-wort			x		FACW-
<i>Eupatorium rotundifolium</i>	False Hoarhound	x				FAC

Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Euthamia minor</i>	Slender Goldenrod	x			x	FAC
<i>Galactia elliotii</i>	Elliott's Milkpea	x				FACU
<i>Galactia regularis</i>	Eastern Milkpea	x				
<i>Galium tinctorium</i>	Stiff-marsh Bedstraw		x	x		FACW
<i>Geranium carolinianum</i>	Carolina cranesbill				x	UPL
<i>Gordonia lasianthus</i>	Loblolly Bay		x			FACW
<i>Hedyotis nigricans</i>	Diamond-flowers	x			x	UPL
<i>Hydrocotyle umbellata</i>	Many-flowered Pennywort			x	x	OBL
<i>Hyptis alata</i>	Cluster Bushmint			x		OBL
<i>Imperata cylindrica</i>	Cogon Grass				x	NL
<i>Indigofera miniata</i> var. <i>leptosepala</i>		x				UPL
<i>Indigofera hirsuta</i>	Hairy Indigo				x	UPL
<i>Ipomea hederacea</i>	Ivy-leaf Morning Glory				x	FAC-
<i>Ipomea pandurata</i>	Wild Potato Vine		x			FACU
<i>Iris</i> sp.	Blue Flag			x		OBL
<i>Iva microcephala</i>	Piedmont Sumpweed			x		FACW
<i>Juncus marginatus</i>	Grass-leaf Rush			x		FACW
<i>Juniperus virginiana</i>	Eastern Red Cedar				x	FACU-
<i>Lachnanthes caroliniana</i>	Carolina Redroot			x		OBL
<i>Lechea sessiliflora</i>	Pineland Pinweed	x				UPL
<i>Liatris tenuifolia</i>	Blazing Star	x				UPL
<i>Lindernia grandiflora</i>	False Pimpernel		x	x		OBL
<i>Linaria canadensis</i>	Blue Toadflax				x	UPL
<i>Liquidambar styraciflua</i>	Sweetgum		x			FAC+
<i>Lonicera sempervirens</i>	Coral Honeysuckle		x		x	FAC
<i>Ludwigia peruviana</i>	Water-primrose			x		OBL
<i>Ludwigia repens</i>	Creeping Seedbox			x		OBL
<i>Lyonia ferruginia</i>	Rusty Lyonia	x				FAC-
<i>Lyonia lucida</i>	Fetterbush		x			FACW
<i>Magnolia grandiflora</i>	Southern Magnolia		x			FAC+
<i>Magnolia virginica</i>	Sweet Bay		x			FACW+
<i>Myrica cerifera</i>	Wax-myrtle				x	FAC+
<i>Nuphar lutea</i>	Spatterdock			x		OBL
<i>Osmunda cinnamomea</i>	Cinnamon Fern		x	x		FACW+
<i>Osmunda regalis</i>	Royal Fern		x	x		OBL
<i>Panicum anceps</i>	Beaked Panicum			x		FAC-
<i>Panicum repens</i>	Torpedo Grass			x		FACW-
<i>Panicum rigidulum</i>	Redtop Panicum		x	x	x	FACW
<i>Paspalum notatum</i>	Bahia Grass				x	FACU+
<i>Paspalum setaceum</i>	Thin Paspalum				x	FAC
<i>Paspalum</i> sp.	Paspalum Grass				x	--
<i>Paspalum urvillei</i>	Vasey Grass			x	x	FAC
<i>Persea palustris</i>	Swamp Bay		x			NL
<i>Phorodendron serotinum</i>	Mistletoe	x		x		UPL
<i>Phyla nodiflora</i>	Frog Fruit			x		FACW
<i>Piloblephis rigidus</i>	False Pennyroyal	x				UPL
<i>Pinus clausa</i>	Sand Pine	x				UPL
<i>Pinus elliotii</i>	Slash Pine		x			FACW

Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Pinus palustris</i>	Longleaf Pine		x			FACU+
<i>Polypodium polypodioides</i>	Resurrection Fern	x	x			UPL
<i>Polypremum procumbens</i>	Rustweed	x				FACU-
<i>Pteridium aquilinum</i>	Bracken	x			x	FACU
<i>Pterocaulon virgatum</i>	Blackroot	x			x	FAC-
<i>Quamoclit coccinea</i>	Cypress Vine				x	FACU+
<i>Quercus geminata</i>	Scrub Live Oak	x			x	UPL
<i>Quercus laevis</i>	Turkey Oak	x				UPL
<i>Quercus myrtifolia</i>	Myrtle Oak	x				UPL
<i>Quercus nigra</i>	Water Oak		x		x	FAC
<i>Rhexia sp.</i>	Meadow Beauty			x		--
<i>Rhexia mariana</i>	Pale Meadow Beauty			x	x	FACW+
<i>Rhynchospora sp.</i>	Beakrush	x	x	x		--
<i>Rhynchospora megalocarpa</i>	Giant-fruited Beakrush	x			x	UPL
<i>Rubus cuneifolius</i>	Sand Blackberry	x				FACU
<i>Rumex crispus</i>	Curly Dock			x	x	FAC
<i>Rumex hastatulus</i>	Heart-wing Sorrel				x	FAC-
<i>Rumex sp.</i>	Dock			x		FACW-OBL
<i>Sabal minor</i>	Dwarf Palmetto		x			FACW
<i>Sabatia brevifolia</i>	Short-leaf Rose Gentian		x			FACW
<i>Salix caroliniana</i>	Carolina Willow			x		OBL
<i>Sambucus canadensis</i>	American Elderberry			x	x	FACW-
<i>Saururus cernuus</i>	Lizard's Tail		x	x		OBL
<i>Schoenus nigricans</i>	Black Sedge		x			OBL
<i>Schrankia nuttallii</i>	Sensitive Briar				x	UPL
<i>Serenoa repens</i>	Saw Palmetto	x	x		x	FACU
<i>Setaria geniculata</i>	Knotroot Bristlegrass			x		FAC
<i>Sium suave</i>	Water-parsnip			x		OBL
<i>Smilax auriculata</i>	Catbrier	x				FACU
<i>Smilax bona-nox</i>	Catbrier	x			x	FAC
<i>Smilax laurifolia</i>	Catbrier		x			FACW
<i>Solidago canadensis</i>	Canadian Goldenrod			x	x	FACU
<i>Solidago fistulosa</i>	Pinebarren Goldenrod		x	x		FAC+
<i>Sonchus asper</i>	Prickly Sow Thistle				x	FAC+
<i>Sporobolus indicus</i>	Smutgrass				x	FACU+
<i>Stenotaphrum secundatum</i>	St. Augustine Grass			x	x	FAC
<i>Thelypteris kunthii</i>	Widespread Maiden Fern		x			FACW
<i>Tillandsia usneoides</i>	Spanish Moss	x	x			UPL
<i>Tradescantia roseolens</i>	Spiderwort	x				UPL
<i>Trifolium pratense</i>	Red Clover				x	FACU
<i>Trifolium repens</i>	White Clover				x	FACU
<i>Typha latifolia</i>	Broadleaf Cattails			x		OBL
<i>Ulmus americana</i>	American Elm		x			FACW
<i>Vaccinium arboreum</i>	Sparkleberry	x				FACU
<i>Vaccinium myrsinites</i>	Shiny Blueberry	x				FACU
<i>Viola sororia</i>	Woolly Blue Violet			x	x	FAC-
<i>Vitis shuttleworthii</i>	Calusa Grape		x		x	FAC
<i>Xyris caroliniana</i>	Yellow-eyed Grass	x				FACW

<sup>1</sup>Wetland Status refers to the Federal Wetland Indicator Status.

## WILDLIFE OBSERVATIONS

<b>Scientific Name</b>	<b>Common Name</b>
<i>Meleagris gallopavo</i>	Eastern wild turkey
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Buteo lineatus</i>	Red-shouldered hawk
<i>Corvus</i>	Crow
<i>Zenaida macroura</i>	Mourning dove
<i>Contopus virens</i>	Eastern wood peewee
<i>Lanius ludovicianus</i>	Loggerhead shrike
<i>Melanerpes carolinus</i>	Red bellied woodpecker
<i>Picoides villosus</i>	Downy woodpecker
<i>Dryocopus pileatus</i>	Pileated woodpecker
<i>Colaptes auratus</i>	Flicker
<i>Coragyps aura</i>	Turkey vulture
<i>Coragyps atratus</i>	Black vulture
<i>Mimus polyglottos</i>	Mockingbird
<i>Turdus migratorius</i>	Robin
<i>Dendrica coronata</i>	Yellow-rumped warbler
<i>Regulus calendula</i>	Ruby crowned kinglet
<i>Odocoileus virginianus</i>	White tailed deer
<i>Sus scrofa</i>	Feral hogs
<i>Procyon lotor</i>	Raccoon
<i>Didelphis virginiana</i>	Opossum
<i>Dasybus novemcinctus</i>	Armadillo
<i>Lynx rufus</i>	Bobcat
<i>Canis latrans</i>	Coyote
<i>Sylvilagus aquaticus</i>	Swamp rabbit
<i>Sciurus niger shermani</i>	Sherman's fox squirrel
<i>Sciurus carolinensis</i>	Gray squirrel
<i>Gopherus polyphemus</i>	Gopher tortoise

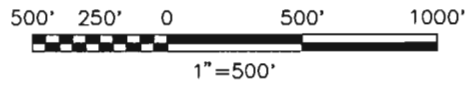
Wetland Survey Access Road, Attachment E-4



WETLAND AREA	AREA (ACRES)
W-1	0.05
W-2	0.54
W-3	0.19
W-4	0.39
W-5	0.76
W-6	0.05
W-7	3.36
W-8	3.36
S-1	-
S-2	-
OW-1	2.09

**LEGEND**

- PROPERTY BOUNDARY
- - - T-LINE ROW
- - - DRAINAGE
- ▨ WETLAND AREA

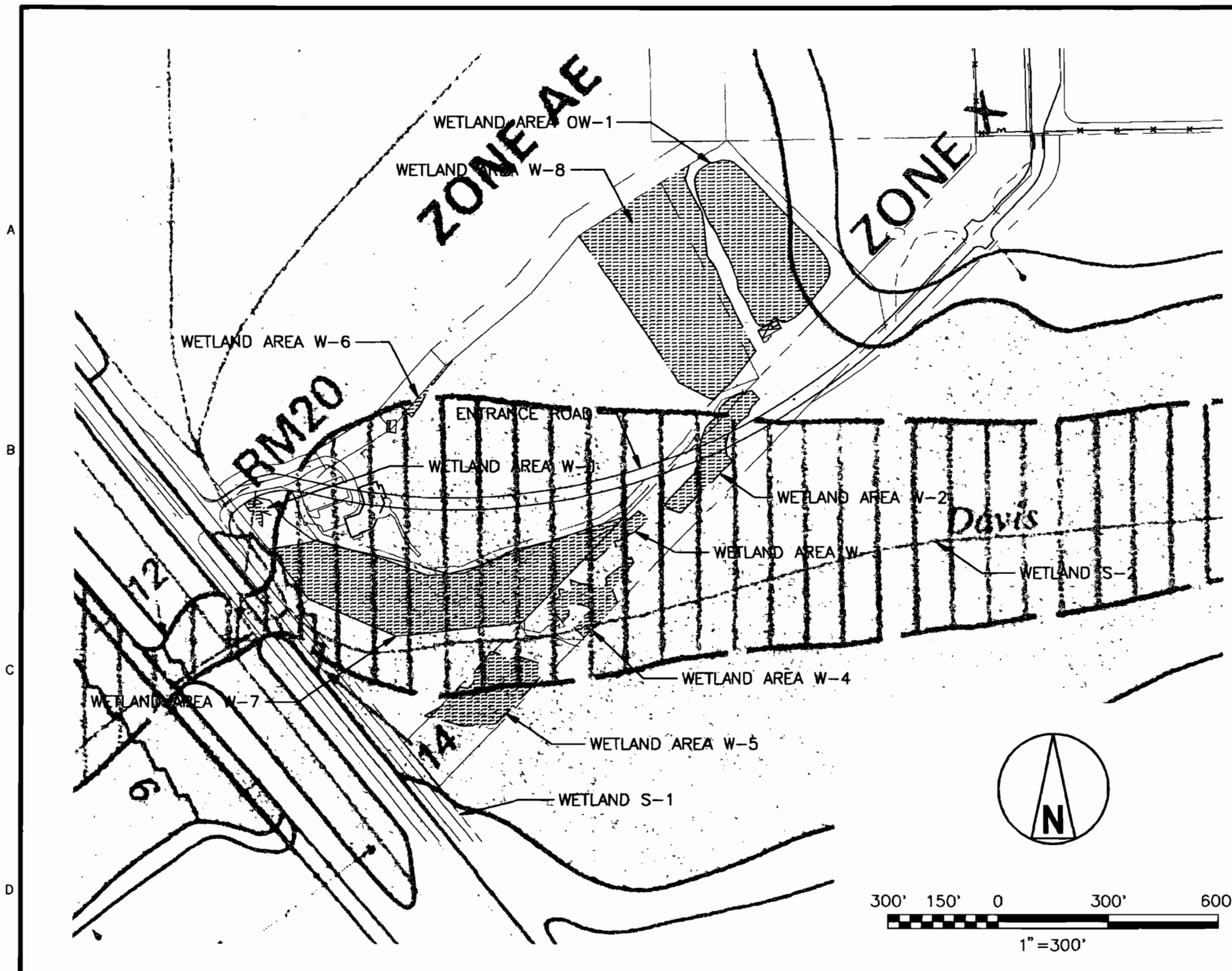


F	07/18/08	SCA ISSUE	JKM	MJT	JMS	D	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
E	06/06/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS	NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP

	<b>BLACK &amp; VEATCH CORPORATION</b>		<b>JEA</b> GREENLAND ENERGY CENTER				PROJECT DRAWING NUMBER 148570-SS-0009		REV F
	ENGINEER	DRAWN JK					WETLAND SURVEY ACCESS ROAD		CODE
CHECKED	DATE					AREA			

New Entrance Road, Attachment E-5

1 2 3 4 5 6 7



### LEGEND

	<b>SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD</b>
ZONE A	No base flood elevations determined
ZONE AE	Base flood elevations determined
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined
ZONE A0	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined; for areas of at least 1/4 acre, flood and velocity also determined
ZONE A99	Is not protected from 100-year flood by Federal flood protection system under construction; base flood elevations determined
ZONE V	Coastal flood with velocity hazard; wave action; base flood elevations determined
ZONE VE	Coastal flood with velocity hazard; wave action; base flood elevations determined
	<b>FLOODWAY AREAS IN ZONE AE</b>
	<b>OTHER FLOOD AREAS</b>
ZONE X	Areas of 100-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile and areas protected by levees from 100-year flood
	<b>OTHER AREAS</b>
ZONE X	Areas determined to be outside 100-year flood zone
ZONE D	Areas of flood hazard that are undetermined
	Flood Boundary
	Floodway Boundary
	Zone D Boundary
	Boundary Dividing Special Flood Hazard Zones, and Boundaries Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones
	Base Flood Elevation Line; Elevation in Feet*
	Cross Section Line
	Elevation Reference Mark
	River Mile
*Referenced to the National Geodetic Vertical Datum of 1929	

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D	07/18/08	SCA ISSUE	JKM	MJT	JMS		
C	06/06/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
B	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
A	04/25/08	INITIAL REVIEW	JKM	MJT	JMS		
NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP

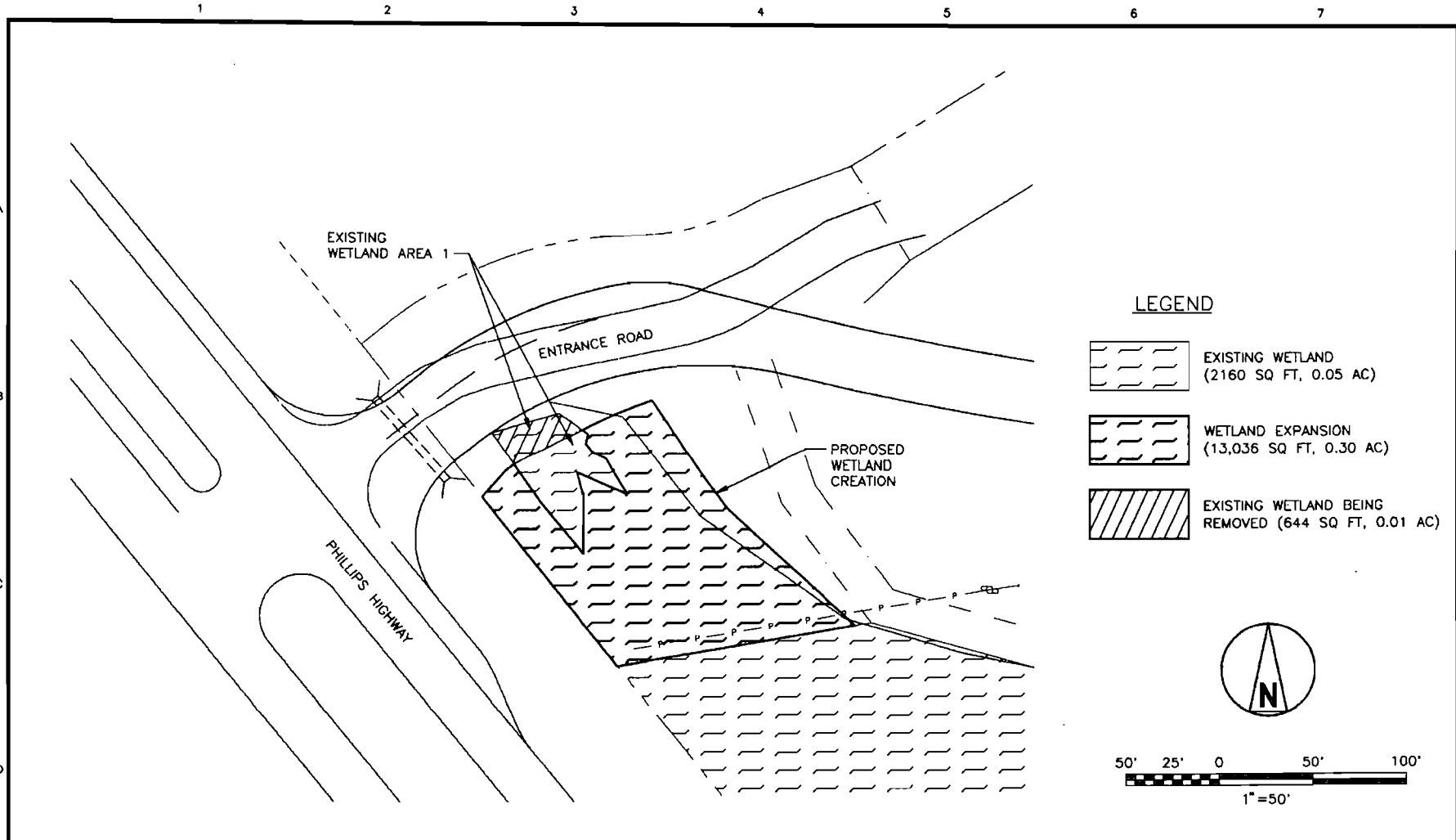
**BLACK & VEATCH CORPORATION**  
 ENGINEER MJT DRAWN JKM  
 CHECKED DATE

**JEA**  
 GREENLAND ENERGY CENTER  
 NEW ENTRANCE ROAD

PROJECT	DRAWING NUMBER	REV
	148570-SS-0019	D
CODE		
AREA		



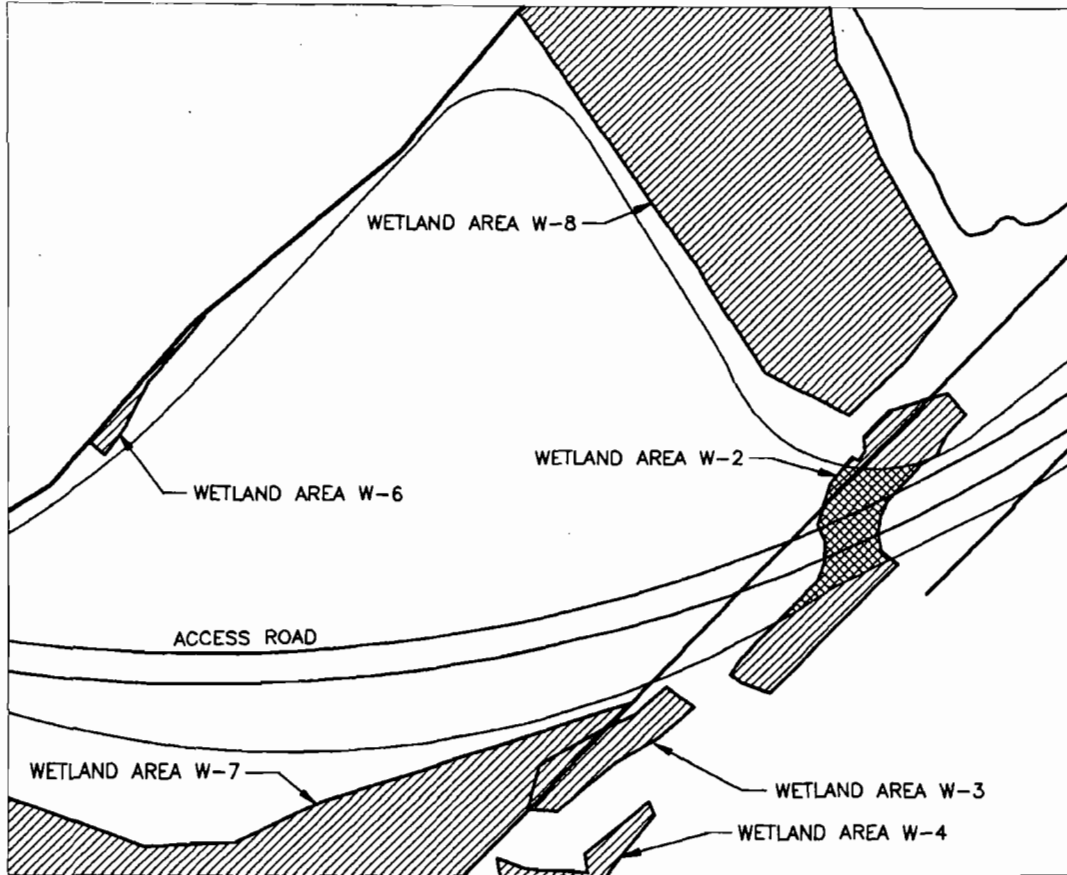
Wetland Area 1 Mitigation Area, Attachment E-6



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C	07/18/08	SCA ISSUE	JKM	MJT	JMS		ENGINEER	DRAWN	CODE		
B	06/10/08	WETLAND UPDATE	JKM	MJT	JMS		MJT	JKM	AREA		
NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK		PDE	APP	CHECKED	DATE	

Wetland Disturbance Access Road, Attachment E-7

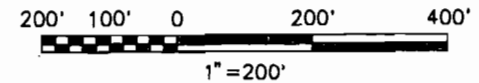


DISTURBED AREAS

WETLAND AREA W-2 - 0.22 ACRE IMPACT

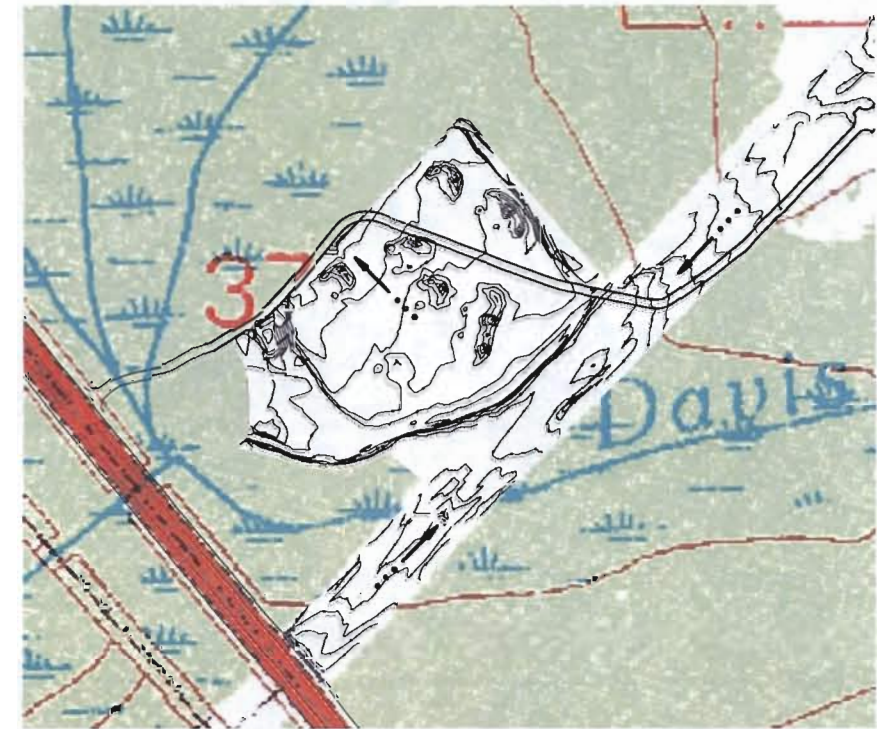
LEGEND

- PROPERTY BOUNDARY
- T-LINE ROW
- ACCESS ROAD CONSTRUCTION LIMIT
- ▨ WETLAND AREA
- ▩ DISTURBED WETLAND AREA

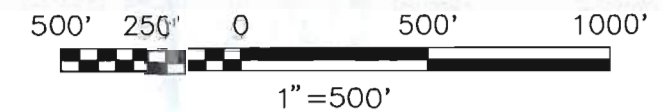


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H	08/20/08	GENERAL REVISION	MRR	MJT	JMS	NO	DATE	REVISIONS AND RECORD OF ISSUE	ORN	DES	CHK	POE	APP
			<b>JEA</b> GREENLAND ENERGY CENTER				PROJECT DRAWING NUMBER 148570-SS-0012			REV 1			
ENGINEER MJT		DRAWN JKM		WETLAND DISTURBANCE ACCESS ROAD				CODE					
CHECKED		DATE						AREA					

**Drainage Patterns Pre-Development, Attachment E-8**



DETAIL 1  
SITE ACCESS ROAD



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C	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
B	05/02/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
A	04/25/08	INITIAL REVIEW	JKM	MJT	JMS		


**BLACK & VEATCH**  
 CORPORATION

ENGINEER MJT DRAWN JKM  
 CHECKED DATE

JEA  
 GREENLAND ENERGY CENTER

DRAINAGE PATTERNS  
 PRE-DEVELOPMENT

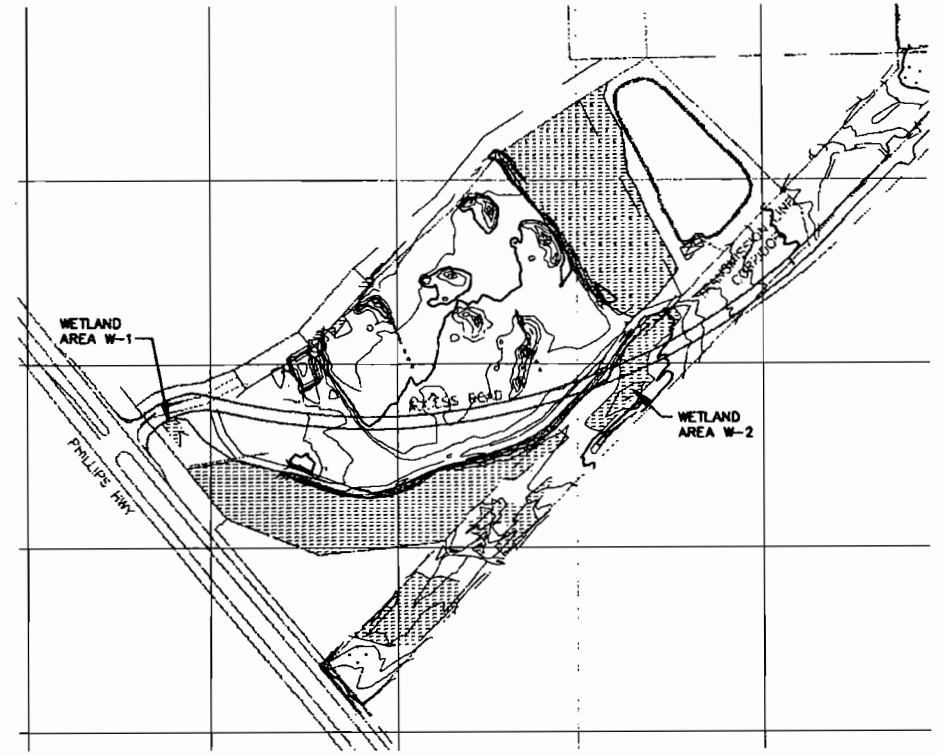
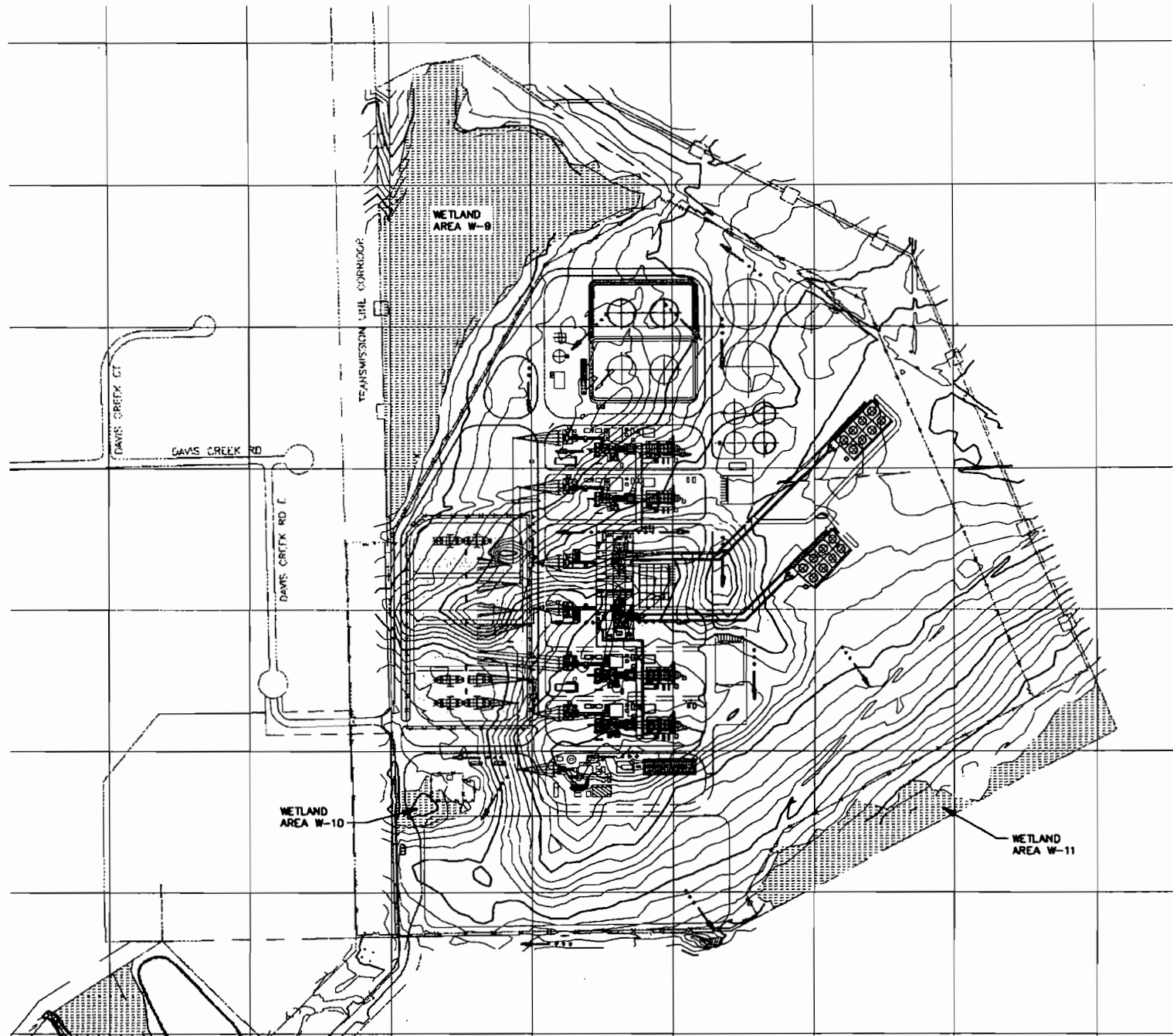
PROJECT	DRAWING NUMBER	REV
148570-SS-0016		D
CODE		
AREA		

**Drainage Patterns Post-Development Attachment E-9**

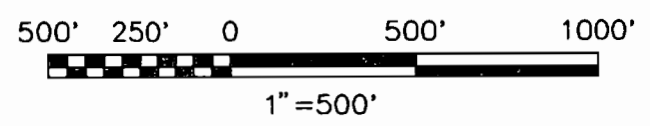
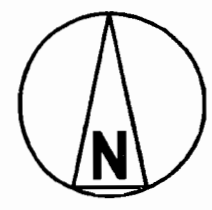
1 2 3 4 5 6 7

A  
B  
C  
D

A  
B  
C  
D



DETAIL 1  
SITE ACCESS ROAD



SEE DETAIL 1 FOR SITE ACCESS ROAD

MCR44608  
 ACAD 16.1s (LMS Tech)  
 A1ASL012 B1 1=1  
 08/11/08 13:23:19

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C	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS	
B	05/02/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS	
NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE APP



ENGINEER MJT      DRAWN JKM  
 CHECKED              DATE

JEA  
 GREENLAND ENERGY CENTER

DRAINAGE PATTERNS  
 POST-DEVELOPMENT

PROJECT	DRAWING NUMBER	REV
148570-SS-0017		E
CODE		
AREA		

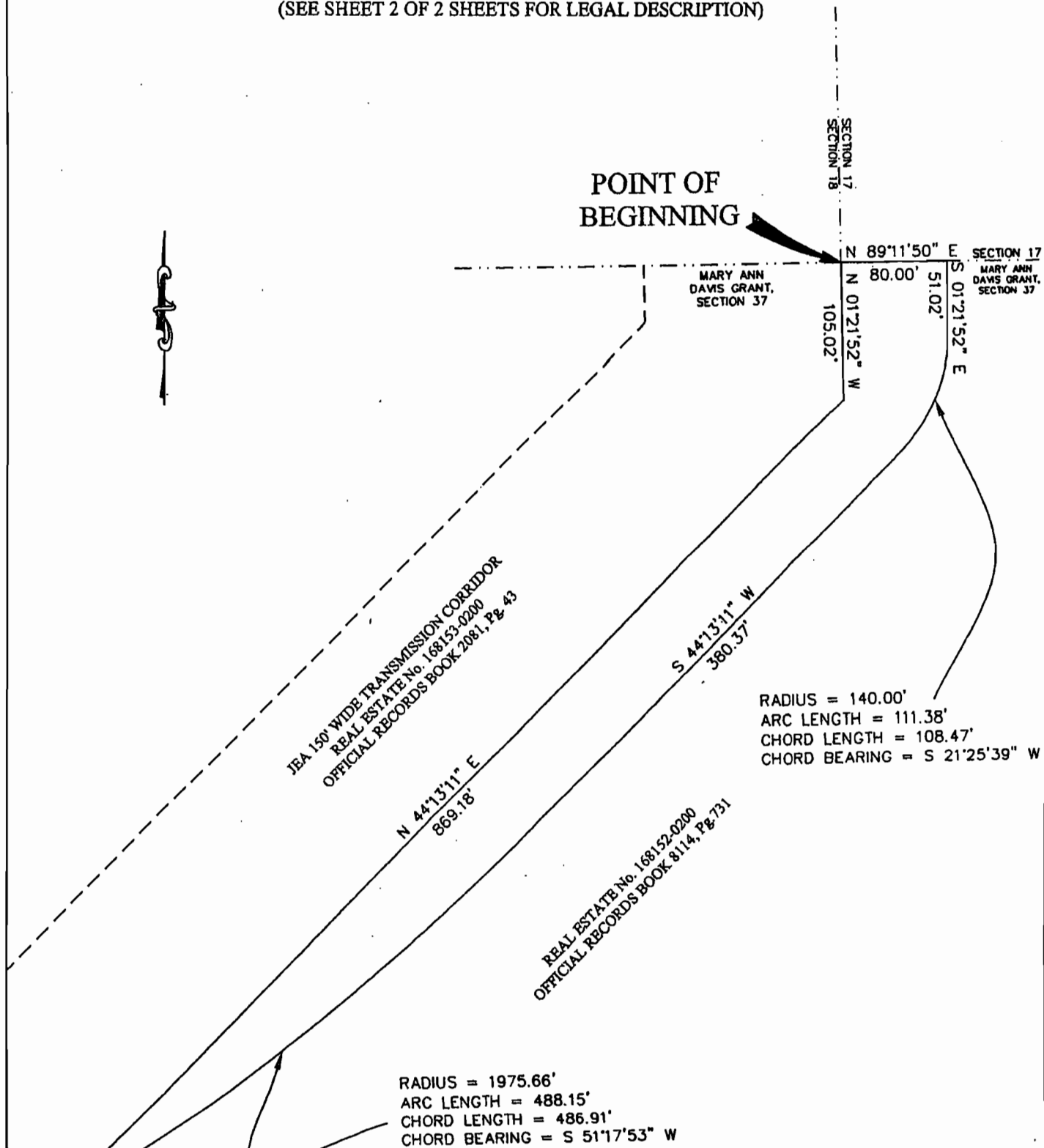


DeGrove Survey of Access Road, Attachment E-10

# MAP SHOWING SKETCH OF DESCRIPTION OF

A PORTION OF THE MARY ANN DAVIS GRANT SECTION 37, TOWNSHIP 4 SOUTH,  
RANGE 28 EAST, DUVAL COUNTY, FLORIDA.

(SEE SHEET 2 OF 2 SHEETS FOR LEGAL DESCRIPTION)



RADIUS = 1975.66'  
ARC LENGTH = 488.15'  
CHORD LENGTH = 486.91'  
CHORD BEARING = S 51°17'53\" W

RADIUS = 140.00'  
ARC LENGTH = 111.38'  
CHORD LENGTH = 108.47'  
CHORD BEARING = S 21°25'39\" W

**NOTES:**

- 1) BEARINGS SHOWN HEREON ARE BASED ON THE SOUTHEASTERLY LINE OF A JEA 150' WIDE TRANSMISSION CORRIDOR, AS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK, 2081, PAGE 43, OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA, WHICH IS N 44°13'11\" W.
- 2) THIS IS A MAP ONLY AND DOES NOT PURPORT TO BE A BOUNDARY SURVEY.

I CERTIFY TO: JEA

SHEET 1 OF 2 SHEETS

THAT THIS MAP MEETS REQUIREMENTS OF THE MINIMUM  
TECHNICAL STANDARDS PURSUANT TO CHAPTER 61G17, F.A.C.

PREPARED BY:

**DEGROVE**  
Surveyors, Inc.

SIGNED: *Russell Taylor Smith*  
RUSSELL TAYLOR SMITH, FLORIDA SURVEYOR AND MAPPER  
REGISTRATION # 4806; L.B. # 403  
DATE: MAY 5, 2008 SCALE 1" = 100'

2131 CORPORATE SQUARE BLVD.  
JACKSONVILLE, FLORIDA 32216  
(904) 722-0400

LEGAL DESCRIPTION

A PORTION OF MARY ANN DAVIS GRANT SECTION 37, TOWNSHIP 4 SOUTH, RANGE 28 EAST, DUVAL COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGIN AT THE SOUTHWESTERLY CORNER OF SAID SECTION 17, SAID CORNER BEING SITUATE ON THE NORTH LINE OF SAID MARY ANN DAVIS GRANT SECTION 37, THENCE NORTH 89 DEGREES 11 MINUTES 50 SECONDS EAST, ALONG THE NORTHERLY BOUNDARY OF SAID SECTION 37, 80.00 FEET TO A POINT ON SAID NORTHERLY BOUNDARY LINE; THENCE SOUTH 01 DEGREES 21 MINUTES 52 SECONDS EAST, DEPARTING FROM SAID NORTHERLY BOUNDARY LINE OF THE MARY ANN DAVIS GRANT SECTION 37, 51.02 FEET TO THE POINT OF CURVATURE OF A CURVE LEADING SOUTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF THE CURVE, SAID CURVE BEING CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 140.00 FEET, AN ARC LENGTH OF 111.38 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 21 DEGREES 25 MINUTES 39 SECONDS WEST, 108.47 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 44 DEGREES 13 MINUTES 11 SECONDS WEST, 380.37 FEET TO THE POINT OF CURVATURE OF A CURVE LEADING SOUTHWESTERLY; THENCE ALONG AND AROUND THE ARC OF THE CURVE, SAID CURVE BEING CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 1975.66 FEET, AN ARC LENGTH OF 488.15 FEET, SAID ARC BEING SUBTENDED BY A CHORD BEARING AND DISTANCE OF SOUTH 51 DEGREES 17 MINUTES 53 SECONDS WEST, 486.91 FEET TO A POINT ON SAID CURVE, SAID POINT ALSO BEING SITUATE ON THE SOUTHEASTERLY BOUNDARY LINE OF A JEA 150 FOOT WIDE TRANSMISSION CORRIDOR, DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 2081, PAGE 43, OF THE CURRENT PUBLIC RECORDS OF SAID COUNTY; THENCE NORTH 44 DEGREES 13 MINUTES 11 SECONDS EAST, ALONG SAID SOUTHEASTERLY BOUNDARY LINE, 869.18 FEET TO AN ANGLE POINT IN SAID BOUNDARY LINE; THENCE NORTH 01 DEGREES 21 MINUTES 52 SECONDS WEST, ALONG THE EASTERLY BOUNDARY LINE OF SAID JEA 150 FOOT WIDE TRANSMISSION CORRIDOR, 105.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 52,298.20 SQUARE FEET OR 1.20 ACRES MORE OR LESS.

SHEET 2 OF 2 SHEETS

PREPARED BY:

**DEGROVE**  
*Surveyors, Inc.*

2131 CORPORATE SQUARE BLVD.  
JACKSONVILLE, FLORIDA 32216  
(904) 722-0400

## SECTION G

### Application for Authorization to Use Sovereign Submerged Lands

**Part I:** Sovereign Submerged Lands title information (see Attachment 5 for an explanation). Please read and answer the applicable questions listed below:

- A. I have a sovereign submerged lands title determination from the Division of State Lands which indicates that the proposed project is NOT ON sovereign submerged lands (Please attach a copy of the title determination to the application). Yes  No
- If you answered Yes to Question A and you have attached a copy of the Division of State Lands Title Determination to this application, you do not have to answer any other questions under Part I or II of Section G.
- B. I have a sovereign submerged lands title determination from the Division of State Lands which indicates that the proposed project is ON sovereign submerged lands (Please attach a copy of the title determination to the application). Yes  No
- If you answered yes to question B please provide the information requested in Part II. Your application will be deemed incomplete until the requested information is submitted.
- C. I am not sure if the proposed project is on sovereign submerged lands (please check here).
- If you have checked this box department staff will request that the Division of State Lands conduct a title determination. If the title determination indicates that the proposed project or portions of the project are located on sovereign submerged lands you will be required to submit the information requested in Part II of this application. The application will be deemed incomplete until the requested information is submitted.
- D. I am not sure if the proposed project is on sovereign submerged lands and I DO NOT WISH to contest the Department's findings (please check here).
- If you have checked this box refer to Part II of this application and provide the requested information. The application will be deemed incomplete until the requested information is submitted.
- E. It is my position that the proposed project is NOT on sovereign submerged lands (please check here)
- If you have evidence that indicates that the proposed project is not on sovereign submerged lands please attach the documentation to the application. If the Division of State Lands title determination indicates that your proposed project or portion of your proposed project are on sovereign submerged lands you will be required to provide the information requested in Part II of this application. See Attachment G-1.
- F. If you wish to contest the findings of the title determination conducted by the Division of State Lands please contact the Department of Environmental Protection's Office of General Counsel. Your proposed project will be deemed incomplete until either the information requested in Part II is submitted or a legal ruling indicates that the proposed project is not on sovereign submerged lands.

**Part II:** If you were referred to this section by Part I, please provide this additional information. Please note that if your proposed project is on sovereign submerged lands and the below requested information is not provided, your application will be considered incomplete.

- A. Provide evidence of title to the subject riparian upland property in the form of a recorded deed, title insurance, legal opinion of title, or a long-term lease which specifically includes riparian rights. Evidence submitted must demonstrate that the application has sufficient title interest in the riparian upland property.

B. Provide a detailed statement describing the existing and proposed upland uses and activities. For commercial uses, indicate the specific type of activity, such as marina, ship repair, dry storage (including the number of storage spaces), commercial fishing/seafood processing, fish camp, hotel, motel resort restaurant, office complex, manufacturing operation, etc.

For rental operations, such as trailer or recreational vehicle parks and apartment complexes, indicate the number of wet slip units/spaces available for rent or lease and describe operational details (e.g., are spaces rented on a month-to-month basis or through annual leases).

For multi-family residential developments, such as condominiums, townhomes, or subdivisions, provide the number of living units/lots and indicate whether or not the common property (including the riparian upland property) is or will be under the control of a homeowners association.

For projects sponsored by a local government, indicate whether or not the facilities will be open to the general public. Provide a breakdown of any fees that will be assessed, and indicate whether or not such fees will generate revenue or will simply cover costs associated with maintaining the facilities.

C. Provide a detailed statement describing the existing and proposed activities located on or over the sovereign submerged lands at the project site. This statement must include a description of docks and piers, types of vessels (e.g., commercial fishing, liveaboards, cruise ships, tour boats), length and draft of vessels, sewage pumped facilities, fueling facilities, boat hoists, boat ramps, travel lifts, railways, and any other structure or activities existing or proposed to be located waterward of the mean/ordinary high water line.

If slips are existing and/or proposed, please indicate the number of powerboat slips and sailboat slips and the percentage of those slips available to the general public on a "first come, first served" basis. This statement must include a description of channels, borrow sites, bridges, groins, jetties, pipelines, or other utility crossings, and any other structures or activities existing or proposed to be located waterward of the mean/ordinary high water line. For shoreline stabilization activities, this statement must include a description of seawalls, bulkheads, riprap, filling activities, and any other structure or activities existing or proposed to be located along the shoreline.

D. Provide the linear footage of shoreline at the mean/ordinary high water line owned by the application which borders sovereign submerged lands.

E. Provide a recent aerial photo of the area. A scale of 1"=200' is preferred. Photos are generally available at minimal cost from your local government property appraiser's office or from district Department of Transportation offices. Indicate on the photo the specific location of your property/project site.

PROPRIETARY PROJECT DESCRIPTIONS

Please check the most applicable activity which applies to your project(s):

**Leases**

- Commercial marinas (renting wet slips) including condos, etc., if 50% or more of their wet slips are available to the general public
- Public/Local governments
- Yacht Clubs/Country Clubs (when a membership is required)
- Condominiums (requires upland ownership)
- Commercial Uplands Activity (temporary docking and/or fishing pier associated with upland revenue generating activities, i.e., restaurants, hotels, motels) for use of the customer at not charge
- Miscellaneous Commercial Upland Enterprises where there is a charge associated with the use of overwater structure (Charter Boats, Tour Boats, Fishing Piers)
- Ship Building/Boat Repair Service Facilities
- Commercial Fishing Related (Offloading, Seafood Processing)
- Private Single-family Residential Docking Facilities; Townhome Docking Facilities; Subdivision Docking Facilities (upland lots privately owned)

**Public Easements and Use Agreements**

- Miscellaneous Public Easements and Use Agreements
- Bridge Right-of-way (DOT, local government)
- Breakwater of groin
- Subaqueous Utility Cable (TV, telephone, electrical)
- Subaqueous Outfall or Intake
- Subaqueous Utility Water/Sewer
- Overhead Utility w/Support Structure on Sovereign Submerged Lands
- Disposal Site for Dredged Material
- Pipeline (gas)
- Borrow Site

**Private Easements**

- Miscellaneous Private Easements
- Bridge Right-of-way
- Breakwater Groin
- Subaqueous Utility Cable (TV, telephone, electrical)
- Subaqueous Outfall or Intake
- Subaqueous Utility Water/Sewer
- Overhead Utility Crossing
- Disposal Site for Dredged Material
- Pipeline (gas)

**Consents of Use**

- Aerial Utility Crossing w/no support structures on sovereign submerged lands
- Private Dock
- Public Dock
- Multi-family Dock
- Fishing Pier (private or Multi-family)
- Private Boat Ramp
- Sea Wall
- Dredge
- Maintenance Dredge
- Navigation Aids/Markers
- Artificial Reef
- Riprap
- Public Boat Ramp
- Public Fishing Pier
- Repair/Replace Existing Public Fishing Pier
- Repair/Replace Existing Private Dock
- Repair/Replace Existing Public Dock
- Repair/Replace Existing Multi-family Dock
- Repair/Replace Existing Fishing Pier (Private or Multi-family)
- Repair/Replace Existing Private Boat Ramp
- Repair/Replace Existing Sea Wall, Revetments, or Bulkheads
- Repair/Replace/Modify structures/activities within an exiting lease, easement, management agreement or use agreement area or repair/replace existing grandfathered structures
- Repair/Replace Existing Public Boat Ramp

**Miscellaneous**

- Biscayne Bay Letters of Consistency/Inconsistency w/258.397, F.S.
- Management Agreements - Submerged Lands
- Reclamation
- Purchase of Filled, Formerly Submerged Lands
- Purchase of Reclaimed Lake Bottom
- Treasure Salvage
- Insect Control Structures/Swales
- Miscellaneous projects which do not fall within the activity codes listed above

Attachment G-1

E. It is my position that the proposed project is NOT on sovereign submerged lands.  
Please check here   X  .

*JEA is in receipt of a letter from the FDEP's Submerged Lands and Environmental Resources Program, dated November 2, 2007 (see Attachment G-1), which states that based upon information submitted by JEA on October 2, 2007, JEA's proposed development, including parking and trailer areas, and a road access to the future JEA Southside Generating Station (now referred to as Greenland Energy Center), the proposed activity does not appear to be located in, on, or over wetlands and other surface waters...and does not require regulatory authorization or sovereign submerged lands authorization from the Department, and that no Environmental Resource Program (ERP) permit is required for the activity. The letter further states that "if you change the project from what you submitted, the above determination may no longer be valid. Please contact us prior to construction if you wish to make any changes. "*

*The project approved by the November 2, 2007, letter has not changed. However, JEA has since obtained additional lands, as currently reflected in this SCA and supporting ERP application, for the generating station and access road. JEA requests that you review this information for a determination of whether the additional lands are on sovereign submerged lands.*





# Florida Department of Environmental Protection

Northeast District Office  
7825 Baymeadows Way, Suite 200B  
Jacksonville, Florida 32256-7590

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

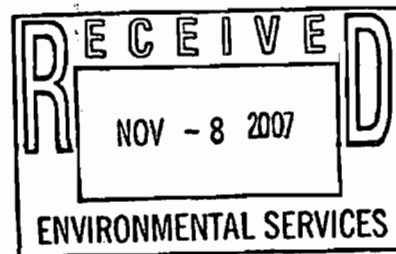
Michael W. Sole  
Secretary

Voice 904-807-3300 FAX 904-448-4366

## SUBMERGED LANDS AND ENVIRONMENTAL RESOURCES PROGRAM

November 2, 2007

Jay Worley  
Director, Environmental Programs  
Jacksonville Electric Authority  
21 West Church Street  
Jacksonville, Florida 32202-3139



RE: JEA Southeast Engineering Location

Dear Mr. Worley:

This is to acknowledge receipt of the information you submitted on October 29, 2007 regarding JEA's proposed development including parking and trailer areas, and a road access to the future JEA Southside Generating Station. Based upon the forms, drawings, and documents submitted, the proposed activity does not appear to be located in, on, or over wetlands and other surface waters, as determined by the methodology ratified by Subsection 373.4211, F.S., and codified in Rule 62-340, Florida Administrative Code, and which further does not otherwise exceed thresholds for authorization required established in Rule 40C-4, F.A.C. and therefore, **does not require regulatory authorization or sovereign submerged lands authorization from the Department.** No Environmental Resource Program permit is required for your activity. This determination is based solely on the information provided the Department and the statutes and rules in effect when the information was submitted. This letter does not relieve you of any responsibility for any impacts that may occur in surface waters or wetlands as a result of your project nor does it relieve you from obtaining all other necessary federal, state, county or municipal permits or authorizations. This determination cannot be relied upon for compliance with Chapters, 253, 373 and 403, Florida Statutes.

**If you change the project from what you submitted, the above determination may no longer be valid. Please contact us prior to construction if you wish to make any changes.**

If you have any questions, please contact me at 904-807-3352 or via my Internet E-mail address at [jim.Maher@dep.state.fl.us](mailto:jim.Maher@dep.state.fl.us). When referring to your project please use the DEP File number listed above.

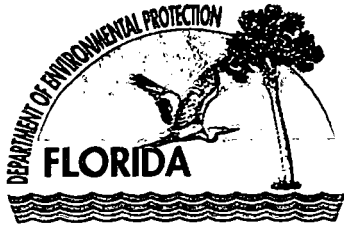
Sincerely,

James R. Maher, P.E.  
Program Administrator

"More Protection. Less Process"  
[www.dep.state.fl.us](http://www.dep.state.fl.us)

Attachment G-1

***10.4.2 Notice of Intent to Use General Permit  
for Addition of a Major User of Reclaimed Water***



# Florida Department of Environmental Protection

Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590  
Phone: 904/807-3300 ♦ Fax: 904/448-4366

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

## ELECTRONIC CORRESPONDENCE

### PERMITTEE:

JEA  
Mr. Paul K. Steinbrecher, P.E.  
Director JEA Permitting and Compliance  
21 West Church Street  
Jacksonville, Florida 32202-3139

**Permit Number:** FL0023493  
**PA File Number :** FL0023493-013-WF  
**Date of Issue:** June 30, 2008  
**Date of Expiration:** June 29, 2013  
**Project:** Greenland Energy Center  
**Anticipated Reuse Capacity:** 5.67 MGD

Re: General Permit Notice – FL0023493-013-WF

Dear Mr. Steinbrecher:

On June 03, 2008, the Department received the subject Notice of Intent to Use a General Permit for Adding a Major User to a Reuse Service Area, under the provisions of Florida Administrative Code (FAC) Rule 62-4(Part III) and 62-610.

After reviewing the notice, it appears that the project will have minimal adverse impact when performed in accordance with specific requirements and practices set forth in the general permit.

Any activities performed under this general permit are subject to the general conditions required in FAC Rule 62-4.540 (attached), and are also subject to the following specific conditions:

1. Reclaimed water limitations for Part III of Chapter 62-610, F.A.C. shall be met before conveying to the reuse system.
2. There will be no direct discharge of reclaimed water to any storage ponds, lakes, or other water bodies which are waters of the states or which will discharge to water of the state.
3. The permittee, JEA, shall respond to all applicable requirements of Part VII of Chapter 62-610, F.A.C.

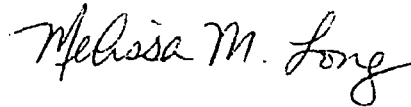
PERMETTEE:  
JEA  
PROJECT NAME:  
Mandarin WR – Greenland Energy Center

PERMIT ID  
ISSUANCE DATE:  
EXPIRATION DATE  
PROJECT NO.

FL0023493  
June 30, 2008  
June 29, 2013  
013

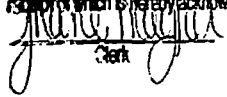
Please be advised that the construction must conform to the description contained in your Notice of Intent to Use a General Permit and Permit Number FL0023493 – 013– DWF and that any deviation will subject the permittee to enforcement action and possible penalties.

Sincerely,



Melissa M. Long., P.E.  
Water Program Administrator

*\*FILED, on this date, pursuant to Section 120.52,  
F.S., with the designated Department Clerk,  
receipt of which is hereby acknowledged.\**

  
Clerk

CC: Duval County H.D  
Nam Huynh, P.E., RESD  
Ed Cordova , P.E., JEA

Attachments

PERMETTEE:  
JEA  
PROJECT NAME:  
Mandarin WR – Greenland Energy Center

PERMIT ID  
ISSUANCE DATE:  
EXPIRATION DATE  
PROJECT NO.

FL0023493  
June 30, 2008  
June 29, 2013  
013

### **General Conditions**

1. The terms, conditions, requirements, limitations, and restrictions set forth in this Part are "general permit conditions" and are binding upon the permittee. The conditions are enforceable under Chapter 403, F.S. *[62-4.540(1)]*
2. The general permit is valid only for the specific activity indicated. Any deviation from the specified activity and the conditions for undertaking that activity shall constitute a violation of the permit. The permittee is placed on notice that violation of the permit may result in suspension or revocation of the permittee's use of the general permit and may cause the Department to begin legal proceedings. *[62-4.540(2)]*
3. The general permit does not convey any vested rights or any exclusive privileges. It does not authorize any injury to public or private property nor any invasion of personal rights. It does not authorize any infringement of federal, state or local laws or regulations. It does not eliminate the necessity for obtaining any other federal, state or local permits that may be required, or allow the permittee to violate any more stringent standards established by federal or local law. *[62-4.540(3)]*
4. The general permit does not relieve the permittee from liability and penalties when the construction or operation of the permitted activity causes harm or injury to human health or welfare; causes harm or injury to animal, plant or aquatic life; or causes harm or injury to property. It does not allow the permittee to cause pollution in contravention of Florida Statutes and Department rules. *[62-4.540(4)]*
5. The general permit conveys no title to land or water, nor does it constitute State recognition or acknowledgment of title. It does not constitute authority for reclamation of submerged lands. Only the Board of Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-4.540(5)]*
6. No general permit shall authorize the use of state owned land without the prior consent of the Board of Trustees of the Internal Improvement Trust Fund pursuant to Section 253.77, F.S. *[62-4.540(6)]*
7. The general permit may be modified, suspended or revoked in accordance with Chapter 120, Florida Statutes, if the Secretary determines that there has been a violation of any of the terms or conditions of the permit, there has been a violation of state water quality standards or state air quality standards, or the permittee has submitted false, incomplete or inaccurate data or information. *[62-4.540(7)]*
8. The general permit shall not be transferred to a third party except pursuant to Fla. Admin. Code Rule 62-4.120. *[62-4.540(8)]*
9. The general permit authorizes construction and where applicable operation of the permitted facility. *[62-4.540(9)]*
10. The permittee agrees in using the general permit to make every reasonable effort to conduct the specific activity or construction authorized by the general permit in a manner that will minimize any adverse effects on adjacent property or on public use

PERMETEE:  
JEA  
PROJECT NAME:  
Mandarin WR – Greenland Energy Center

PERMIT ID  
ISSUANCE DATE:  
EXPIRATION DATE  
PROJECT NO.

FL0023493  
June 30, 2008  
June 29, 2013  
013

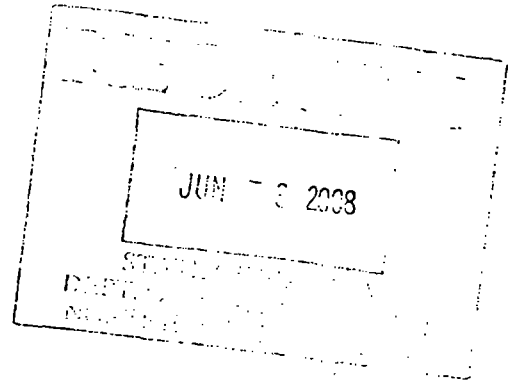
of the adjacent property, where applicable, and on the environment, including fish, wildlife, natural resources of the area, water quality or air quality. *[62-4.540(10)]*

11. The permittee agrees in using the general permit to allow a duly authorized representative of the Department access to the permitted facility or activity at reasonable times to inspect and test upon presentation of credentials or other documents as may be required by law to determine compliance with the permit and the Department rules. *[62-4.540(11)]*
12. The permittee agrees to maintain any permitted facility, or activity in good condition and in accordance with the plans submitted to the department under Rule 62-4.530(1). *[62-4.540(12)]*
13. A permittee's use of a general permit is limited to five years. However, the permittee may request continued use of the general permit by notifying the Department pursuant to Rule 62-4.530(1). However, the permittee shall give notice of continued use of a general permit thirty days before it expires. *[62-4.540(13)]*

21 West Church Street  
Jacksonville, Florida 32202-3139

June 3, 2008

D. Anh Vo, P.E.  
NPDES Permitting Section  
Florida Department of Environmental Protection  
Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590



ELECTRIC

RE: Mandarin Water Reclamation Facility (WRF)  
Permit No. FL0023493  
Application for General Permit for Addition of a Major User of Reclaimed Water

WATER

Dear Mr. Vo:

Please find attached four signed and sealed copies of the above form for the addition of the Greenland Energy Center as a major user of reclaimed water originating from the Mandarin WRF. A check in the amount of \$250.00 is attached for the processing fee.

SEWER

JEA plans to use up to 5.67 MGD on-site. The breakdown of the specific uses of the reclaimed water is as follows:

<u>Reuse Activity</u>	<u>Amount (MGD)</u>
Cooling tower	5.6
Irrigation	0.07
Total	5.67

Should you have any questions or require additional information regarding any of these issues, please don't hesitate to contact me at (904) 665-5130.

Sincerely,



21 W. CHURCH STREET  
JACKSONVILLE, FLORIDA 32202  
(904) 665-6460  
Floor - CC6



VOID 90 DAYS FROM DATE  
DATE 6/02/2008

CHECK NO. 000656749

65-2  
630

CHECK AMOUNT

\$\*\*\*\*\*250.00

PAY EXACTLY *Two hundred fifty and 00/100 Dollars*

PAY TO  
THE ORDER  
OF

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
2800 BLAIR STONE RD  
TWIN TOWERS OFFICE BLDG  
TALLAHASSEE FL 32399-2400

Vice President of Financial Services

JEA Managing Director/CEO

Wachovia Bank, N.A.  
Pensacola



**Florida Department of Environmental Protection**  
Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

**NOTICE OF INTENT TO USE GENERAL PERMIT FOR  
ADDITION OF A MAJOR USER OF RECLAIMED WATER**

**PART I - Instructions**

- (1) All applicable items must be completed in full in order to avoid delay in processing of this application. Where attached sheets (or other technical documentation) are utilized in lieu of the blank space provided, indicate appropriate cross-references in the space and provide copies to the Department in accordance with (3) below. Note that if part(s) of this form do not apply, those part(s) of the form need not be completed.
- (2) All information is to be typed or printed in ink.
- (3) Four (4) copies of this application (with supporting information) and a check for the application fee, in accordance with Rule 62-4.050, F.A.C., made payable to the State of Florida, Department of Environmental Protection, shall be submitted with this application when sent to the appropriate district office or approved local program.
- (4) Attach an 8 1/2" x 11" copy of a USGS map showing site locations.
- (5) This form shall be used only for the addition of new major users of reclaimed water (using 0.1 mgd or more, based on an annual average) to a reuse system designed and permitted under Part III of Chapter 62-610, F.A.C. The following conditions, shall be met:
  - a. The new major users shall be located within the reuse area designed in an existing permit.
  - b. The permitted capacity of the reuse system shall not be changed.
- (6) This form shall not be used if any of the following conditions exist:
  - a. The new major user is located outside of the reuse area designated in an existing permit.
  - b. The permitted capacity of the reuse system shall be adjusted.
  - c. There will be a direct discharge of reclaimed water to storage ponds, lakes or other water bodies which are waters of the state or which will discharge to waters of the state.
- (7) Attach a copy of the agreement(s) used to control the use of reclaimed water on the new site(s).
- (8) Attach a copy of an existing permit that designates the permitted reuse area.
- (9) If the new major user will irrigate edible crops using reclaimed water, attach a copy of the updated inventory of edible crop irrigation, as required by Rule 62-610.475, F.A.C.
- (10) This general permit is described in Rule 62-610.890, F.A.C.



**PART II - General Information**

(1) Applicant: Name Paul Steinbrecher, P.E.  
 Organization: JEA  
 Address: 21 West Church Street, T8  
 City Jacksonville Zip: 32202-0000  
 Telephone Number: (904) 665-5653

(2) Project Name: Greenland Energy Center (GEC) Reclaimed Water Utilization  
 DEP Facility Identification Number: FL0023493  
 Location: County: Duval City: Jacksonville  
 Street: 10828 Hampton Road

(3) Permit Number: FL0023493  
 Issue Date: 06/04/02 Expiration Date: 05/22/07

(4) List new major users (greater than or equal to 0.1 mgd, annual average) to be added to the reuse system. Include the area to be irrigated, the average anticipated application rate, and capacity. Locate areas or sites to receive reclaimed water on a USGS map.

Major Users	Area (acres)	Rate (inch/week)	Capacity (mgd)
GEC - Industrial Use	N/A	N/A	5.6
GEC - Irrigation		2	0.07
<b>Total</b>			<b>5.67</b>

PART III - Certifications

A. Applicant

I certify that the statements made in this notice of intent for a general permit and all attachments are true, correct, and complete to the best of my knowledge and belief.

Date: 6/2/08 Paul Steinbrecher  
Signature of the Applicant

Phone: (904) 665-5653 Paul Steinbrecher, P.E. - Director, Permitting and Assessments  
Name and Title (please type)

Company Name: JEA - Environmental Services

Address: 21 West Church Street, T8

City/State/Zip Code: Jacksonville, Florida 32202-3139

B. Professional Engineer Registered in Florida (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this construction project have been (designed)(examined) by me and found to conform to engineering principles applicable to such projects. In my professional judgment this facility, when properly constructed, operated and maintained, will comply with all applicable statutes of the State of Florida and rules of the Department. I will provide the applicant with instructions for proper operation and maintenance of the facility.

Jens Sapin Jens Sapin, P.E. 61835  
Signature of Engineer Name (Please type) Florida Registration No.

*Jens Sapin*  
61835  
6/2/08

JEA - Environmental Services  
Company Name

21 West Church Street, T8  
Company Address

(Affix Seal)

Date: \_\_\_\_\_ Phone: (904) 665-5130

**10.4.6 Florida Division of Historical Resources (DHR) Review**



REC'd 8/5/08  
MLS

FLORIDA DEPARTMENT OF STATE  
**Kurt S. Browning**  
Secretary of State  
DIVISION OF HISTORICAL RESOURCES

Mr. Michael Soltys  
Site Certification Coordinator  
Black & Veatch Corporation  
11401 Lamar  
Overland Park, KS 66211

July 28, 2008

Re: DHR Project No.: 2008-2331  
Date Received by DHR: April 21, 2008  
BV Project 148570/File 32.6000  
Greenland Energy Center  
Site Certification  
Osceola County

Dear Mr. Soltys:

Our office reviewed the referenced project notification in accordance with Chapters 403 and 267, *Florida Statutes*, for possible impact to historic properties listed, or eligible for listing, in the National Register of Historic Places, or otherwise of historical, architectural or archaeological significance. The State Historic Preservation Officer/Division of Historical Resources advises and assists state agencies to identify historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

A review of our files and Florida Master Site File database and the information provided in the referenced application we note that the Greenland Energy Center property has not been subjected to a cultural resource assessment investigation. No historical sites have been located within the project's area of potential effect. Five non-significant archaeological sites were identified within the property as depicted on your map attachment.

It is the opinion of this agency that it is unlikely that significant historic resources will be encountered within the area of potential affect for the proposed new unit. However, if the project should encounter previously undetected, unmarked human remains or in a non-associated location, or discover a cache of prehistoric stone tools and/or pottery in deeply buried deposits or otherwise that the standard archaeological field testing would not discover, the Department of Environmental Protection and this agency should be notified. Work shall stop in the immediate area of human remains and the State Archaeologist notified after it is determined by local law enforcement to be of State concern. Similarly, should a cache of artifacts be encountered, work in the immediate area should stop and the same parties should be notified. Work in the area of the discovery should not continue without this agency's approval at a minimum.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

Director's Office  
(850) 245-6300 • FAX: 245-6436

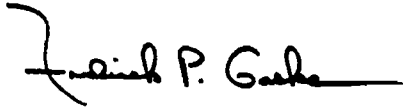
Archaeological Research  
(850) 245-6444 • FAX: 245-6452

Historic Preservation  
(850) 245-6333 • FAX: 245-6437

Mr. Soltys  
July 28, 2008  
Page 2

If you have any questions concerning our comments, please contact Alyssa McManus, Historic Sites Specialist for Review and Compliance, by telephone at 850-245-6333, or by electronic mail at [ammcmanus@dos.state.fl.us](mailto:ammcmanus@dos.state.fl.us). Thank you for your interest in protecting Florida's historic properties.

Sincerely,

A handwritten signature in black ink that reads "Frederick P. Gaske". The signature is written in a cursive style with a long horizontal line extending to the right.

Frederick P. Gaske, Director, and  
State Historic Preservation Officer



JEA  
Greenland Energy Center

B&V Project 148570  
B&V File 32.6000  
April 18, 2008

Ms. Laura Kammerer  
Deputy State Historic Preservation Officer  
Florida Department of State  
Division of Historical Resources  
R. A. Gray Building, 4<sup>th</sup> Floor  
500 South Bronough Street  
Tallahassee, Florida 32399-0250

Subject: Project Review

Dear Ms. Kammerer:

JEA is proposing to construct and operate a new electric-generating facility (hereinafter referred to as Greenland Energy Center or the Project) on a greenfield site south of Jacksonville in Duval County, Florida. The site location is shown on Attachment A; an aerial view of the project site and access road corridor are provided as Attachment B. This site is adjacent to the eight-acre parcel you reviewed on October 19, 2007 for a similar request to locate several construction trailers. Your response was dated November 27, 2007 (see Attachment C). The access road connects the site to Philips Highway/US-1.

The power plant site includes approximately 129 acres (eight-acre trailer site + 121 acres of additional property). The access road corridor includes approximately four acres. The facilities are located in Sections 8, 17, and 37 of Township 4 South, Range 28 East. The proposed facility will consist of two simple-cycle combustion turbine units firing natural gas or fuel oil, and will operate as a peaking power plant. Start of construction is slated for February 2009, with a proposed commercial operation date of June 2010.

On behalf of JEA, Black & Veatch requests your office review the project site, corridor and vicinity for known or potential cultural / historical resources. We also request a written response for the project record.

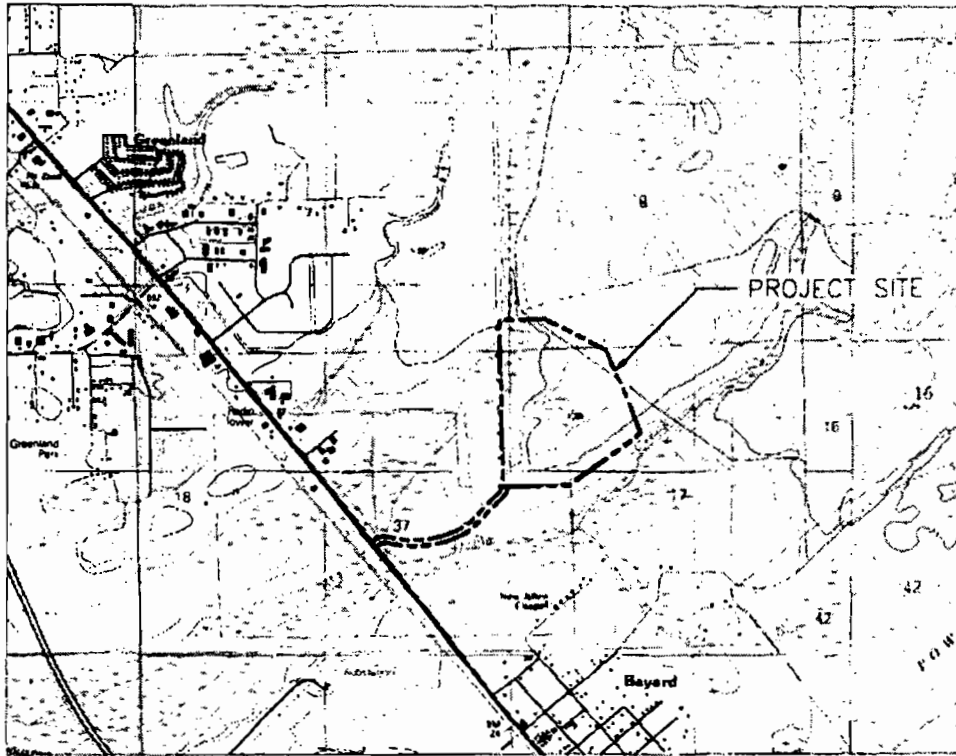
If you have any questions during your review, please contact me at (913) 458-7563 or [soltysjm@bv.com](mailto:soltysjm@bv.com).

Very truly yours,  
BLACK & VEATCH

Michael Soltys  
Environmental Permitting Manager

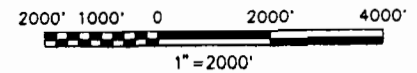
Enclosures

cc: Mr. Jay Worley, JEA



Duval County, FL

S8, T4S, R28E  
 S17, T4S, R28E  
 S37, T4S, R28E



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**BLACK & VEATCH CORPORATION**

ENGINEER MJT      DRAWN JKM

CHECKED              DATE

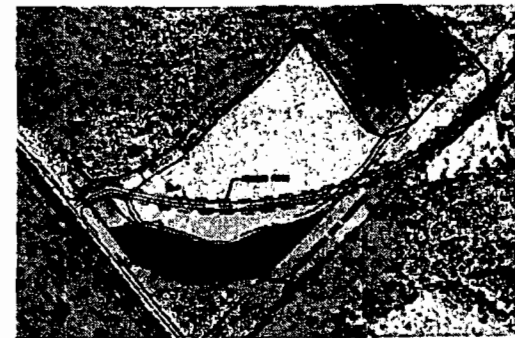
JEA  
 GREENLAND ENERGY CENTER

SITE LOCATION MAP

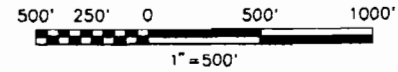
PROJECT 148570-SS-0007	DRAWING NUMBER	REV A
CODE	<b>Attachment A</b>	
AREA		



SEE DETAIL 1 FOR SITE ACCESS ROAD



DETAIL 1  
SITE ACCESS ROAD



FACILITIES LEGEND	
ITEM NO	DESCRIPTION
1	(6) WIDE OFFICE TRAILER
2	COMBUSTION TURBINE NO 1
3	COMBUSTION TURBINE NO 2
4	WAREHOUSE (14,000 SF)
5	SERVICE / FIRE WATER TANK
6	DEMIN WATER TANKS - 3 DAY STORAGE (1,200,000 GAL TOTAL)
7	DRS WETTING PULVER
8	FUEL OIL TANKS W/COMPARTMENT - 3 DAY STORAGE (3,750,000 GAL TOTAL)
9	CLUNG TOWER
10	230 KV SUBSTATION
11	DETENTION POND
12	FUEL GAS HEATER
13	CHIEF GENERATOR
14	OIL WATER SEPARATOR
15	FIRE PUMP BUILDING
16	ADMIN/CONTROL/MAINTENANCE BUILDING (24,350 SF)

GENERAL LEGEND	
	6' HIGH CHAIN LINK SECURITY FENCE
	BARBED WIRE FENCE
	PROPERTY LINE

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 04/17/08 13:10:05

										<b>BLACK &amp; VEATCH CORPORATION</b>		<b>JEA</b> GREENLAND ENERGY CENTER		PROJECT DRAWING NUMBER 148570-SS-0008		REV A
										ENGINEER MJT DRAWN JKM		PLANT ARRANGEMENT SIMPLE CYCLE COMBUSTION TURBINE FACILITY		CODE AREA		<b>Attachment B</b>
NO	DATE	REVISIONS AND RECORD OF ISSUE				DRN	DES	CHK	PDE	APP	CHECKED	DATE				



***10.4.7.1 Florida Fish and Wildlife Conservation Commission Review***



**Florida Fish  
and Wildlife  
Conservation  
Commission**

**Commissioners**

**Rodney Barco**  
Chair  
Miami

**Brian S. Yablonski**  
Vice-Chair  
Tallahassee

**Kathy Barco**  
Jacksonville

**Ronald M. Bergeron**  
Fort Lauderdale

**Richard A. Corbett**  
Tampa

**Dwight Stephenson**  
Delray Beach

**Kenneth W. Wright**  
Winter Park

**Executive Staff**

**Kenneth D. Haddad**  
Executive Director

**Nick Wiley**  
Assistant Executive  
Director

**Karen Ventimiglia**  
Deputy Chief of Staff

Fish and Wildlife  
Research Institute  
Information Science  
and Management  
(850) 488-0588  
(850) 410-5269

*Managing fish and wildlife  
resources for their long-  
term well-being and the  
benefit of people.*

620 South Meridian Street  
Tallahassee, Florida  
32399-1600  
Voice: (850) 488-4676

Hearing/voice impaired:  
(800) 955-8771 (T)  
(800) 955-8770 (V)

MyFWC.com

July 17, 2008

Ms. Laura McNeil  
Black & Veatch Corp.  
11401 Lamar Avenue  
Overland Park, KS 66211

Dear Ms. McNeil:

This letter is in response to your request for listed species occurrence records for your project (JEA Greenland Energy Center), located in Duval County, Florida. No records of listed species occurrence or critical habitats from the Florida Fish and Wildlife Conservation Commission database were located within the project area. Enclosed are 8.5 x 11 maps showing biodiversity hotspots, priority wetlands for listed species, and land cover for the project area.

This letter and/or attachments should not be considered as a review or an assessment of the impact upon threatened or endangered species of the project site. It provides FWC's most current data regarding the location of listed species and their associated habitats.

Our fish and wildlife location data represents only those occurrences recorded by FWC staff and other affiliated researchers. Please note that our database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species, such as gopher tortoises, are not entered into our database on a site-specific basis. Therefore, one should not assume that an absence of occurrences in our database indicates that species of significance do not occur in the area.

The Florida Natural Areas Inventory (FNAI) maintains a separate database of listed plant and wildlife species, please contact FNAI directly for specific information on the location of element occurrences within the project area. Because FNAI is funded to provide information to public agencies only, you may be required to pay a fee for this information. County-wide listed species information can be located at their website (<http://www.fnai.org>).

Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or [gisrequests@myfwc.com](mailto:gisrequests@myfwc.com).

Sincerely,

*Jan Stearns*

Jan Stearns  
Staff Assistant

js  
2008\_5064  
Enclosures

# Biodiversity Hotspots

## JEA Greenland Energy Center

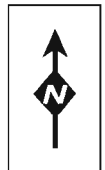
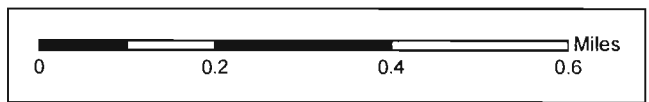


County Boundary

Project Site

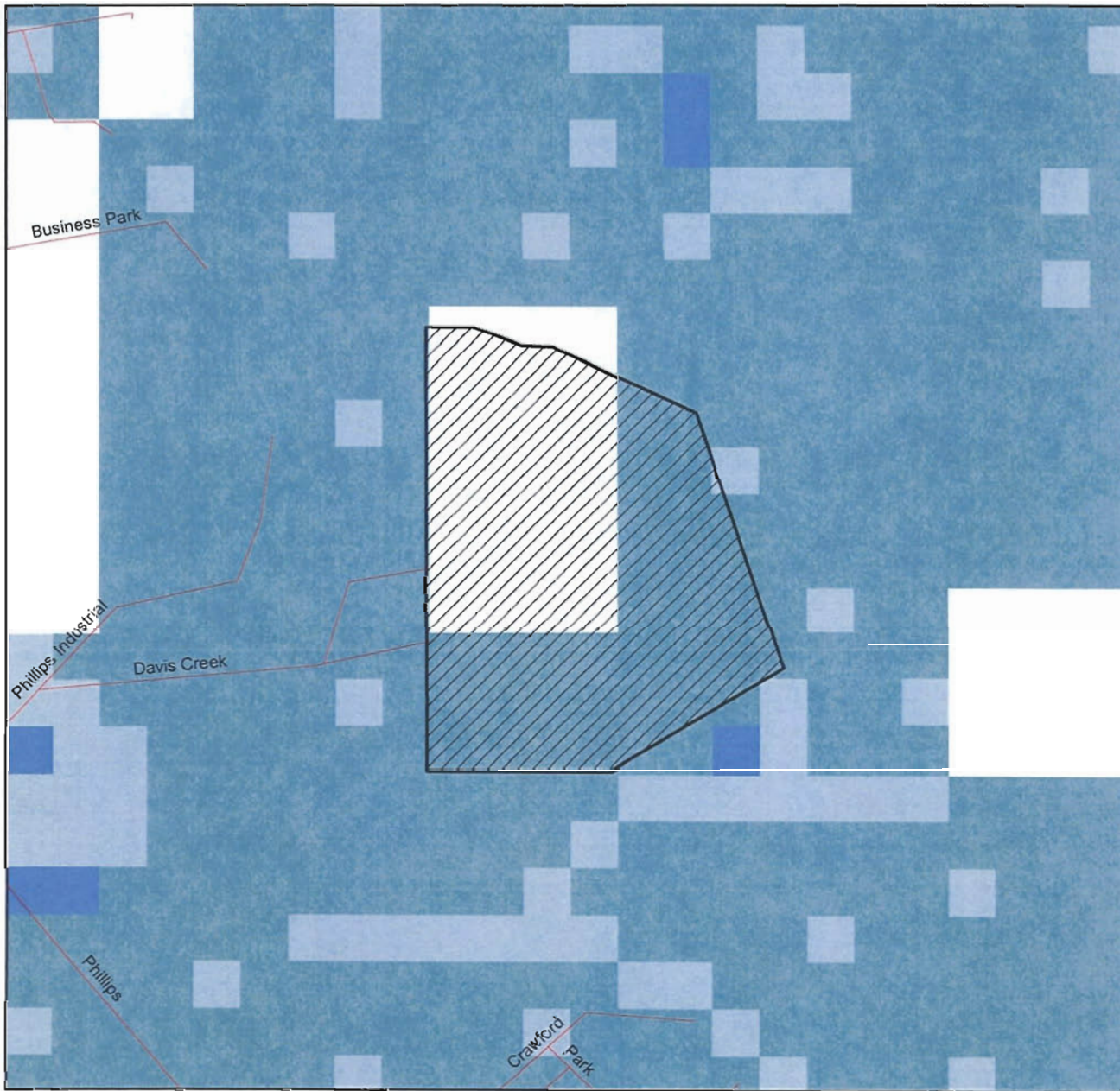
**Biodiversity Hotspots**









- 3 - 4 Focal Species Overlap
- 5 - 6 Focal Species Overlap
- 7+ Focal Species Overlap

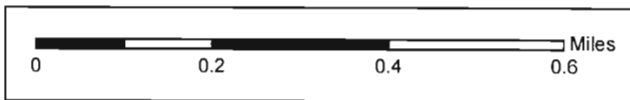


# Priority Wetlands

## JEA Greenland Energy Center

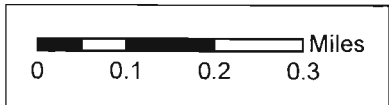
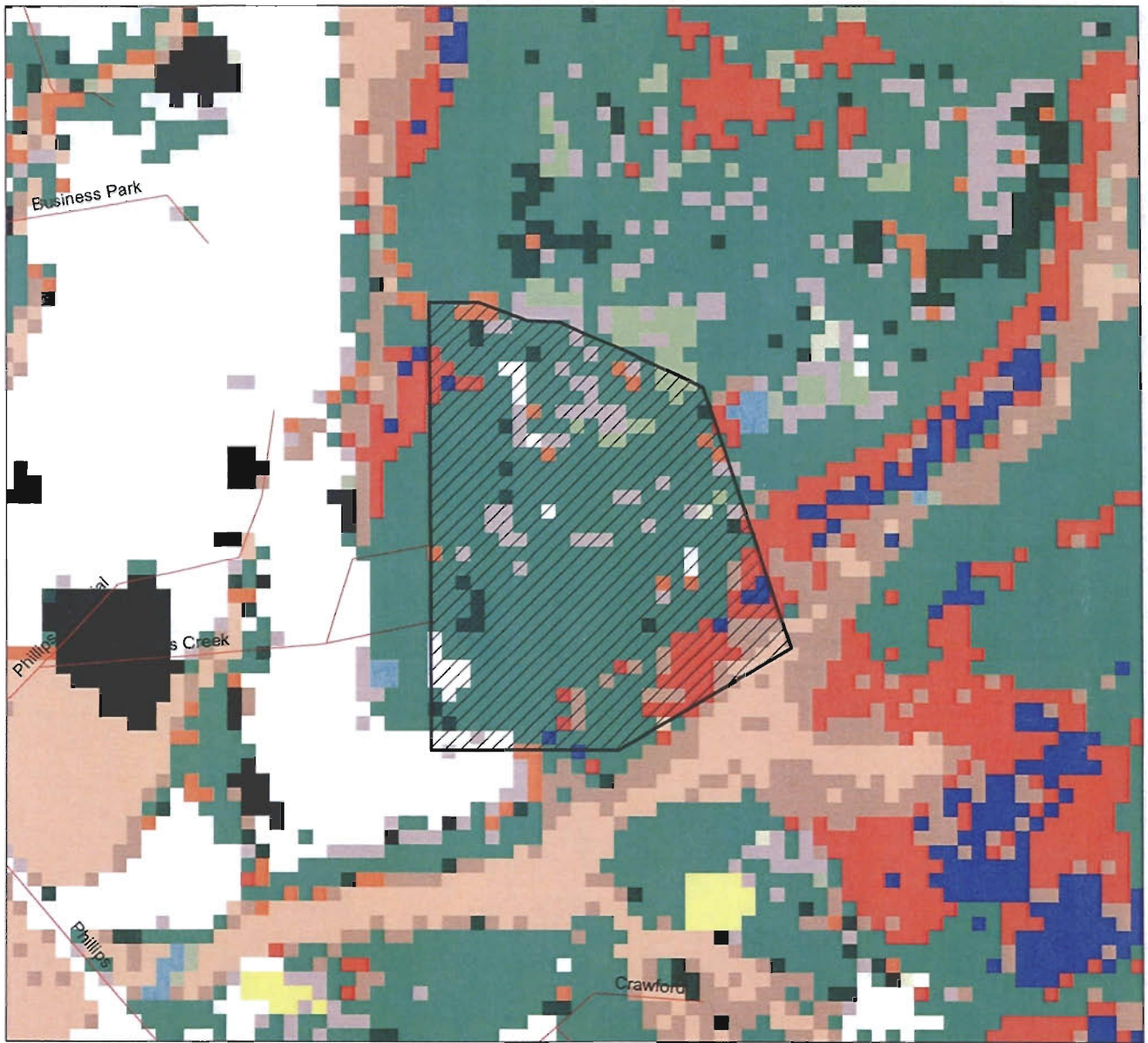


	County Boundary	<b>Priority Wetlands</b>
	Project Site	 7-9 species, wetland habitat
		 4-6 species, wetland habitat
		 4-6 species, upland habitat
		 10-11 species, wetland habitat
		 1-3 species, wetland habitat
		 1-3 species, upland habitat



# Florida Land Cover - 2003

## JEA Greenland Energy Center



**Subject:** FW: Greenland Energy Center project review  
**From:** Loggins, Ron [mailto:Ron.Loggins@MyFWC.com]  
**Sent:** Tuesday, April 22, 2008 8:08 AM  
**To:** Soltys, J. Michael (Mike)  
**Cc:** Doonan, Terry; Mitchell, Anni  
**Subject:** Greenland Energy Center project review

Mr. Soltys,

We have received your request for review of the Greenland Energy Center project. As we discussed on the phone in early February, based on the number of gopher tortoises on this site you will need to apply for a permit to relocate the gopher tortoises. To apply for a Standard Tortoise Relocation Permit, please contact our permitting office in Tallahassee (850-921-5990, ext. 17310). Please note that there are new permitting guidelines for gopher tortoises which are being phased in during the coming year (<http://myfwc.com/permits/Protected-Wildlife/GopherTortoisePermitGuidelines.pdf>). The permitting office can help determine which of the guidelines your project will be permitted under.

You also inquired in your letter about a site review for known or potential listed state species and critical habitats. Our office is unable to conduct such a review, however you may contact [GISRequests@myfwc.com](mailto:GISRequests@myfwc.com), or call (850) 488-0588 for assistance in determining if there is GIS based data for your area which could assist in this evaluation.

If you have any other questions or would like to discuss my response, feel free to contact me.

Ron

Ron Loggins, Ph.D.  
Assistant Regional Biologist  
Florida Fish and Wildlife Conservation Commission  
North Central Region  
P.O. Box 177  
Olustee, FL 32072

386-758-0525  
386-623-9349, cell  
386-758-5799, FAX  
[Ron.Loggins@MyFWC.com](mailto:Ron.Loggins@MyFWC.com)



JEA  
Greenland Energy Center

B&V Project 148570  
B&V File 32.3000  
April 18, 2008

Mr. Ron Loggins  
Florida Fish and Wildlife Conservation Commission  
P. O. Box 177  
Oluisee, Florida 32072

Subject: Project Review

Dear Mr. Loggins:

JEA proposes to construct and operate a new electric-generating facility (hereinafter referred to as Greenland Energy Center or the Project) on a greenfield site south of Jacksonville in Duval County, Florida. The site location is shown on Attachment A. The site comprises approximately 129 acres; a new access road connecting the site to Philips Highway/US-1 includes approximately four acres. The facilities are located in Sections 8, 17, and 37 of Township 4 South, Range 28 East. The proposed facility will consist of two simple-cycle combustion turbine units firing natural gas or fuel oil, and will function as a peaking power plant. Start of construction is slated for February 2009, with a proposed commercial operation date of June 2010.

Black & Veatch staff visited the site earlier this year to perform field surveys. The property was evaluated using current aerial photography, topographic maps, Natural Resources Conservation Service (NRCS) soils maps, and ground truthing to assess existing conditions for vegetation, soils, and hydrology. A wetland delineation was performed and a wetland delineation report and application for an Environmental Resource Permit (ERP) will be submitted to the Florida Department of Environmental Protection – NE District Office. Approximate wetland boundaries are illustrated on Attachments B and C. Also, a list of plants observed at the site in January and February of 2008 is included for your review as Attachment D. The site is habitat for the state listed gopher tortoise. A figure providing the approximate locations of gopher tortoise burrows is included as Attachment E. A Standard Tortoise Relocation Permit from the Florida Fish and Wildlife Conservation Commission will be obtained to relocate the tortoises.

On behalf of JEA, Black & Veatch requests your office review the project site, corridor and vicinity for known or potential listed state species and critical habitats and provide a written response for the project record.

If you have any questions during your review, please contact me at (913) 458-7563 or [soltysjm@bv.com](mailto:soltysjm@bv.com).

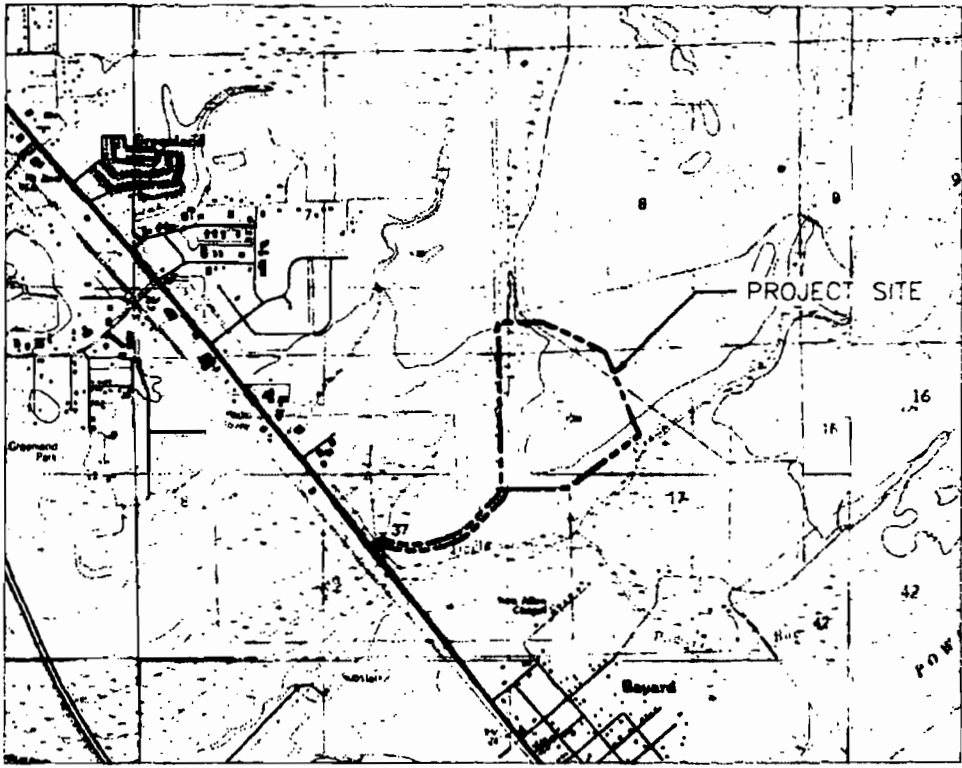
Very truly yours,  
BLACK & VEATCH

Michael Soltys  
Environmental Permitting Manager

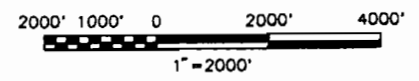
Attachments  
cc: Mr. Jay Worley, JEA

1 2 3 4 5 6 7

A  
B  
C  
D



Duval County, FL  
S8, T4S, R28E  
S17, T4S, R28E  
S37, T4S, R28E

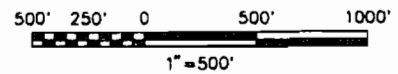
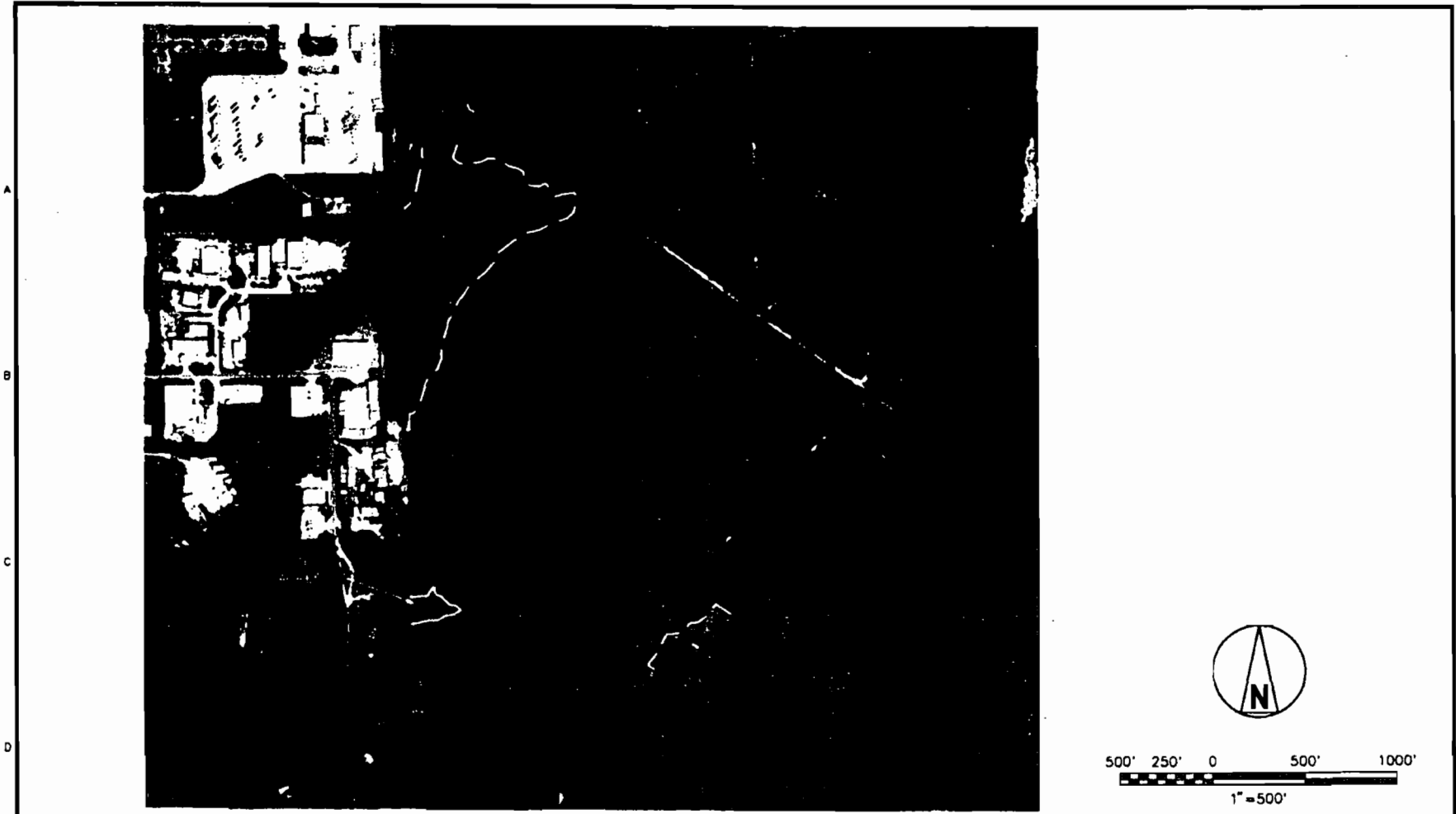


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														148570-SS-0007		A		
										ENGINEER		DRAWN		CODE		Attachment A		
										MJT		JKM		AREA				
										CHECKED		DATE						
NO	DATE	REVISIONS AND RECORD OF ISSUE			DRN	DES	CHK	PDE	APP									



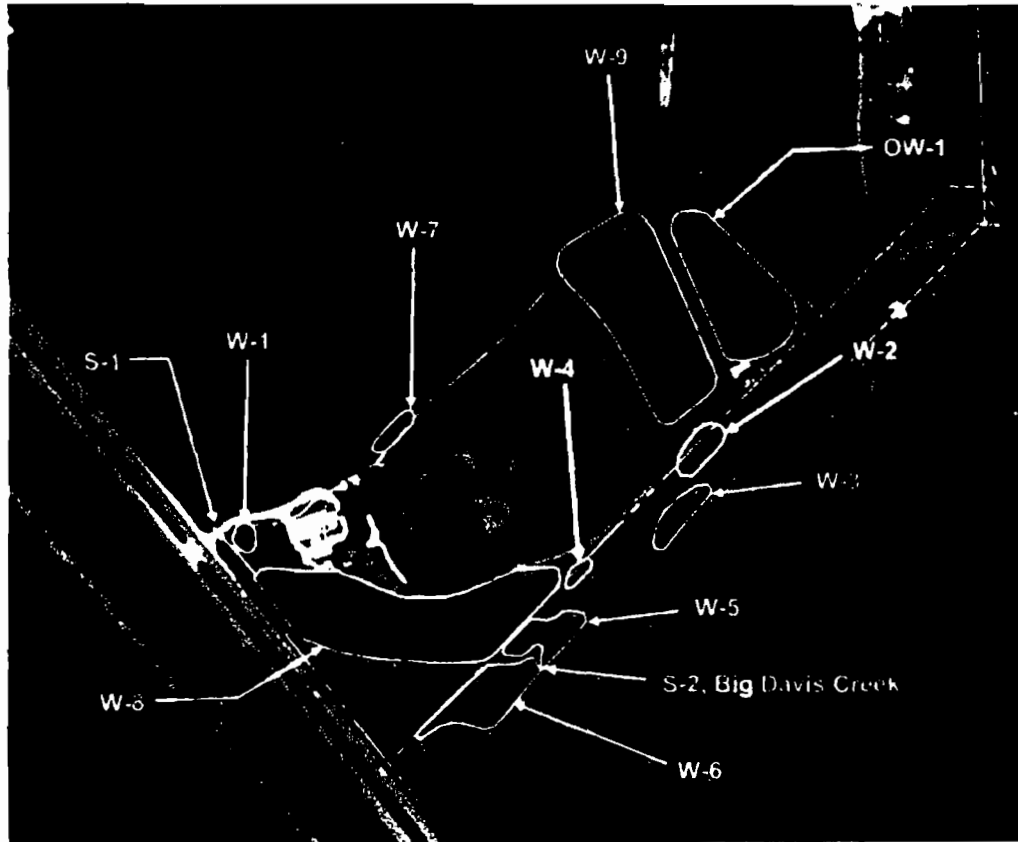
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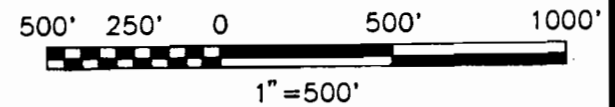
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																148570-SS-0001		A
A	02-29-08		INITIAL ISSUE			JKM	MJT	MJT	JMS	ENGINEER	MJT	DRAWN	JKM	PLOT PLAN WETLANDS				
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														AREA				

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LEGEND

- PROPERTY BOUNDARY
- T-LINE ROW



		NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
		JEA SOUTHEAST GENERATING STATION			PROJECT		DRAWING NUMBER		REV
					148570-SS-0003				A
ENGINEER	DRAWN	WETLANDS AND STREAMS			CODE		Attachment C		
	JKM				AREA				
CHECKED	DATE								
	03/25/2008								

**Attachment D**  
**Plants Observed at Proposed JEA Greenland Energy Center Site**  
**September 25, 2007, January 7-11, 2008, and February 20-22, 2008**

Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Acer rubrum L.</i>	Red Maple		x			OBL
<i>Alisma subcordatum</i>	Subcordate Water Plantain			x		OBL
<i>Ambrosia artemisiifolia</i>	Annual Ragweed			x	x	FACU
<i>Andropogon glomeratus</i>	Bushy Bluestem			x	x	FACW+
<i>Andropogon ternarius</i>	Silver Bluestem	x			x	FACU
<i>Andropogon virginicus</i>	Broom-sedge	x		x	x	FAC-
<i>Aristida spicata</i>	Pineland Three-awn Grass	x				FAC-
<i>Asimina reticulata</i>	Pawpaw	x				FACU
<i>Aster elliotii</i>	Elliott's Aster			x	x	OBL
<i>Baccharis halimifolia</i>	Groundsel-tree			x		FACW
<i>Bidens leucantha</i>	Spanish Needles			x	x	--
<i>Buchnera americana</i>	Blueheart	x			x	FAC
<i>Carex spp.</i>	Sedge		x	x	x	FAC-OBL
<i>Carphephorus corymbosus</i>	Coastal Plain Chaffhead	x				FACU
<i>Centella asiatica</i>	Asian Coinwort			x	x	OBL
<i>Cenchrus echinatus</i>	Southern Sandspur				x	UPL
<i>Centrostema virginianum</i>	Spurred Butterfly Pea				x	UPL
<i>Ceratiola ericoides</i>	Rosemary	x				UPL
<i>Chamaecrista fasciculata</i>	Partridge-pea	x			x	UPL
<i>Chamaecrista procumbens</i>	Partridge-pea	x			x	UPL
<i>Cnidioscolus stimulosus</i>	Spurge-Nettle				x	UPL
<i>Conradina grandiflora</i>	Cumberland Rosemary	x				UPL
<i>Coryza canadensis</i>	Horsetail				x	FACU
<i>Crotalaria angulata</i>	Rabbitbells	x			x	FACU
<i>Cynodon dactylon</i>	Bermudagrass				x	FACU
<i>Cyperus esculentus</i>	Nut Sedge			x	x	FAC
<i>Cyperus ligularis</i>	Flat Sedge			x	x	FACW
<i>Cyperus ovularis</i>	Flat Sedge			x	x	FAC
<i>Desmodium sp.</i>	Tick-clover				x	--
<i>Dichanthelium sp</i>	Panic Grass	x			x	--
<i>Digitaria ciliaris</i>	Southern Crabgrass				x	UPL
<i>Digitaria sanguinalis</i>	Hairy Crabgrass				x	FAC-
<i>Diodia virginiana</i>	Virginia Button-weed			x		FACW
<i>Elephantopus carolinianus</i>	Elephant's Foot		x			FAC
<i>Elephantopus elatus</i>	Florida Elephant's Foot	x				FAC
<i>Eleocharis sp.</i>	Spike Rush			x	x	OBL
<i>Eleusine indica</i>	India Goosegrass				x	FACU
<i>Eragrostis elliotii</i>	Elliott's Lovegrass		x			FACW
<i>Erechtites hieracifolia</i>	Fireweed			x	x	FAC-
<i>Erigeron vernus</i>	Early Whitetop Fleabane			x		OBL
<i>Eryngium aromaticum</i>	Fragrant Eryngium	x				FACW?
<i>Eupatorium capillifolium</i>	Dog Fennel				x	FACU
<i>Eupatorium morhii (E. recurvans)</i>	Coastal Plain Thorough-wort			x		FACW-
<i>Eupatorium rotundifolium</i>	False Hoarhound	x				FAC
<i>Euthamia minor</i>	Slender Goldenrod	x			x	FAC

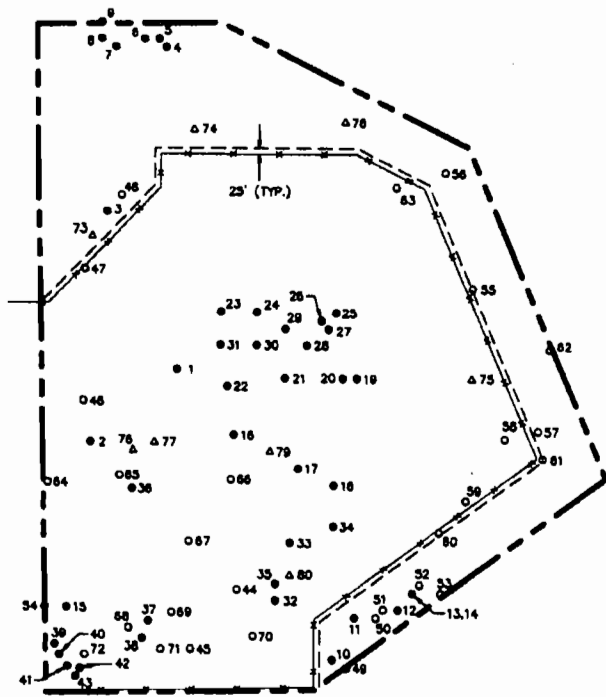
Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Galactia elliotii</i>	Elliott's Milkpea	x				FACU
<i>Galactia regularis</i>	Eastern Milkpea	x				
<i>Galium tinctorium</i>	Stiff-marsh Bedstraw		x	x		FACW
<i>Geranium carolinianum</i>	Carolina cranesbill				x	UPL
<i>Gordonia lasianthus</i>	Loblolly Bay		x			FACW
<i>Hedyotis nigricans</i>	Diamond-flowers	x			x	UPL
<i>Hydrocotyle umbellata</i>	Many-flowered Pennywort			x	x	OBL
<i>Hyptis alata</i>	Cluster Bushmint			x		OBL
<i>Imperata cylindrica</i>	Cogon Grass				x	NL
<i>Indigofera miniata</i> var. <i>leptosepala</i>		x				UPL
<i>Indigofera hirsuta</i>	Hairy Indigo				x	UPL
<i>Ipomea hederacea</i>	Ivy-leaf Morning Glory				x	FAC-
<i>Ipomea pandurata</i>	Wild Potato Vine		x			FACU
<i>Iris</i> sp.	Blue Flag			x		OBL
<i>Iva microcephala</i>	Piedmont Sumpweed			x		FACW
<i>Juncus marginatus</i>	Grass-leaf Rush			x		FACW
<i>Juniperus virginiana</i>	Eastern Red Cedar				x	FACU-
<i>Lachnanthes caroliniana</i>	Carolina Redroot			x		OBL
<i>Lechea sessiliflora</i>	Pineland Pinweed	x				UPL
<i>Liatris tenuifolia</i>	Blazing Star	x				UPL
<i>Lindernia grandiflora</i>	False Pimpernel		x	x		OBL
<i>Linaria canadensis</i>	Blue Toadflax				x	UPL
<i>Liquidambar styraciflua</i>	Sweetgum		x			FAC+
<i>Lonicera sempervirens</i>	Coral Honeysuckle		x		x	FAC
<i>Ludwigia peruviana</i>	Water-primrose			x		OBL
<i>Ludwigia repens</i>	Creeping Seedbox			x		OBL
<i>Lyonia ferruginia</i>	Rusty Lyonia	x				FAC-
<i>Lyonia lucida</i>	Fetterbush		x			FACW
<i>Magnolia grandiflora</i>	Southern Magnolia		x			FAC+
<i>Magnolia virginica</i>	Sweet Bay		x			FACW+
<i>Myrica cerifera</i>	Wax-myrtle				x	FAC+
<i>Nuphar lutea</i>	Spatterdock			x		OBL
<i>Osmunda cinnamomea</i>	Cinnamon Fern		x	x		FACW+
<i>Osmunda regalis</i>	Royal Fern		x	x		OBL
<i>Panicum anceps</i>	Beaked Panicum			x		FAC-
<i>Panicum repens</i>	Torpedo Grass			x		FACW-
<i>Panicum rigidulum</i>	Redtop Panicum		x	x	x	FACW
<i>Paspalum notatum</i>	Bahia Grass				x	FACU+
<i>Paspalum setaceum</i>	Thin Paspalum				x	FAC
<i>Paspalum</i> sp.	Paspalum Grass				x	--
<i>Paspalum urvillei</i>	Vasey Grass			x	x	FAC
<i>Persea palustris</i>	Swamp Bay		x			NL
<i>Phorodendron serotinum</i>	Mistletoe	x		x		UPL
<i>Phyla nodiflora</i>	Frog Fruit			x		FACW
<i>Piloblephis rigidus</i>	False Pennyroyal	x				UPL
<i>Pinus clausa</i>	Sand Pine	x				UPL
<i>Pinus elliotii</i>	Slash Pine		x			FACW
<i>Pinus palustris</i>	Longleaf Pine		x			FACU+
<i>Polypodium polypodioides</i>	Resurrection Fern	x	x			UPL
<i>Polypremum procumbens</i>	Rustweed	x				FACU-

Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Pteridium aquilinum</i>	Bracken	x			x	FACU
<i>Pterocaulon virgatum</i>	Blackroot	x			x	FAC-
<i>Quamoclit coccinea</i>	Cypress Vine				x	FACU+
<i>Quercus geminata</i>	Scrub Live Oak	x			x	UPL
<i>Quercus laevis</i>	Turkey Oak	x				UPL
<i>Quercus myrtifolia</i>	Myrtle Oak	x				UPL
<i>Quercus nigra</i>	Water Oak		x		x	FAC
<i>Rhexia sp.</i>	Meadow Beauty			x		--
<i>Rhexia mariana</i>	Pale Meadow Beauty			x	x	FACW+
<i>Rhynchospora sp.</i>	Beakrush	x	x	x		--
<i>Rhynchospora megalocarpa</i>	Giant-fruited Beakrush	x			x	UPL
<i>Rubus cuneifolius</i>	Sand Blackberry	x				FACU
<i>Rumex crispus</i>	Curly Dock			x	x	FAC
<i>Rumex hastatulus</i>	Heart-wing Sorrel				x	FAC-
<i>Rumex sp.</i>	Dock			x		FACW-OBL
<i>Sabal minor</i>	Dwarf Palmetto		x			FACW
<i>Sabatia brevifolia</i>	Short-leaf Rose Gentian		x			FACW
<i>Salix caroliniana</i>	Carolina Willow			x		OBL
<i>Sambucus canadensis</i>	American Elderberry			x	x	FACW-
<i>Saururus cernuus</i>	Lizard's Tail		x	x		OBL
<i>Schoenus nigricans</i>	Black Sedge		x			OBL
<i>Schrankia nuttallii</i>	Sensitive Briar				x	UPL
<i>Serenoa repens</i>	Saw Palmetto	x	x		x	FACU
<i>Setaria geniculata</i>	Knotroot Bristlegrass			x		FAC
<i>Sium suave</i>	Water-parsnip			x		OBL
<i>Smilax auriculata</i>	Catbrier	x				FACU
<i>Smilax bona-nox</i>	Catbrier	x			x	FAC
<i>Smilax laurifolia</i>	Catbrier		x			FACW
<i>Solidago canadensis</i>	Canadian Goldenrod			x	x	FACU
<i>Solidago fistulosa</i>	Pinebarren Goldenrod		x	x		FAC+
<i>Sonchus asper</i>	Prickly Sow Thistle				x	FAC+
<i>Sporobolus indicus</i>	Smutgrass				x	FACU+
<i>Stenotaphrum secundatum</i>	St. Augustine Grass			x	x	FAC
<i>Thelypteris kunthii</i>	Widespread Maiden Fern		x			FACW
<i>Tillandsia usneoides</i>	Spanish Moss	x	x			UPL
<i>Tradescantia roseolens</i>	Spiderwort	x				UPL
<i>Trifolium pratense</i>	Red Clover				x	FACU
<i>Trifolium repens</i>	White Clover				x	FACU
<i>Typha latifolia</i>	Broadleaf Cattails			x		OBL
<i>Ulmus americana</i>	American Elm		x			FACW
<i>Vaccinium arboreum</i>	Sparkleberry	x				FACU
<i>Vaccinium myrsinites</i>	Shiny Blueberry	x				FACU
<i>Viola sororia</i>	Woolly Blue Violet			x	x	FAC-
<i>Vitis shuttleworthii</i>	Calusa Grape		x		x	FAC
<i>Xyris caroliniana</i>	Yellow-eyed Grass	x				FACW

<sup>1</sup>Wetland Status refers to the Federal Wetland Indicator Status.

Florida High Precision, East Zone											
Point	North	East	Description	Point	North	East	Description	Point	North	East	Description
1	2118269	492589	Active	28	2118376	493158	Active	56	2118827	493686	Inactive
2	2117944	492206	Active	29	2118449	493063	Active	57	2118937	493782	Inactive
3	2118982	492276	Active	30	2118377	492937	Active	58	2117966	494178	Inactive
4	2119686	492532	Active	31	2118378	492779	Active	59	2117980	494030	Inactive
5	2119723	492500	Active	32	2117249	493026	Active	60	2117688	493861	Inactive
6	2119725	492437	Active	33	2117903	493091	Active	61	2117549	493744	Inactive
7	2119669	492311	Active	34	2117675	493281	Active	62	2117874	494199	Inactive
8	2119726	492248	Active	35	2117322	493027	Active	63	2118359	494227	Inactive
9	2119798	492248	Active	36	2117739	492394	Active	64	2119071	493646	Inactive
10	2116993	493278	Active	37	2117180	492472	Active	65	2117783	492024	Inactive
11	2117175	493374	Active	38	2117085	492444	Active	66	2117798	492338	Inactive
12	2117210	493664	Active	39	2117054	492059	Active	67	2117781	492829	Inactive
13	2117283	493627	Active	40	2117006	492080	Active	68	2117508	492645	Inactive
14	2117263	493627	Active	41	2116958	492116	Active	69	2117129	492363	Inactive
15	2117217	492110	Active	42	2116950	492172	Active	70	2117197	492571	Inactive
16	2117977	492840	Active	43	2116915	492152	Active	71	2117093	492929	Inactive
17	2117831	493124	Active	44	2117297	492856	Inactive	72	2117036	492525	Inactive
18	2117757	493282	Active	45	2117037	492656	Inactive	73	2117011	492190	Inactive
19	2118229	493379	Active	46	2116126	492177	Inactive	74	2116953	492212	Questionable
20	2118230	493315	Active	47	2118708	492180	Inactive	75	2118324	492607	Questionable
21	2118231	493062	Active	48	2119034	492336	Inactive	76	2118227	493884	Questionable
22	2118198	492809	Active	49	2116957	493341	Inactive	77	2118357	493320	Questionable
23	2118523	492779	Active	50	2117174	493489	Inactive	78	2117942	492492	Questionable
24	2118522	492937	Active	51	2117211	493500	Inactive	79	2117907	492387	Questionable
25	2118521	493286	Active	52	2117319	493859	Inactive	80	2117904	492968	Questionable
26	2118485	493222	Active	53	2117282	493753	Inactive				
27	2118448	493263	Active	54	2117217	492015	Inactive				

\* LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR



**LEGEND**

- ACTIVE LOCATION
- INACTIVE LOCATION
- △ QUESTIONABLE LOCATION
- PROPERTY BOUNDARY
- - - - - FENCE
- - - - - CONSTRUCTION IMPACT AREA

**SCALE**

500' 250' 0 500' 1000'

1" = 500'



MCR44608 ACAD 16.1s (LWS Tech) 1=1  
 A1/ASLO12 B1 03/04/08 08:11:28

				<b>BLACK &amp; VEATCH CORPORATION</b>				JEA SOUTHEAST GENERATING STATION		PROJECT 148570-SS-0002		DRAWING NUMBER 148570-SS-0002		REV A	
A		03-03-08		INITIAL ISSUE		JKM MJT		ENGINEER MJT		DRAWN JKJ		CODE		Attachment E	
NO		DATE		REVISIONS AND RECORD OF ISSUE		DRN DES CHK PDE APP		CHECKED		DATE		AREA			
										02-29-08					

**From:** Wallingford, Lesley A.  
**Sent:** Tuesday, April 22, 2008 7:03 PM  
**To:** 'GISRequests@myfwc.com'  
**Cc:** Soltys, J. Michael (Mike)  
**Subject:** GIS based data for Sections 8, 17, and 37 of Township 4 South, Range 28 East of the USGS quadrangle - Bayard, Florida

**Attachments:** Att A - Location Map.pdf

Dear Sirs:

Black & Veatch contacted the Florida Fish and Wildlife Conservation Commission (FFWCC) on April 18, 2009 to request its assistance in a site review for determining known or potential listed state species and critical habitats at JEA's proposed site for a new electric-generating facility (Greenland Energy Center). The site is a greenfield site south of Jacksonville in Duval County, Florida. The location of the proposed facility is Sections 8, 17, and 37 of Township 4 South, Range 28 East, USGS 7.5' quadrangle - Bayard, Florida , as shown Attachment A.

The FFWCC stated in its email reply to Black & Veatch on April 22 that its office is unable to conduct such a review; however, Black & Veatch could contact GISRequests@myfwc.com for assistance in determining if there is GIS based data for this area, which could assist in this evaluation.

Accordingly, and on behalf of JEA, Black & Veatch requests your assistance in determining if there is GIS based data for this area, and requests that you provide a written response for the project record. Please contact Mike Soltys with Black & Veatch at (913) 458-7563 or soltysjm@bv.com if you have any questions.

Thank you for your time,



Att A - Location  
Map.pdf (360 ...

**Lesley Wallingford | Environmental, Health & Safety**  
**Black & Veatch - Building a World of Difference™**  
11401 Lamar Avenue  
Overland Park, KS 66211  
Phone & Fax: **(913) 458-2640**  
Email: wallingfordla@bv.com



Please consider the environment before printing my e-mail

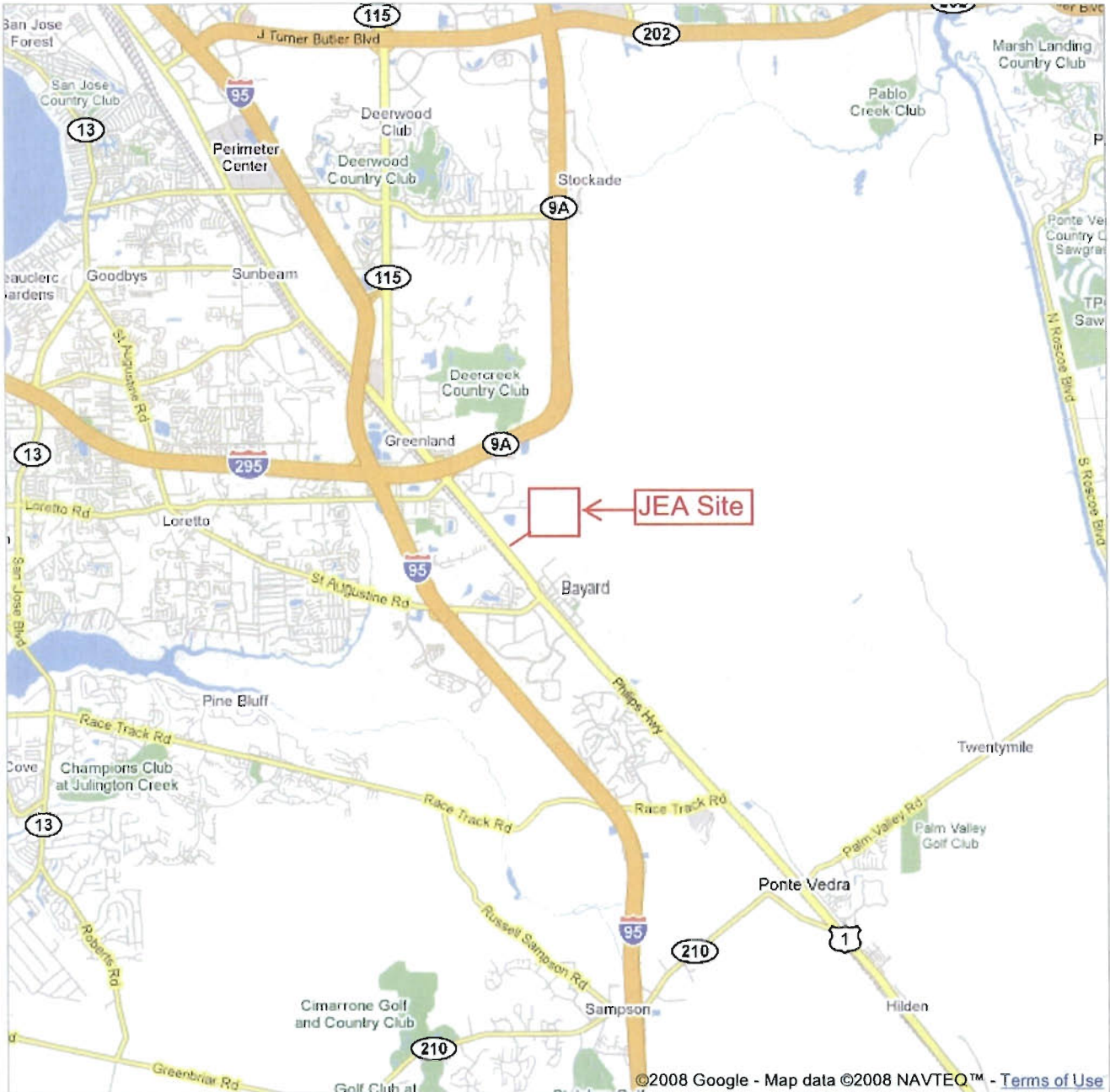
*Note that the information and attachments in this email are intended for the exclusive use of the addressee and may contain confidential or privileged information. If you are not the intended recipient, please do not forward, copy or print the message or its attachments. Notify me at the above address, and delete this message and any attachments. Thank you.*

JEA Greenland Energy Center  
Location Map 5 mile radius



Get Google Maps on your phone

Text the word "GMAPS" to 466453

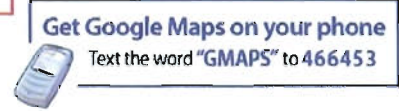


JEA Greenland Energy Center  
Location Map 5 mile radius

Entrance from US Hwy 1 / Philips Hwy,  
south of Greenland Road and north of St. Augustine Road



JEA Greenland Energy Center  
Location Map 7-10 mile radius

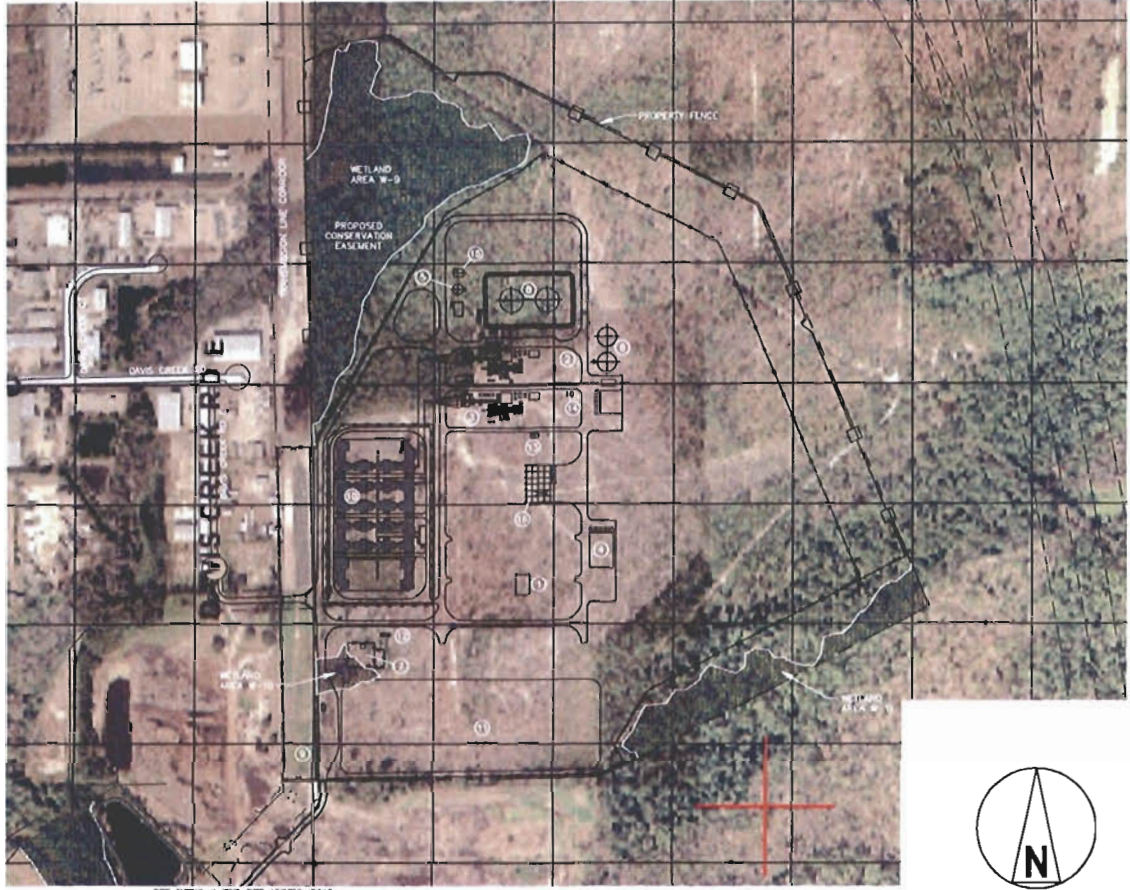


JEA Greenland Energy Center  
Location Map 7-10 mile radius

Entrance from US Hwy 1 / Philips Hwy,  
south of Greenland Road and north of St. Augustine Road

1 2 3 4 5 6 7

A  
B  
C  
D



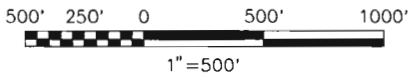
SEE DETAIL 1 FOR SITE ACCESS ROAD



FACILITIES LEGEND	
ITEM NO	DESCRIPTION
1	(8) WIDE OFFICE TRAILER
2	COMBUSTION TURBINE NO 1
3	COMBUSTION TURBINE NO 2
4	WAREHOUSE (14,000 SF)
5	SERVICE / FIRE WATER TANK
6	DEMIN WATER TANKS - 3 DAY STORAGE (1,800,000 GAL TOTAL)
7	GAS METERING STATION
8	FUEL OIL TANKS W/CONTAINMENT - 5 DAY STORAGE (3,750,000 GAL TOTAL)
9	GUARD SHACK
10	230 KV SUBSTATION
11	DETENTION POND
12	FUEL GAS HEATER
13	DIESEL GENERATOR
14	OIL WATER SEPARATOR
15	FIRE PUMP BUILDING
16	ADMIN/CONTROL/MAINTENANCE BUILDING (28,250 SF)

GENERAL LEGEND	
	8' HIGH CHAIN LINK SECURITY FENCE
	BARBED WIRE FENCE
	PROPERTY LINE



MCR44608 ACAD 16.1s (LMS Tech)  
 A1ASL012 B1 1=1  
 06/10/08 09:09:22

E	06/10/08	WETLAND UPDATE	JKM	MJT	JMS		
D	06/06/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
C	05/30/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
B	05/02/08	ENTRANCE ROAD UPDATE	JKM	MJT	JMS		
NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP



ENGINEER	MJT	DRAWN	JKM
CHECKED		DATE	

JEA  
 GREENLAND ENERGY CENTER  
  
 PLANT ARRANGEMENT  
 SIMPLE CYCLE COMBUSTION TURBINE FACILITY

PROJECT	DRAWING NUMBER	REV
148570-SS-0008		E
CODE		
AREA		

***10.4.7.2 Florida Fish and Wildlife Conservation Commission***

***JEA Greenland Energy Center  
Standard Gopher Tortoise Relocation Permit No. WR08306***

21 West Church Street  
Jacksonville, Florida 32202-3139

August 13, 2008



Dr. Elsa Haubold, Ph.D., Leader  
Florida Fish & Wildlife Conservation Commission  
Species Conservation Planning Section  
620 South Meridian Street  
M.S. 2A  
Tallahassee, Florida 32399-1600

E L E C T R I C

RE: JEA / Greenland Energy Center (GEC)  
Standard Gopher Tortoise Relocation Permit  
Permit No. #WR08306

W A T E R

Dear Dr. Haubold:

S E W E R

The "Standard Gopher Tortoise Relocation Permit" was received for signature August 11, 2008. Please find attached the signed permit authorizing to capture, remove and relocate gopher tortoises in Florida pursuant to Rules 68A-9.002, 68A-25.002 and 68A-27.004 FAC, the Florida Fish and Wildlife Conservation Commission's Guidelines for Gopher Tortoise Relocations (May 30, 2008) and the implemented portions of the Gopher Tortoise Permitting Guidelines (April 2008) and subject to the provisions/conditions as stated in the permit.

Please do not hesitate to contact me at (904) 665-8729 if you have any questions or require any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Jay Worley", is written over the typed name.

Jay Worley  
Director, Environmental Programs

Enclosure: GEC Gopher Tortoise Relocation Permit # WR08306

cc: A. Mann, JEA  
S. Chambers, Environmental Resource Solutions  
B. Schroeder, Longleaf Wetland Mitigation Bank  
M. Dinkins, King Engineering Associates, Inc.

bcc: A. Sears, JEA  
M. Lawson, JEA  
M. Soltys, B&V  
JEA GEC File



**Standard Gopher Tortoise Relocation Permit**  
 FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
 Species Conservation Planning Section  
 620 South Meridian Street, M.S. 2A  
 Tallahassee, FL 32399-1600

Permittee Name:	Mr. Jay Worley	Permit #:	WR08306
Affiliation:	Jacksonville Electric Authority	Effective Date:	August 1, 2008
Permittee Address:	21 West Church Street Jacksonville, FL 32202-3139	Expiration Date:	February 1, 2009
Phone/Fax No.:	904-665-8729/904-665-7376		
Consultant:	Ms. Shannon Chambers		
Company:	Environmental Resource Solutions		
Consultant Address:	1597 The Greens Way, Suite 200 Jacksonville Beach, FL 32250		
Phone/Fax No.:	904-285-1397/904-285-1229		

Pursuant to Rules 68A-9.002, 68A-25.002 and 68A-27.004, F.A.C., the Florida Fish and Wildlife Conservation Commission's Guidelines for Gopher Tortoise Relocations (May 30, 2008) and the implemented portions of the Gopher Tortoise Permitting Guidelines (April 2008) and subject to the following provisions/conditions, the above named Permittee is authorized to capture, remove and relocate gopher tortoises (*Gopherus polyphemus*) in Florida.

**PERMITTEE IS AUTHORIZED TO:**

Up to 29 gopher tortoises (*Gopherus polyphemus*) may be captured by non-harmful means in association with development activities at the Jacksonville Electric Authority Greenland Energy Center site (T4S, R28E, S7, 8, 17, 18, and 37 with Latitude 30°9'34.22" N and Longitude -81°30'59.06" W), in Duval County, relocated to and released at the 25.49-acre off-site Longleaf Wetland Mitigation Bank – Area I recipient site (T1S, R24E, S19, 29, 30 and 31 with Latitude 30°47'33" N and Longitude 81°93'45" W), in Nassau County which is owned by Longleaf Mitigation Development Company, LLC, managed by Mr. Bill Schroeder, 501 Riverside Avenue, Suite 902, Jacksonville, FL 32202, 904-421-3265, 904-393-9003(fax), and represented by Mr. Matt Dinkins, King Engineering Associates, Inc., 6500 Bowden Road, Suite 290, Jacksonville, FL 32216, 904-636-6755, 904-636-9533 (fax). Any gopher tortoise burrow commensals encountered in the capture operation may likewise be live-captured, relocated and released. However, no more than one indigo snake (*Drymarchon corais couperi*), or 10 each of Florida mice (*Podomys floridanus*) and gopher frogs (*Rana capito*) may be relocated. Should additional specimens of those species or other species listed as endangered, threatened or of special concern, be encountered, the capture operation is to be suspended immediately and this office contacted for instructions.

---

Permittee Signature  Date 8/12/08

Not valid unless signed. By signature, confirms that all information provided to issue the permit is accurate and complete and indicates acceptance and understanding of the provisions and conditions listed below. **Any false statements or misrepresentations when applying for this permit may result in felony charges and will result in revocation of this permit.**

---

Authorized by: Kenneth D. Haddad, Executive Director  
 Authorizing Signature  Date 08/01/08  
 Elsa Haubold, Ph.D., Leader  
 Species Conservation Planning Section

## PERMIT CONDITIONS AND PROVISIONS:

1. Tortoises shall not be captured/relocated on days for which the overnight low temperature for that day and the two consecutive days thereafter is forecasted by the U.S. National Weather Service to be below 50°F. This 3-day window of milder overnight temperatures is to allow the relocated tortoises to settle into the recipient site. Authorizing the capture/relocation is otherwise predicated and conditioned on the information and assurances provided in the Permittee's May 13, 2008 (revised June 9, 2008) application and supplemented on July 17, 2008, the assurances of which are herein incorporated by reference.
2. Captured gopher tortoises that show signs of disease (i.e., nasal and ocular discharge, emaciation, etc.) should not be relocated off-site. At the Permittee's discretion, symptomatic tortoises may be: relocated on-site; transported to and quarantined at a FWC licensed wildlife rehabilitation center (list available upon request) or licensed veterinary facility and observed for recovery and subsequent relocation along with others from the population; transported and donated to a FWC permitted disease research program; or humanely euthanized by a licensed veterinarian when disease is advanced.
3. Tortoises released at the recipient site shall be released into an enclosure for a minimum period of six months, but no longer than twelve months; however, the maximum 12-month time limit will not apply when the entire perimeter of the approved recipient site parcel is permanently fenced in conformance with the FWC enclosure requirements. Enclosure materials, construction methods and dimensions must conform to the requirements specified in the Gopher Tortoise Permitting Guidelines (April 2008). The enclosures must be regularly monitored and maintained, including the immediate repair of any damage to maintain the integrity of the enclosure. Monitoring of the enclosure shall be conducted at least once a week for the first four weeks following release of tortoises, and at least once a month thereafter.
4. Tortoises released into the enclosure may be stocked at up to 1.5 times the FWC-approved gopher tortoise density of the recipient site parcel containing the enclosure, provided that the maximum number of tortoises approved by the FWC for release into the entire recipient site parcel is not exceeded.
5. This permit does not authorize Permittee access to any public or private properties. Any required permission must be secured from the appropriate landholders prior to undertaking any work on such properties.
6. Captures/relocations may be conducted only if local written approvals have been obtained for clearing, grading, or construction activities. This permit is subject to revocation at any time pursuant to Chapter 120, Florida Statutes. It is nontransferable and must be readily available for inspection at all times while engaging in the permitted activities.
7. The activities authorized under this Permit may be carried out by authorized personnel or contractors of the Permittee or designated Consulting Firm (Authorized Agent), provided all such activities are under the direct supervision and responsibility of the Permittee or Authorized Agent. The Permittee and Authorized Agent shall be as fully responsible for any such activities to the same extent as if they had themselves carried out those activities under this Permit.
8. The Permittee shall notify the Gopher Tortoise Permit Coordinator by fax at (850)488-5297 or by phone at (850)410-0656, ext. 17327, within 24 hours of initiating the tortoise relocation effort.
9. Either this original permit, or a complete copy, must be clearly posted at the affected site at all times while engaged in the permitted tortoises relocation activities.
10. The Permittee, by signing this permit, specifically agrees to allow authorized Commission personnel, upon presentation of credentials as may be required by law, access to the donor and recipient sites, at reasonable times, for the purpose of inspecting the capture/relocation activities authorized under this permit.

## PERMIT CONDITIONS AND PROVISIONS:

11. The Permittee shall submit a report detailing the capture/relocation to the Species Conservation Planning Section (SCPS) Regional contact person, with copies provided to the recipient site landowner and this office, within 30 days of release of the captured/relocated tortoises involved. A report form is attached for use in that regard. Any request for permit renewal or extension shall be submitted at least 45 days prior to the expiration date of this permit.

**A person whose substantial interests are affected by FWC's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. A person seeking a hearing on FWC's action shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision. The petition must contain the information and otherwise comply with section 120.569, Florida Statutes, and the uniform rules of the Florida Division of Administration, chapter 28-106, Florida Administrative Code. The Permittee shall cease all work authorized by this permit, upon receiving written notice that the FWC has received a petition. The cease work order shall remain in effect until the petition is resolved. The enclosed Explanation of Rights statement provides additional information as to the rights of parties whose substantial interests are or may be affected by this action.**

RDM/dm  
LIC 6-20  
WR08306.per

Enclosure: Notice of Rights  
After Action Report form

cc w/ enc.: Mr. Matt Dinkins, King Engineering Associates, Inc.  
cc w/o enc: Ms. Daphne McCann  
North Central Region



REPORT FORM FOR GOPHER TORTOISE RELOCATIONS

PERMITTEE \_\_\_\_\_ PERMIT NO: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PHONE NO: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

DONOR SITE: County: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_

NO. ACTIVE PLUS INACTIVE BURROWS: \_\_\_\_\_ NO. TORTOISES CAPTURED: \_\_\_\_\_

METHOD OF CAPTURE: \_\_\_\_\_

CAPTURE DATE: RELEASE DATE: \_\_\_\_\_

NUMBER OF MALES<sup>1</sup>: \_\_\_\_\_ MEAN CARAPACE LENGTH: \_\_\_\_\_ mm

NUMBER OF FEMALES<sup>2</sup>: \_\_\_\_\_ MEAN CARAPACE LENGTH: \_\_\_\_\_ mm

NUMBER OF IMMATURES: \_\_\_\_\_ MEAN CARAPACE LENGTH: \_\_\_\_\_ mm

RECIPIENT SITE: County: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_

PROPERTY NAME: \_\_\_\_\_

OWNER: \_\_\_\_\_

HABITAT TYPE: \_\_\_\_\_

ACREAGE AVAILABLE TO TORTOISES: \_\_\_\_\_

NUMBER OF ACTIVE AND INACTIVE BURROWS PRESENT: \_\_\_\_\_

TYPE OF PROPOSED MANAGEMENT: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Frequently Asked Questions Gopher tortoise permitting guidelines

### **Why did FWC revise the gopher tortoise permitting guidelines?**

The permitting guidelines are the first step in implementing the Gopher Tortoise management plan (approved September 2007). The guidelines will help Florida meet the plan's objective of "decreasing gopher tortoise mortality on lands proposed for development through a redesigned FWC gopher tortoise permitting system."

### **How is the new permitting system proposed in the guidelines different from FWC's previous permitting program for gopher tortoises?**

The new guidelines provide incentives for relocating tortoises to lands that have long-term protection and management. In addition to permitting tortoise relocations, the new system will authorize gopher tortoise agents who will be responsible for capturing, handling, and transporting gopher tortoises. Agents must demonstrate experience or training prior to being authorized to handle tortoises. The new system will also require recipient site certification for private landowners who would like to receive displaced tortoises. All permits will require a mitigation contribution to FWC to fund activities that help achieve the conservation goals of the management plan, including administration of the new permitting system (previously, the "five or fewer" and standard relocation permits were "no cost" permits).

### **How long will it take to implement the new permitting guidelines?**

With passage of the guidelines, FWC is implementing the new tortoise capture, handling, health, and transport guidelines; and emergency take and settlement permits for new violations being reported and investigated. Also, people whose standard relocation permit and interim incidental take permit applications remain incomplete after May 31, 2008 and those whose applications are received by the FWC after that date will be required to use soft-release (i.e., enclosures) at all recipient sites – in conformance with the April 2008 guidelines. Applications for authorized agents and certified recipient sites will be accepted by the FWC after June 1, 2008. The online permitting for the new types of relocation permits (e.g., 10 or fewer burrow permits and conservation permits) and the associated mitigation contributions will be implemented in spring 2009.

### **I am interested in obtaining the most current information on how to become a permitted tortoise recipient site. Has an official application been developed, and if so, can you provide me with a copy?**

Now that the guidelines have been approved by our Commissioners, FWC staff are developing a recipient site application in preparation for the 1 June 2008 implementation date. It is anticipated that the application will be available on our website by 15 May 2008. However, the use of certified recipient sites will not be required by the FWC until the conservation and 10 or fewer burrow permit processes are implemented, which are tentatively scheduled for spring of 2009.



## Frequently Asked Questions Gopher tortoise permitting guidelines

**How do I go about requesting certain lands be evaluated as potential gopher recipient sites?**

You must apply for consideration. FWC staff will provide application forms for recipient site certification by 1 June 2008 on our website. Criteria for recipient sites are outlined in the approved tortoise permitting guidelines. Soil type, canopy cover, and ground cover are required information that will be considered in determining site suitability. FWC permitting staff will then evaluate information on the application and will coordinate with the applicant to conduct a site visit.

**If the on-site habitat does not meet the minimum size criteria for a "long-term protected area" nor the minimum size criteria for a "short-term protected" recipient site but still has adequate stocking capacity for the resident tortoises (greater than 10 burrows) to be relocated there, does the conservation permit permittee need to obtain a recipient site permit for this on-site relocation recipient area?**

No, the permittee will not need to obtain a separate recipient site permit for smaller on-site recipient areas. However, those areas will need to be approved as providing suitable gopher tortoise habitat by the FWC before they can be used.

**Are you going to have some sort of certification process to allow people to dig up and relocate tortoises, and manage recipient sites?**

Yes, the authorized agent permit will certify those individuals who meet the qualifications specified in the guidelines. Moving gopher tortoises must be done only by those who have permits to do so. An agent works for a conservation permit holder or a certified recipient site permit holder to perform any and all actions approved by the permit. The authorization permit is an indication that the agent is qualified to conduct certain actions; however, in order to carry out such actions, there must be a separate permit which has been issued to specify the details of where and when gopher tortoise conservation activities are to be conducted by the agent.

**Where can I get the application for an Authorized Agent permit?**

FWC staff are developing a new application form for Authorized Agent permits in preparation for the 2<sup>nd</sup>. SA2008 implementation date which will be available on FWC's website around *THAT DATE*. However, use of an authorized agent to conduct activities associated with issued gopher tortoise relocations will not be required by the FWC until the conservation and 10 or fewer burrow permit processes are implemented, tentatively scheduled to begin in spring 2009.

**Will people have to demonstrate knowledge of digging burrows, bleeding tortoises, etc?**

The qualifications for becoming an authorized agent include completion of an approved training course or having an average of 240 hours experience per year over the prior four year period (see pp 10-12 of the April 2008 guidelines for other qualifications). Approved training courses should include specific hands-on components which would demonstrate that a person is qualified for specified activities.



## Frequently Asked Questions Gopher tortoise permitting guidelines

### **Will FWC be teaching classes or contracting out to a private entity?**

No, FWC will not provide training nor will we contract with a private entity. However, FWC is establishing a course curriculum and will send out a request for those individuals or companies that wish to train. Some are already conducting such training, and others are hoping to begin training in the near future.

### **My group is interested in teaching courses in our areas. How would one go about becoming certified to teach proper techniques to others in the field?**

The FWC will evaluate all proposed course curriculum for approval. The training proposals that we have received thus far include instructors who are well-experienced gopher tortoise consultants/handlers/biologists. Those are generally the type of instructors that are included in training courses. Instructors may also be authorized agents themselves, especially if they are performing field work in conjunction with their training course.

### **When applying for a certified recipient site permit, will an authorized agent be allowed to perform surveys in the course of evaluating the suitability of a potential certified recipient site?**

Agents who are authorized to perform gopher tortoise surveys may do so at any time they are performing work that is in support of a current or future gopher tortoise permit application.

### **Are settlement permits the same as the old "after-the-fact" permit? How is the settlement permit different?**

Settlement permits are not the same as "after-the-fact" permits. Permit applicants are moved into the settlement permit process when site disturbance has occurred on the project site which prevents complete gopher tortoise surveys from being conducted, or which prevents FWC from site-checking such surveys. As part of the settlement permit process, an FWC law enforcement investigation is conducted to determine if FWC rules have been violated. FWC will not issue settlement permits until such investigations have been completed.

### **Are there any activities that do not require a permit under the new gopher tortoise guidelines?**

The guidelines provide clear direction for activities that do not require a permit such as agricultural, silvicultural, and wildlife management activities that are conducted in accordance with the Gopher Tortoise Enforcement Policy, found in Appendix 1 of the guidelines.

### **Can I still apply for an "interim incidental take permit" with mandatory relocation, and is there a cut-off date for this permit type?**

Standard relocation and interim incidental take permits will continue to be issued until the conservation permits, temporary exclusion, and 10 or fewer burrow permits are implemented in spring of 2009.



## Frequently Asked Questions Gopher tortoise permitting guidelines

**I already have a permit application in process; will I be required to use soft release (i.e., enclosures) at the recipient site, or will I be grandfathered under the interim policy?**

Complete applications for standard gopher tortoise relocation or interim incidental take (I.T.) permits received in hard copy at the FWC at 620 South Meridian Street, Tallahassee, Florida 32399-1600 (FWC Office) on or before 5 p.m. EDT on 31 May 2008, will be reviewed, and permits issued, consistent with the current guidelines "Available Options to Address the Presence of Gopher Tortoises on Lands Slated for Development (26 October 2007)" and the current standard tortoise relocation permit conditions.

Standard Relocation Permits and interim I.T. permits issued for applications either initially received by the FWC at the FWC Tallahassee Office before 5 p.m. EDT 31 May 2008 but remaining incomplete after that time (e.g., do not contain all required items to be considered a complete application), or received by the FWC at the FWC Office after 5 p.m. 31 May 2008, will include a specific condition that requires the permittee to relocate all gopher tortoises to on-site or off-site recipient areas using soft release (enclosures), as described in the Gopher Tortoise Permitting Guidelines (April 2008).

**I am receiving tortoises on my property now under the old permitting guidelines, what changes will affect my ability to continue to receive tortoises?**

After 1 June 2008, soft release (as described in the April 2008 permitting guidelines) will be required to help tortoises settle into recipient areas. Although certification will not be required this year, we urge recipient sites to become certified and will begin accepting such applications on 1 June 2008. By next spring (2009), recipient sites that are not permanently protected will be at a disadvantage because the mitigation contributions paid to FWC will be 10 times greater than those for tortoises being moved to protected sites.

**We are preparing to clear a lot for development and the adjacent lot has an active gopher tortoise burrow eight feet from our lot boundary. Can we clear our entire lot since the gopher tortoise is on the other lot, or what precautions should we take?**

The gopher tortoise permitting guidelines state that burrows must be avoided by 25 feet during development activities. If your gopher tortoise survey indicates that a burrow on someone else's property is closer than 25 feet to where you propose to actually disturb the site (dig, bulldoze, pave, etc) you should contact FWC for further directions. If you also own the neighboring site and it is slated for future development, you may want to hire an Authorized Agent to advise you or to assess the potential impacts to gopher tortoise burrows for you.

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
ELECTION OF RIGHTS

I have read the Explanation of Rights provided to me by the Florida Fish and Wildlife Conservation Commission (Commission) and understand my options. (You may select one of the options below and return this form to the Commission no later than twenty-one (21) days from the receipt of the notice of agency action or proposed action.)

1. I do not dispute any of the issues of material fact in the notice of agency action or proposed action, but do wish to be accorded an informal proceeding, pursuant to Sections 120.569 and 120.57(2), Florida Statutes. I understand that I may either submit a written statement or submit evidence in mitigation to the agency head or designated representative. I have attached the completed and signed Petition for Administrative Proceeding form completed in accordance with Chapter 28-106, Florida Administrative Code, or a substitute document in compliance with Chapter 28-106, of the Florida Administrative Code.

2. I do dispute one or more issues of material fact in the notice of agency action or proposed action. I have attached the completed and signed Petition for Administrative Proceeding form completed in accordance with Chapter 28-106, Florida Administrative Code, or a substitute document in compliance with Chapter 28-106, of the Florida Administrative Code, and I request a formal hearing, pursuant to Sections 120.569 and 120.57(1), Florida Statutes, before an administrative law judge appointed by the Division of Administrative Hearings.

I have read and understand the Election of Rights form and understand that I have the right to be represented by counsel or a qualified representative in an administrative proceeding. I also understand that I must attach a petition to this request if I have requested an informal proceeding or hearing.

Please sign and state your current address and telephone number:

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
PRINT NAME

The above indicated person is  the Petitioner,  counsel for the Petitioner, or  the qualified representative of the Petitioner (Please check one).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Petitioner's name and address Attorney or representative's name and address (if applicable)

\_\_\_\_\_  
If applicable, please list the type of Permit /License applied for and the Permit/License Number

Use mail form to: Office of General Counsel  
Florida Fish and Wildlife Conservation Commission  
620 South Meridian Street  
Tallahassee, FL 32304

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**  
**PETITION FOR ADMINISTRATIVE PROCEEDING**  
Compliance of Section 120.569(2)(c), Florida Statutes, and  
Chapter 28-106, Florida Administrative Code.

If requesting a proceeding, please complete this form or otherwise provide the information required by Chapter 28-106, of the Florida Administrative Code on single sided 8 1/2" x 11" white paper and send to the following address along with the completed Election of Rights form:

Office of General Counsel  
Florida Fish and Wildlife Conservation Commission  
620 South Meridian Street  
Tallahassee, Florida 32399-1600

1. Please list the name and address of each agency affected and each agency's file or identification number, if known:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Please identify the petitioner (the individual or organization requesting the hearing):

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone number: (\_\_\_\_) \_\_\_\_\_

3. Please identify the petitioner's representative or counsel (if any):

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone number: (\_\_\_\_) \_\_\_\_\_

[The address of petitioner's representative, if listed above, shall be the address for service purposes during the course of the proceedings]

4. Please explain how the petitioner's substantial interests are or will be affected by the Commission's action or proposed action:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please explain when and how the petitioner received notice of the Commission's action or proposed action:

\_\_\_\_\_

6. Please indicate whether the petitioner disputes any material facts and, if so, state all disputed material facts:

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7. Please concisely state the ultimate facts alleged, including a statement of the specific facts that the petitioner contends warrant reversal or modification of the Commission's action or proposed action:

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8. Please state the specific rules or statutes that the petitioner contends require reversal or modification of the Commission's action or proposed action:

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9. Please state the relief sought by the petitioner, stating precisely the action that the petitioner wants the Commission to take with respect to the action or proposed action:

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Either the Petitioner, counsel for the Petitioner, or the qualified representative of the Petitioner must sign below agreeing that the person signing this document has read this Petition, made a reasonable inquiry, and is not filing this document for any improper purposes, frivolous purpose, or needless increase in the cost of litigation.

Signature

Date

PRINT NAME



FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
EXPLANATION OF RIGHTS

If your substantial interests are or will be determined by the Florida Fish and Wildlife Conservation Commission's action or proposed action stated in the accompanying notice, you may make any one of the following elections on the attached Election of Rights form and file the form within twenty-one (21) days from the date you receive the notice of agency action or proposed action. If you so choose, please return the completed Election of Rights form with the enclosed Petition for Administrative Proceeding form completed in accordance with Chapter 28-106, Florida Administrative Code, or a substitute document in compliance with Chapter 28-106, of the Florida Administrative Code, to the address listed on the Election of Rights form.

1. If you wish to contest the agency action or proposed action, but do not dispute any of the issues of material fact set forth in the notice, you may request an informal proceeding pursuant to Sections 120.569 and 120.57(2), Florida Statutes. In the event that your request for an informal proceeding is granted, you will be given the opportunity to either simply present a written statement challenging the grounds upon which the Commission has chosen to justify its action or inaction or present evidence in mitigation.

Any request for an informal proceeding in this matter should be directed to the Commission by checking the space marked as 1 on the Election of Rights form and filing the completed and signed form with the Commission within twenty-one (21) days from the date of receipt of the notice. In making such a request, you must include with the completed and signed Election of Rights form either the completed and signed Petition for Administrative Proceeding form completed in accordance with Chapter 28-106, Florida Administrative Code, or a substitute document in compliance with Chapter 28-106, of the Florida Administrative Code.

2. If you wish to contest the notice of agency action or proposed action and you dispute one or more of the issues of material fact as set forth in the notice, you may request a formal hearing pursuant to Sections 120.569 and 120.57(1), Florida Statutes. If there is a disputed issue of material fact and your request is otherwise complete, an administrative law judge shall be furnished by the Division of Administrative Hearings of the Department of Management Services pursuant to Sections 120.569 and 120.57(1), Florida Statutes. A petition shall be dismissed if it fails to state disputed issues of material fact, it otherwise is not in substantial compliance with the requirements of 28-106.201(2) FAC, or it has been voluntarily filed.

Any request for a formal hearing in this matter should be directed to the Commission by checking the space marked as 2 on the Election of Rights form and filing the completed and signed form with the Commission within twenty-one (21) days from the date of receipt of the notice. In making such a request, you must include with the completed and signed Election of Rights form either the completed and signed Petition for Administrative Proceeding form completed in accordance with Chapter 28-106, Florida Administrative Code, or a substitute document in compliance with Chapter 28-106, of the Florida Administrative Code.

Failure to make any election in this matter, as provided above, within twenty-one (21) days from the date you received the notice, shall be considered a waiver of your rights to any administrative proceeding as provided in either 1 or 2, above.

Meditation is not an available alternative with respect to this action or proposed action.

***10.4.8 Florida Natural Areas Inventory Review***



JEA  
Greenland Energy Center

B&V Project 148570  
B&V File 32.1550  
April 18, 2008

Mr. Jon Oetting, Conservation Planner  
Florida Natural Areas Inventory  
1018 Thomasville Road, Suite 200-C  
Tallahassee, Florida 32303

Subject: Project Review

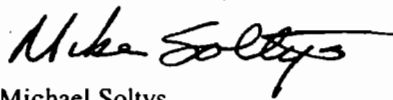
Dear Mr. Oetting:

JEA proposes to construct and operate a new electric-generating facility (hereinafter referred to as Greenland Energy Center or the Project) on a greenfield site south of Jacksonville in Duval County, Florida. The site location is shown on Attachment A. The site includes approximately 129 acres; a new access road connecting the site to Philips Highway/US-1 includes approximately four acres. The facilities are located in Sections 8, 17, and 37 of Township 4 South, Range 28 East. The proposed facility will consist of two simple-cycle combustion turbine units firing natural gas or fuel oil, and will function as a peaking power plant. Start of construction is slated for February 2009, with a proposed commercial operation date of June 2010.

Black & Veatch staff visited the site earlier this year to perform field surveys. The property was evaluated using current aerial photography, topographic maps, Natural Resources Conservation Service (NRCS) soils maps, and ground truthing to assess existing conditions for vegetation, soils, and hydrology. A wetland delineation was performed and a wetland delineation report and application for an Environmental Resource Permit (ERP) will be submitted to the Florida Department of Environmental Protection - NE District. Approximate wetland boundaries are illustrated on Attachments B and C. Also, a list of plants observed at the site in January and February of 2008 is included for your review as Attachment D. The site is habitat for the state listed gopher tortoise. A figure providing the approximate locations of gopher tortoise burrows is included as Attachment E. A Standard Tortoise Relocation Permit from the Florida Fish and Wildlife Conservation Commission will be obtained to relocate the tortoises.

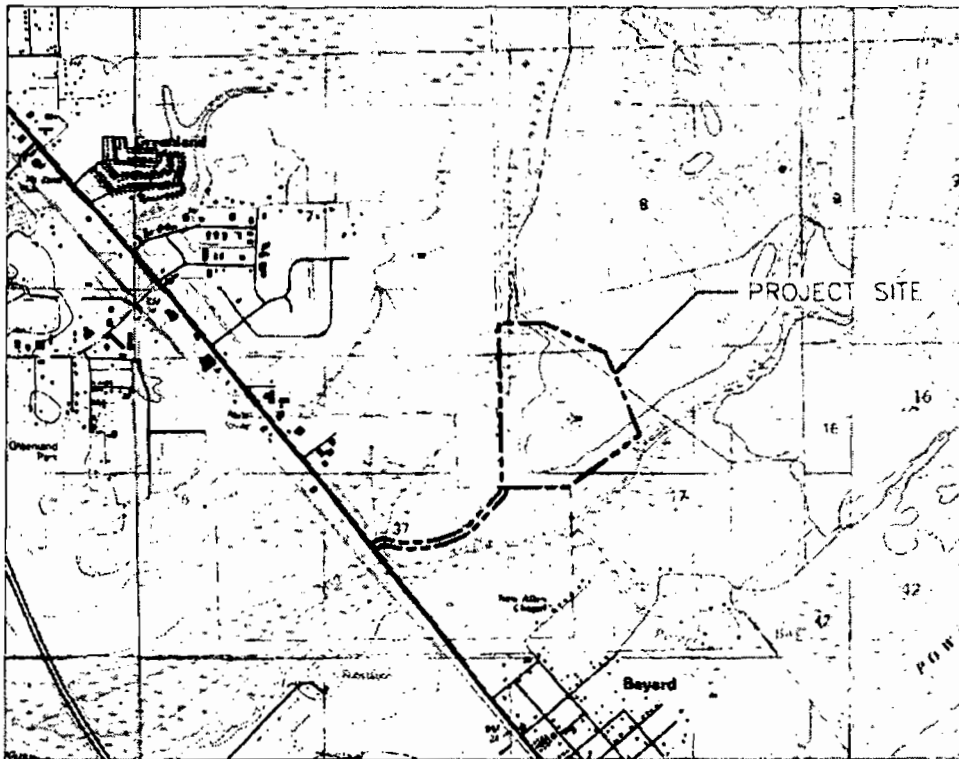
On behalf of JEA, Black & Veatch requests your office review the project site, corridor and vicinity for Element Occurrences and provide a written response for the project record. If you have any questions during your review, please contact me at (913) 458-7563 or [soltysjm@bv.com](mailto:soltysjm@bv.com).

Very truly yours,  
BLACK & VEATCH

  
Michael Soltys  
Environmental Permitting Manager

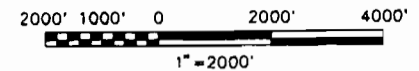
Attachments

cc: Mr. Jay Worley, JEA



Duval County, FL

S8, T4S, R2BE  
 S17, T4S, R2BE  
 S37, T4S, R2BE



MCR44608 ACAD 16.1s (LMS Tech)  
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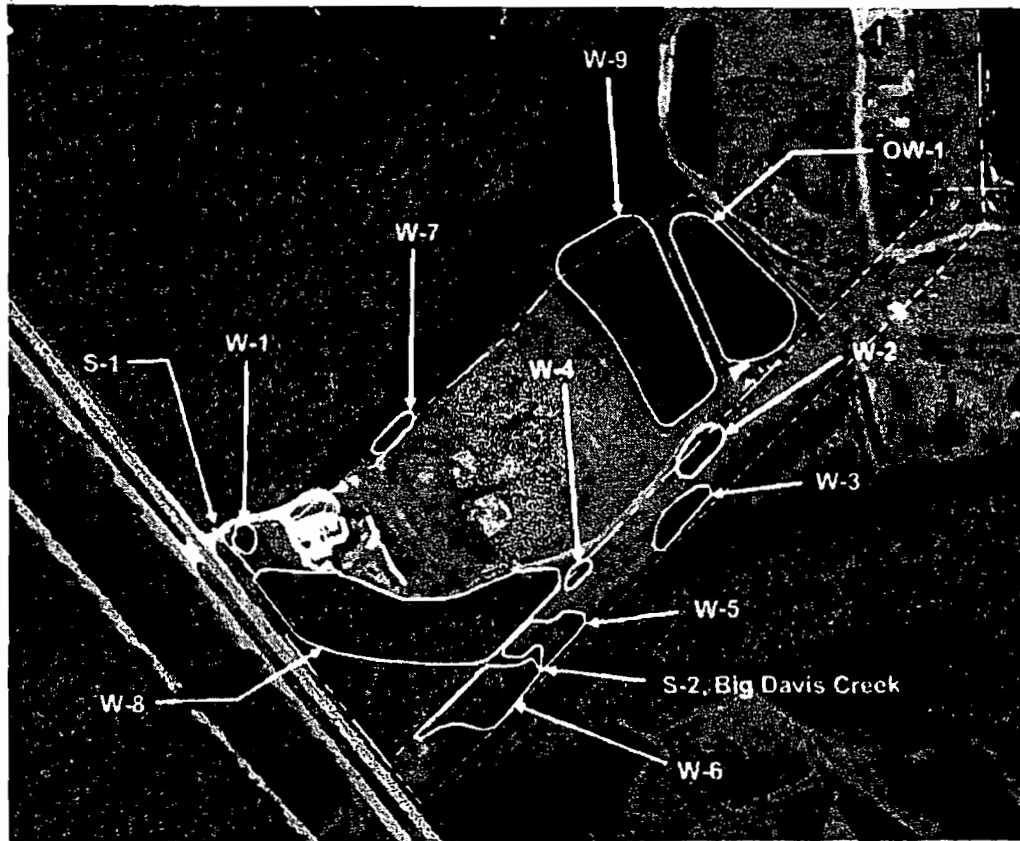
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														SITE LOCATION MAP		148570-SS-0007		Attachment A	
NO	DATE	REVISIONS AND RECORD OF ISSUE				DRN	DES	CHK	PDE	APP	ENGINEER	M/JT	DRAWN	JKM	CHECKED	DATE	CODE	AREA	

1 2 3 4 5 6 7



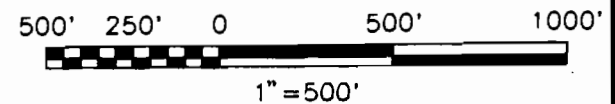
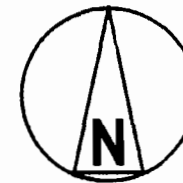
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										<b>BLACK &amp; VEATCH CORPORATION</b>		<b>JEA</b> SOUTHEAST GENERATING STATION		PROJECT DRAWING NUMBER 148570-SS-0001		REV A	
A	02-29-08	INITIAL ISSUE				JKM	MJT	MJT	JMS	ENGINEER	MJT	DRAWN	JKM	CODE		Attachment B	
NO	DATE	REVISIONS AND RECORD OF ISSUE				DRN	DES	CHK	PDE	APP	CHECKED	DATE	02-29-08	AREA			



LEGEND

- PROPERTY BOUNDARY
- ..... T-LINE ROW



		NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
		JEA SOUTHEAST GENERATING STATION			PROJECT	DRAWING NUMBER			REV
					148570-SS-0003				
ENGINEER	DRAWN	WETLANDS AND STREAMS			CODE	Attachment C			
CHECKED	DATE				03/25/2008				

**Attachment D**  
**Plants Observed at Proposed JEA Greenland Energy Center Site**  
**September 25, 2007, January 7-11, 2008, and February 20-22, 2008**

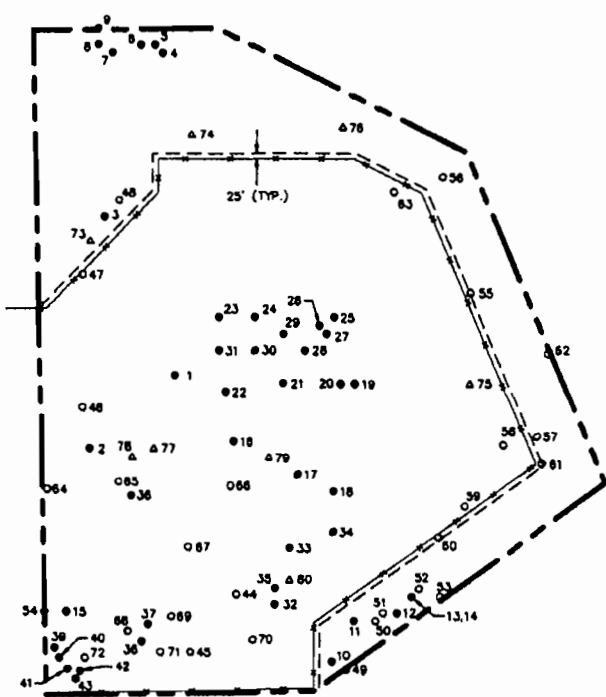
Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Acer rubrum L.</i>	Red Maple		x			OBL
<i>Alisma subcordatum</i>	Subcordate Water Plantain			x		OBL
<i>Ambrosia artemisiifolia</i>	Annual Ragweed			x	x	FACU
<i>Andropogon glomeratus</i>	Bushy Bluestem			x	x	FACW+
<i>Andropogon ternarius</i>	Silver Bluestem	x			x	FACU
<i>Andropogon virginicus</i>	Broom-sedge	x		x	x	FAC-
<i>Aristida spicata</i>	Pineland Three-awn Grass	x				FAC-
<i>Asimina reticulata</i>	Pawpaw	x				FACU
<i>Aster elliotii</i>	Elliott's Aster			x	x	OBL
<i>Baccharis halimifolia</i>	Groundsel-tree			x		FACW
<i>Bidens leucantha</i>	Spanish Needles			x	x	--
<i>Buchnera americana</i>	Blueheart	x			x	FAC
<i>Carex spp.</i>	Sedge		x	x	x	FAC-OBL
<i>Carphephorus corymbosus</i>	Coastal Plain Chaffhead	x				FACU
<i>Centella asiatica</i>	Asian Coinwort			x	x	OBL
<i>Cenchrus echinatus</i>	Southern Sandspur				x	UPL
<i>Centrostema virginianum</i>	Spurred Butterfly Pea				x	UPL
<i>Ceratiola ericoides</i>	Rosemary	x				UPL
<i>Chamaecrista fasciculata</i>	Partridge-pea	x			x	UPL
<i>Chamaecrista procumbens</i>	Partridge-pea	x			x	UPL
<i>Cnidioscolus stimulosus</i>	Spurge-Nettle				x	UPL
<i>Conradina grandiflora</i>	Cumberland Rosemary	x				UPL
<i>Conyza canadensis</i>	Horsetail				x	FACU
<i>Crotalaria angulata</i>	Rabbitbells	x			x	FACU
<i>Cynodon dactylon</i>	Bermudagrass				x	FACU
<i>Cyperus esculentus</i>	Nut Sedge			x	x	FAC
<i>Cyperus ligularis</i>	Flat Sedge			x	x	FACW
<i>Cyperus ovularis</i>	Flat Sedge			x	x	FAC
<i>Desmodium sp.</i>	Tick-clover				x	--
<i>Dichanthelium sp</i>	Panic Grass	x			x	--
<i>Digitaria ciliaris</i>	Southern Crabgrass				x	UPL
<i>Digitaria sanguinalis</i>	Hairy Crabgrass				x	FAC-
<i>Diodia virginiana</i>	Virginia Button-weed			x		FACW
<i>Elephantopus carolinianus</i>	Elephant's Foot		x			FAC
<i>Elephantopus elatus</i>	Florida Elephant's Foot	x				FAC
<i>Eleocharis sp.</i>	Spike Rush			x	x	OBL
<i>Eleusine indica</i>	India Goosegrass				x	FACU
<i>Eragrostis elliotii</i>	Elliott's Lovegrass		x			FACW
<i>Erechtites hieracifolia</i>	Fireweed			x	x	FAC-
<i>Erigeron vernus</i>	Early Whitetop Fleabane			x		OBL
<i>Eryngium aromaticum</i>	Fragrant Eryngium	x				FACW?
<i>Eupatorium capillifolium</i>	Dog Fennel				x	FACU
<i>Eupatorium morhii (E. recurvans)</i>	Coastal Plain Thorough-wort			x		FACW-
<i>Eupatorium rotundifolium</i>	False Hoarhound	x				FAC
<i>Euthamia minor</i>	Slender Goldenrod	x			x	FAC

Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Galactia elliotii</i>	Elliott's Milkpea	x				FACU
<i>Galactia regularis</i>	Eastern Milkpea	x				
<i>Galium tinctorium</i>	Stiff-marsh Bedstraw		x	x		FACW
<i>Geranium carolinianum</i>	Carolina cranesbill				x	UPL
<i>Gordonia lasianthus</i>	Loblolly Bay		x			FACW
<i>Hedyotis nigricans</i>	Diamond-flowers	x			x	UPL
<i>Hydrocotyle umbellata</i>	Many-flowered Pennywort			x	x	OBL
<i>Hyptis alata</i>	Cluster Bushmint			x		OBL
<i>Imperata cylindrica</i>	Cogon Grass				x	NL
<i>Indigofera miniata</i> var. <i>leptosepala</i>		x				UPL
<i>Indigofera hirsuta</i>	Hairy Indigo				x	UPL
<i>Ipomea hederacea</i>	Ivy-leaf Morning Glory				x	FAC-
<i>Ipomea pandurata</i>	Wild Potato Vine		x			FACU
<i>Iris</i> sp.	Blue Flag			x		OBL
<i>Iva microcephala</i>	Piedmont Sumpweed			x		FACW
<i>Juncus marginatus</i>	Grass-leaf Rush			x		FACW
<i>Juniperus virginiana</i>	Eastern Red Cedar				x	FACU-
<i>Lachnanthes caroliniana</i>	Carolina Redroot			x		OBL
<i>Lechea sessiliflora</i>	Pineland Pinweed	x				UPL
<i>Liatris tenuifolia</i>	Blazing Star	x				UPL
<i>Lindernia grandiflora</i>	False Pimpernel		x	x		OBL
<i>Linaria canadensis</i>	Blue Toadflax				x	UPL
<i>Liquidambar styraciflua</i>	Sweetgum		x			FAC+
<i>Lonicera sempervirens</i>	Coral Honeysuckle		x		x	FAC
<i>Ludwigia peruviana</i>	Water-primrose			x		OBL
<i>Ludwigia repens</i>	Creeping Seedbox			x		OBL
<i>Lyonia ferruginia</i>	Rusty Lyonia	x				FAC-
<i>Lyonia lucida</i>	Fetterbush		x			FACW
<i>Magnolia grandiflora</i>	Southern Magnolia		x			FAC+
<i>Magnolia virginica</i>	Sweet Bay		x			FACW+
<i>Myrica cerifera</i>	Wax-myrtle				x	FAC+
<i>Nuphar lutea</i>	Spatterdock			x		OBL
<i>Osmunda cinnamomea</i>	Cinnamon Fern		x	x		FACW+
<i>Osmunda regalis</i>	Royal Fern		x	x		OBL
<i>Panicum anceps</i>	Beaked Panicum			x		FAC-
<i>Panicum repens</i>	Torpedo Grass			x		FACW-
<i>Panicum rigidulum</i>	Redtop Panicum		x	x	x	FACW
<i>Paspalum notatum</i>	Bahia Grass				x	FACU+
<i>Paspalum setaceum</i>	Thin Paspalum				x	FAC
<i>Paspalum</i> sp.	Paspalum Grass				x	--
<i>Paspalum urvillei</i>	Vasey Grass			x	x	FAC
<i>Persea palustris</i>	Swamp Bay		x			NL
<i>Phorodendron serotinum</i>	Mistletoe	x		x		UPL
<i>Phyla nodiflora</i>	Frog Fruit			x		FACW
<i>Piloblephis rigidus</i>	False Pennyroyal	x				UPL
<i>Pinus clausa</i>	Sand Pine	x				UPL
<i>Pinus elliotii</i>	Slash Pine		x			FACW
<i>Pinus palustris</i>	Longleaf Pine		x			FACU+
<i>Polypodium polypodioides</i>	Resurrection Fern	x	x			UPL
<i>Polypremum procumbens</i>	Rustweed	x				FACU-



Scientific Name	Common Name	Habitat				Wetland Status <sup>1</sup>
		Scrub/Flat Woods	Forested Wetland	Emergent Wetland	Disturbed Areas	
<i>Pteridium aquilinum</i>	Bracken	x			x	FACU
<i>Pterocaulon virgatum</i>	Blackroot	x			x	FAC-
<i>Quamoclit coccinea</i>	Cypress Vine				x	FACU+
<i>Quercus geminata</i>	Scrub Live Oak	x			x	UPL
<i>Quercus laevis</i>	Turkey Oak	x				UPL
<i>Quercus myrtifolia</i>	Myrtle Oak	x				UPL
<i>Quercus nigra</i>	Water Oak		x		x	FAC
<i>Rhexia sp.</i>	Meadow Beauty			x		--
<i>Rhexia mariana</i>	Pale Meadow Beauty			x	x	FACW+
<i>Rhynchospora sp.</i>	Beakrush	x	x	x		--
<i>Rhynchospora megalocarpa</i>	Giant-fruited Beakrush	x			x	UPL
<i>Rubus cuneifolius</i>	Sand Blackberry	x				FACU
<i>Rumex crispus</i>	Curly Dock			x	x	FAC
<i>Rumex hastatulus</i>	Heart-wing Sorrel				x	FAC-
<i>Rumex sp.</i>	Dock			x		FACW-OBL
<i>Sabal minor</i>	Dwarf Palmetto		x			FACW
<i>Sabatia brevifolia</i>	Short-leaf Rose Gentian		x			FACW
<i>Salix carolinana</i>	Carolina Willow			x		OBL
<i>Sambucus canadensis</i>	American Elderberry			x	x	FACW-
<i>Saururus cernuus</i>	Lizard's Tail		x	x		OBL
<i>Schoenus nigricans</i>	Black Sedge		x			OBL
<i>Schrankia nuttallii</i>	Sensitive Briar				x	UPL
<i>Serenoa repens</i>	Saw Palmetto	x	x		x	FACU
<i>Setaria geniculata</i>	Knotroot Bristlegrass			x		FAC
<i>Sium suave</i>	Water-parsnip			x		OBL
<i>Smilax auriculata</i>	Catbrier	x				FACU
<i>Smilax bona-nox</i>	Catbrier	x			x	FAC
<i>Smilax laurifolia</i>	Catbrier		x			FACW
<i>Solidago canadensis</i>	Canadian Goldenrod			x	x	FACU
<i>Solidago fistulosa</i>	Pinebarren Goldenrod		x	x		FAC+
<i>Sonchus asper</i>	Prickly Sow Thistle				x	FAC+
<i>Sporobolus indicus</i>	Smutgrass				x	FACU+
<i>Stenotaphrum secundatum</i>	St. Augustine Grass			x	x	FAC
<i>Thelypteris kunthii</i>	Widespread Maiden Fern		x			FACW
<i>Tillandsia usneoides</i>	Spanish Moss	x	x			UPL
<i>Tradescantia roseolens</i>	Spiderwort	x				UPL
<i>Trifolium pratense</i>	Red Clover				x	FACU
<i>Trifolium repens</i>	White Clover				x	FACU
<i>Typha latifolia</i>	Broadleaf Cattails			x		OBL
<i>Ulmus americana</i>	American Elm		x			FACW
<i>Vaccinium arboreum</i>	Sparkleberry	x				FACU
<i>Vaccinium myrsinites</i>	Shiny Blueberry	x				FACU
<i>Viola sororia</i>	Woolly Blue Violet			x	x	FAC-
<i>Vitis shuttleworthii</i>	Calusa Grape		x		x	FAC
<i>Xyris caroliniana</i>	Yellow-eyed Grass	x				FACW

<sup>1</sup>Wetland Status refers to the Federal Wetland Indicator Status.



Florida High Precision, East Zone											
Point	North	East	Description	Point	North	East	Description	Point	North	East	Description
1	2118269	492589	Active	28	2118378	493156	Active	56	2118627	493686	Inactive
2	2117844	492206	Active	29	2118448	493063	Active	57	2119137	493762	Inactive
3	2118962	492276	Active	30	2118377	492937	Active	58	2117995	494178	Inactive
4	2119668	492532	Active	31	2118378	492779	Active	59	2117686	494030	Inactive
5	2118725	492500	Active	32	2117249	493026	Active	60	2117549	493744	Inactive
6	2118725	492437	Active	33	2117503	493091	Active	61	2117874	494199	Inactive
7	2119689	492311	Active	34	2117575	493281	Active	62	2118369	494227	Inactive
8	2118726	492246	Active	35	2117322	493027	Active	63	2119071	493548	Inactive
9	2118798	492248	Active	36	2117739	493394	Active	64	2117763	492024	Inactive
10	2118993	493278	Active	37	2117160	492472	Active	65	2117798	492338	Inactive
11	2117175	493374	Active	38	2117085	492444	Active	66	2117781	492829	Inactive
12	2117210	493564	Active	39	2117054	492098	Active	67	2117508	492645	Inactive
13	2117283	493627	Active	40	2117009	492080	Active	68	2117129	492383	Inactive
14	2117283	493627	Active	41	2118959	492116	Active	69	2117197	492571	Inactive
15	2117217	492110	Active	42	2118950	492172	Active	70	2117083	492929	Inactive
16	2117977	492840	Active	43	2118915	492152	Active	71	2117036	492526	Inactive
17	2117831	493124	Active	44	2117297	492856	Inactive	72	2117011	492190	Inactive
18	2117757	493282	Active	45	2117037	492656	Inactive	73	2118853	492212	Questionable
19	2118229	493379	Active	46	2118126	492177	Inactive	74	2118324	492867	Questionable
20	2118230	493315	Active	47	2118708	492180	Inactive	75	2118227	493684	Questionable
21	2118231	493062	Active	48	2119034	492339	Inactive	76	2119357	493320	Questionable
22	2118196	492809	Active	49	2118667	493341	Inactive	77	2117942	492482	Questionable
23	2118523	492776	Active	50	2117174	493469	Inactive	78	2117907	492397	Questionable
24	2118522	492937	Active	51	2117211	493500	Inactive	79	2117904	492996	Questionable
25	2118521	493286	Active	52	2117319	493699	Inactive	80	2117368	493090	Questionable
26	2118485	493222	Active	53	2117282	493753	Inactive				
27	2118448	493253	Active	54	2117217	492015	Inactive				

\* LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR

**LEGEND**

- ACTIVE LOCATION
- INACTIVE LOCATION
- △ QUESTIONABLE LOCATION
- PROPERTY BOUNDARY
- - - FENCE
- - - CONSTRUCTION IMPACT AREA

**SCALE**

500' 250' 0 500' 1000'

1" = 500'



MCR44606  
 A1ASL012  
 03/04/08 09:11:28  
 ACAD 16.1s (LMS Tech)  
 B1 1=1

				<b>BLACK &amp; VEATCH CORPORATION</b>				JEA SOUTHEAST GENERATING STATION				PROJECT 148570-SS-0002		DRAWING NUMBER 148570-SS-0002		REV A	
				ENGINEER MJT		DRAWN JKM		PLOT PLAN GOPHER TORTOISE LOCATIONS				CODE		Attachment E			
				CHECKED		DATE 02-29-08						AREA					
A		03-03-08		INITIAL ISSUE				JKM MJT MJT JMS									
NO		DATE		REVISIONS AND RECORD OF ISSUE				DRN DES CHK PDE APP									

***10.4.9 Florida Department of Transportation Review***



## Florida Department of Transportation

CHARLIE CRIST  
GOVERNOR

1109 South Marion Avenue  
Lake City, FL 32025-5874

STEPHANIE C. KOPELOUSOS  
SECRETARY

### MEMORANDUM

To: ALL FDOT Drainage Connection Permit Applicants  
In Alachua, Clay, Duval, and St. Johns Counties

From: Alan Obaigbena, P.E., Water Resources Engineer / NPDES Administrator

Subject: National Pollutant Discharge Elimination System (NPDES) Permits

Pursuant to Florida Department of Environmental Protection Rule 62-621, Florida Administrative Code, and the Florida Department of Transportation (FDOT) NPDES Municipal Separate Storm Sewer System (MS4) permit, you are required to submit a copy of your Notice of Intent (NOI) application or letter to use the Generic Permit for Storm Water Discharge from Large and Small Construction Activities to the FDOT. Please complete the applicable items below:

**Project Name:** JEA Greenland Energy Center Driveway

**Project Address / Location:** 12121 Philips Hwy., Jacksonville, FL 32256

I certify that the referenced project is over 1.0 Acre of disturbed area and a copy of the NOI is attached for your records.

I certify that the referenced project is less than 1.0 Acre of disturbed area and an NOI is not required

Signature: \_\_\_\_\_

Printed Name: Michael Lawson       Owner  Agent  Contractor  Developer

Return this Document and any required attachment to:

Alan Obaigbena, P.E.  
Florida Department of Transportation  
1109 South Marion Avenue, MS 2010  
Lake City, Florida, 32025-5874

You may also submit this Document and any required attachment as part of your application.

**\*\*\* The Drainage Connection Permit will not be issued without this completed document \*\*\***

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**DRIVEWAY/CONNECTION APPLICATION  
FOR ALL CATEGORIES**

850-040-15  
SYSTEMS PLANNING  
04/03  
Page 1 of 3

**OFFICE USE ONLY**

Application Number: _____	Received By: _____ FDOT STAFF (TYPE OR PRINT)
Category: _____	Date: _____
Section/Mile Post: _____	State Road: _____
Section/Mile Post: _____	State Road: _____

**Instructions - To Applicant**

- Contact the Department of Transportation to determine what plans and other documents you are required to submit with your application.
- Complete this form (some questions may not apply to you) and attach all necessary documents and submit it to the Department of Transportation.
- For help with this form contact your local Maintenance or District Office.
  - Or visit our website at <http://www11.myflorida.com/onestoppermitting/> for the contact person and phone number in your area.
  - You may also email - [driveways@dot.state.fl.us](mailto:driveways@dot.state.fl.us)
  - Or call your District or local Florida Department of Transportation Office and ask for Driveway Permits.

Please print or type

**APPLICANT:**

**Check one:**

Owner     Lessee     Contract to Purchase

Name: JEA

Responsible Officer or Person: Michael Lawson, Project Manager

If the Applicant is a Company or Organization, Name: JEA

Address: 12121 Philips Highway

City, State: Jacksonville, FL

Zip: 32256-1788 Phone: 904-665-4837 Fax: 904-665-4978

Email: LawsonMN@JEA.com

**LAND OWNER:** (if not applicant)

Name: \_\_\_\_\_

If the Applicant is a Company or Organization, Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State: \_\_\_\_\_

Zip: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE:** If specified by Applicant to handle, represent, sign, and file the application -  
**NOTE:** A notarized letter of authorization must be provided with the Application

Name: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State: \_\_\_\_\_

Zip: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Address of property to be served by permit (if known): 12121 Philips Hwy., Jacksonville, FL 32256

If address is not known, provide distance from nearest intersecting public street (such as, 500 feet south of Main St.)

Check here if you are requesting a

- new driveway     temporary driveway     modification to existing driveway     safety upgrade

Does the property owner own or have any interests in any adjacent property?

- No     Yes, if yes - please describe:

Are there other existing or dedicated public streets, roads, highways or access easements bordering or within the property?

- No     Yes, if yes - list them on your plans and indicate the proposed and existing access points.

Local Government Development Review or Approval Information:

Local Government Contact: \_\_\_\_\_

Name: \_\_\_\_\_

Government Agency: \_\_\_\_\_

Phone #: \_\_\_\_\_

If you are requesting commercial or industrial access, please indicate the types and number of businesses and provide the floor area square footage of each. Use additional sheets if necessary.

Business (Name and Type)	Square Footage	Business (Name and Type)	Square Footage
1. Greenland Energy Center Power Plant	140 acres	3.	
2.		4.	

If you are requesting a residential development access, what is the type (single family, apartment, townhouse) and number of units?

Type	Number of Units

Provide an estimate of the daily traffic volume anticipated for the entire property at build out. (An individual single family home, duplex, or quad-plex is not required to complete this section).

Daily Traffic Estimate = 50 (Use the latest Institute of Transportation Engineers (ITE) Trip Generation Report)

If you used the ITE Trip Generation Report, provide the land use code, independent variable, and reference page number.

ITE Land Use Code	Independent Variable	ITE Report page number reference

Check with the Florida DOT Office where you will return this form to determine which of the following documents are required to complete the review of your application.

- |   |   |
|---|---|
| Plans should be 11" x 17" (scale 1" x 50')<br>Note: No plans larger than 24" x 36" will be accepted<br>a) Highway and driveway plan profile<br>b) Drainage plan showing impact to the highway right-of-way<br>c) Map and letters detailing utility locations before and after Development in and along the right of way<br>d) Subdivision, zoning, or development plans<br>e) Property map indicating other access, bordering roads and streets | f) Proposed access design<br>g) Parcel and ownership maps including easements (Boundary Survey)<br>h) Signing and striping plans<br>i) Traffic Control/Maintenance of Traffic plan<br>j) Proof of liability insurance<br>k) Traffic Impact Study<br>l) Cross section of roadway every 100' if exclusive turn lanes are required |
|---|---|

**Important Notices to Applicant Before Signing Application**

**The Department Reserves The Right To Change Traffic Features And Devices In Right Of Way At Any Time**  
 Proposed traffic control features and devices in the right of way, such as median openings and other traffic control devices, are not part of the connection(s) to be authorized by a connection permit. The Department reserves the right to change these features and devices in the future in order to promote safety in the right of way or efficient traffic operations on the highway. Expenditure by the applicant of monies for installation or maintenance of such features or devices shall not create any interest in the maintenance of such features or devices.

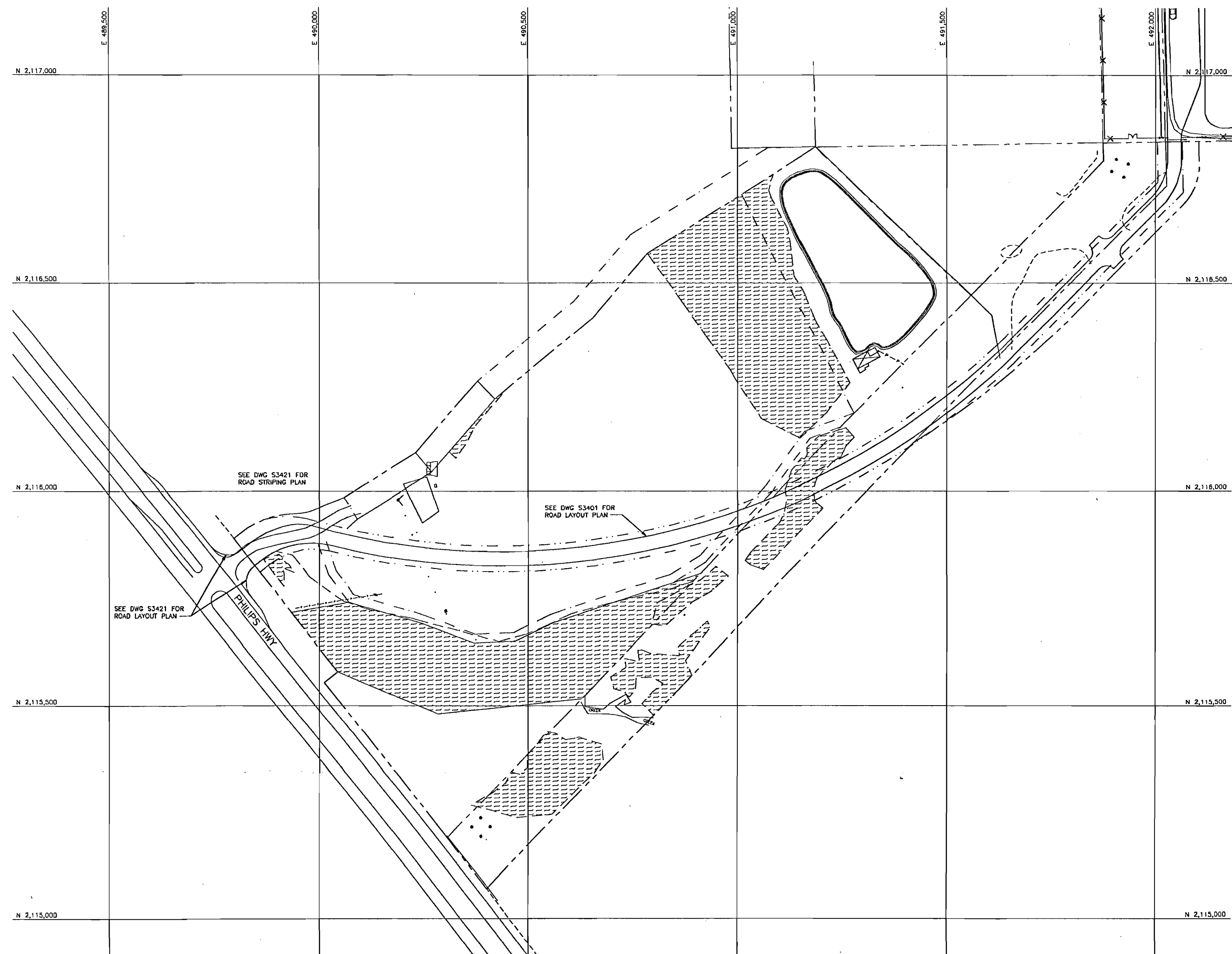
**Significant Changes In Property Use Must Undergo Further Review**  
 If an access permit is issued to you it will state the terms and conditions for its use. Significant changes in the use as defined in Section 335.182(3), Florida Statutes, of the permitted access not consistent with the terms and conditions listed on the permit may be considered a violation of the permit.

**All Information I Give Is Accurate**  
 I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief, such information is true, complete and accurate.

**Starting Work On The Driveway Connection After I Get My Permit Means I Accept All the Conditions In My Permit**  
 I will not begin work on the connection until I receive my Permit and I understand all the conditions of the Permit. When I begin work on the connection, I am accepting all conditions listed in my Permit.

Applicant Name (Printed): \_\_\_\_\_

Applicant's signature: \_\_\_\_\_ Date \_\_\_\_\_



GENERAL NOTES

1. SEE DWG S3000 FOR GENERAL NOTES, KEY PLAN, AND ABBREVIATIONS.

FOR PERMITTING PURPOSE ONLY  
APPROVED FOR CONSTRUCTION

BRIAN K. HILL  
FLORIDA P.E. LICENSE NO. 53555  
BLACK & VEATCH CORPORATION  
11401 LAMAR AVENUE  
OVERLAND PARK, KANSAS 66211  
CERTIFICATE OF AUTHORIZATION NO. 00008132

*Brian K. Hill*  
a/10/08

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALIFIED REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FLORIDA.  
DRAWN: MJE  
CHECKED: JCB  
DATE: 09/10/2008  
REG. NO.: 53555

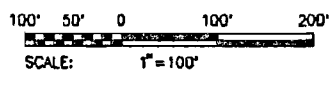
**BLACK & VEATCH**  
CORPORATION

JEA  
GREENLAND ENERGY CENTER  
ENTRANCE ROAD  
PLAN LAYOUT

PROJECT	DRAWING NUMBER	REV
JEA GREENLAND ENERGY CENTER	149588-CSTA-S3400	0
CODE	AREA	

09/10/2008 10:18 (LMS Tech)  
 09/10/2008 11:04:12  
 09/10/2008 11:04:12

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHKD
0	09/10/2008	SCA ISSUE	HRN/AUT/LCB/MSK/	BRN/DEK/POK/APP







GENERAL NOTES

1. SEE DWG S3000 FOR GENERAL NOTES, KEY PLAN, AND ABBREVIATIONS.
2. SEE DWG S3450 FOR ROAD DETAILS.

FOR PERMITTING PURPOSE ONLY  
APPROVED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION  
 09/10/2008  
 11:00:24

*Brian Hill Hill*  
9/10/08

BRIAN K. HILL  
 FLORIDA P.E. LICENSE NO. 53555  
 BLACK & VEATCH CORPORATION  
 11401 LAMAR AVENUE  
 OVERLAND PARK, KANSAS 66211  
 CERTIFICATE OF AUTHORIZATION NO. 0000813

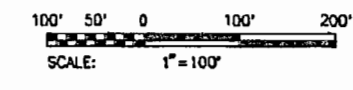
I HEREBY CERTIFY THAT THIS DOCUMENT WAS  
 PREPARED BY ME OR UNDER MY DIRECT SUPER-  
 VISION AND THAT I AM A FULLY REGISTERED PRO-  
 FESSOR ENGINEER UNDER THE LAWS OF THE  
 STATE OF FLORIDA.  
 SIGNED: BRIAN K. HILL  
 DATE: 09/10/2008 REG. NO. 53555

**BLACK & VEATCH**  
**CORPORATION**  
 ENGINEER: MJT  
 DRAWN: MRR  
 CHECKED: JCB  
 DATE: 09/10/2008

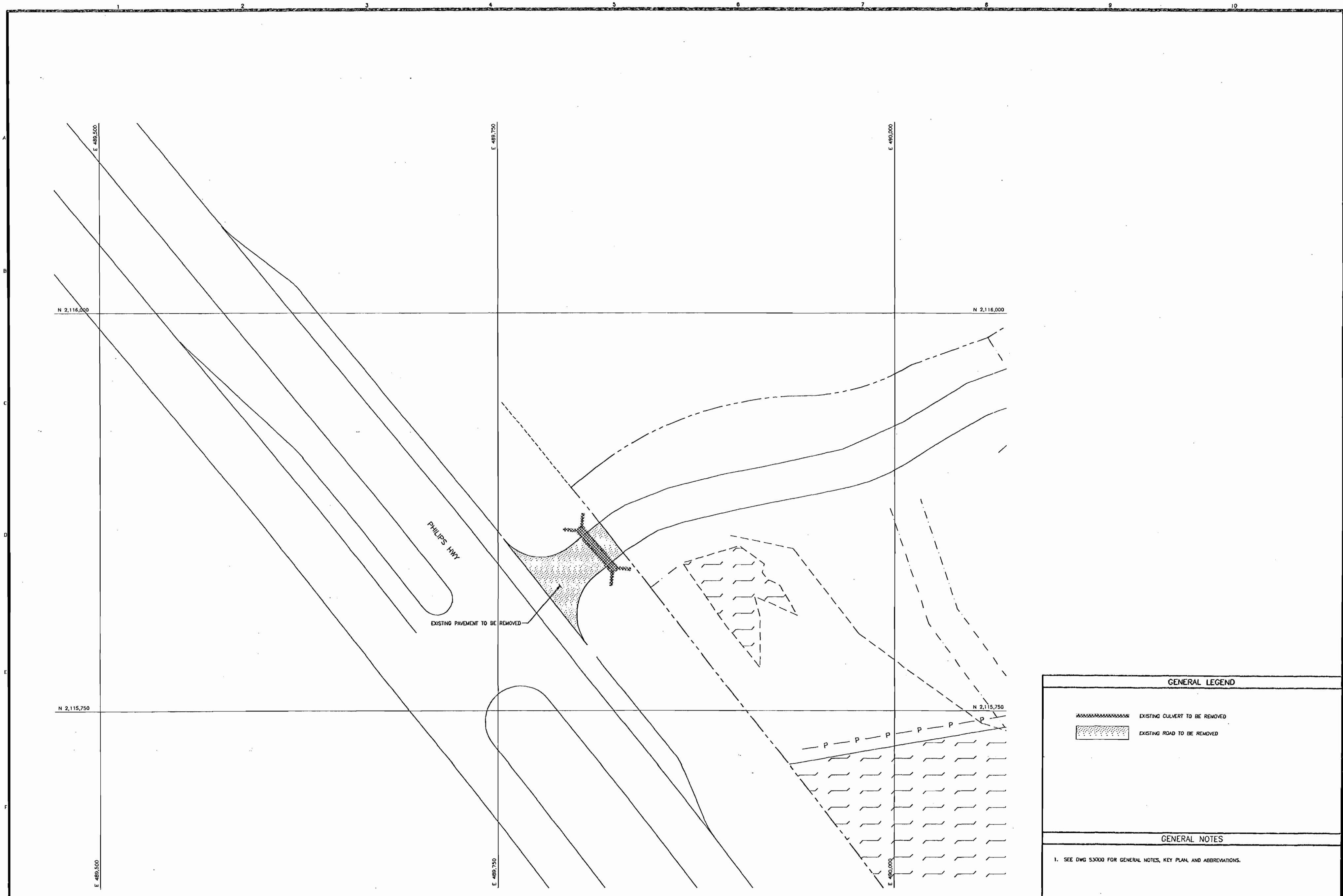
PROJECT: JEA  
 GREENLAND ENERGY CENTER  
 ENTRANCE ROAD - CITY PORTION  
 PLAN LAYOUT

PROJECT	DOWG NUMBER	REV
149588-CSTA-S3401		0
CODE		
AREA		

NO.	DATE	REVISIONS AND RECORD OF ISSUE	DRWNS/CHK/APP
0	09/10/2008	SCA ISSUE	MRR/MJT/BJK/MSK







GENERAL LEGEND	
	EXISTING CULVERT TO BE REMOVED
	EXISTING ROAD TO BE REMOVED

GENERAL NOTES

1. SEE DWG 53000 FOR GENERAL NOTES, KEY PLAN, AND ABBREVIATIONS.

**FOR PERMITTING PURPOSE ONLY  
APPROVED FOR CONSTRUCTION**

*Brian Keith Hill  
9/10/08*

BRIAN K. HILL  
FLORIDA P.E. LICENSE NO. 53555  
BLACK & VEATCH CORPORATION  
11401 LAMAR AVENUE  
OVERLAND PARK, KANSAS 66211  
CERTIFICATE OF AUTHORIZATION NO. 00008133

**BLACK & VEATCH**  
CORPORATION

JEA  
GREENLAND ENERGY CENTER

PROJECT  
149588-CSTF-S3040  
DRAWING NUMBER  
REV  
0

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A duly REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF FLORIDA.  
SIGNED: BRIAN K. HILL  
DATE: 09/10/2008 REG. NO. 53555



SCALE: 1" = 20'

PLANS 2025 ACAD 18.61" (US Feet) 1"=1' 09/10/08 1:03:18

NO.	DATE	SCALE	REVISIONS AND RECORD OF ISSUE	APPROVALS
0	09/10/2008	SCA ISSUE		

**10.4.10 *Consumptive Uses of Water Permit Application***

# PERMIT APPLICATION FOR CONSUMPTIVE USES OF WATER

Permit Type: Individual CUP <input type="checkbox"/> Secondary Use <input checked="" type="checkbox"/>	
Standard General CUP <input type="checkbox"/>	
Application is for: New use <input checked="" type="checkbox"/> Renewal <input type="checkbox"/>	
Modification of Existing Permit <input type="checkbox"/>	



## APPLICANT INFORMATION

ORGANIZATION NAME (please print all responses)  
**JEA**

---

LAST NAME (please print all responses) <b>Mann</b>	FIRST NAME <b>Athena</b>
---	-----------------------------

---

STREET NO.	STREET NAME	CITY
<b>21 W.</b>	<b>Church Street</b>	<b>Jacksonville</b>

---

STATE	ZIP	PHONE
<b>Florida</b>	<b>32202</b>	<b>904-665-6252</b>

<input checked="" type="checkbox"/> Same as above	<b>AGENT OR CONSULTANT</b>
---	----------------------------

ORGANIZATION NAME (please print all responses)

---

LAST NAME (please print all responses)	FIRST NAME
--	------------

---

STREET NO.	STREET NAME	CITY
------------	-------------	------

---

STATE	ZIP	PHONE
-------	-----	-------

<input checked="" type="checkbox"/> Same as applicant	<b>OWNER INFORMATION</b>
---	--------------------------

ORGANIZATION NAME (please print all responses)

---

LAST NAME (please print all responses)	FIRST NAME
--	------------

---

STREET NO.	STREET NAME	CITY
------------	-------------	------

---

STATE	ZIP	PHONE
-------	-----	-------

APPLICANT'S NAME (Please print)	APPLICANT'S SIGNATURE	DATE
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If a person other than applicant has completed this form, that person certifies by his signature below that he is acting as an authorized agent of the applicant and his signature will be certification that he is in fact the authorized agent.

AGENT'S NAME (Please print)	AGENT'S SIGNATURE	DATE
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**SITE INFORMATION**

COUNTY Duval ACRES OWNED 172  
 SECTION 8, 17, 37 TOWNSHIP 4 South RANGE 28 East  
 PROJ. NAME Greenland Energy Center PROJECT ACRES 152.5  
 COUNTY PARCEL NO. 168060-0000; -0020; - 0030; - 0040;  
168153-0000; 168155-0620

**TYPE OF USE**

**DARKEN ALL THAT APPLY**

- AESTHETIC  AGRICULTURAL  AQUACULTURAL  COOLING AND AIR CONDITIONING   
 DEWATERING  COMMERCIAL AND INDUSTRIAL  ESSENTIAL  FREEZE PROTECTION   
 GOLF COURSE  RECREATION AREA  HOUSEHOLD TYPE  LIVESTOCK   
 NURSERY  URBAN LANDSCAPE IRRIGATION  WATER BASED RECREATION   
 UNACCOUNTED FOR WATER  OTHER

Previous Permit No. \_\_\_\_\_

AMOUNT REQUESTED	INCHES PER YEAR _____
	MILLION GALLONS PER YEAR <u>40.88 AVG / 46.72 MAX</u>
	MILLION GALLONS PER DAY <u>0.112 AVG / 0.128 MAX</u>
	DATE OF START OF USE <u>June 2012</u>

REQUESTED PERMIT DURATION	20 YEARS <input type="checkbox"/>
	Other (Specify Years): <u>Lifetime - Site Certification</u>

**WATER USE MONITORING**

All permittees are required to measure their water usage on a continuous basis. All users must report their use using form EN-50 to the District at the intervals specified in their permit. If used, meters must be 95% accurate, verifiable and installed according to manufacturers' specifications. Meters or alternative methods utilized by the water supplier to charge for the water may suffice as a water use monitoring tool.

Alternative methods must be 90% accurate and verifiable. All alternative methods must be approved in advance and in writing by District staff.

<input type="checkbox"/> Same as applicant	<b>COMPLIANCE ENTITY</b>
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Consumptive Use Permits require the periodic submittal of data to the District. Please provide the name, address and phone number of the person who will be responsible for ensuring that the permitted conditions are met. Submittal of this information does not relieve the permit holder from the responsibility for compliance.

Name: Mike Lawson  
Address: 12121 Philips Highway  
Jacksonville, FL

Phone Number: ( 904 ) - 665-4837

<b>SECONDARY TYPE USE</b>
---------------------------

Please supply information regarding the source(s) of water for your activities.

1. The name of the supplier of water. JEA
2. Is this source of water potable or non-potable? (circle one)
3. What percentage of your total water use is from this supplier? 100
4. If 100% of your water is not provided from the supplier, please indicate what uses are self supplied.
5. The applicant must also complete other packages which address the requested consumptive use identified in question 4.

**Description of Use Classes:** Each permit shall be identified with one or more of the following use classifications:

- (a) **Aesthetic use** – the use of water for fountains, waterfalls, and landscape lakes and ponds where such uses are entirely ornamental and decorative.
- (b) **Agricultural use** – use of water for the commercial production of crops or the growing of farm products including, but not limited to, vegetables, citrus and other fruits, pasture, rice and sod.
- (c) **Aquacultural use** – the use or withdrawal of water for cultivation of animal and plant life in a water environment, including but not limited to food fish, aquatic bait, game fish, aquatic plants (i.e. watercress), alligators, tropical fish, shellfish, and turtles.
- (d) **Commercial and industrial process use** – the use of water essential to the production of the goods or services provided by a business establishment.
- (e) **Cooling and air conditioning use** – the use of water for heating or cooling, or for air conditioning.
- (f) **Dewatering use** – the removal of water from a specific area to facilitate mining or construction.
- (g) **Essential use** – the use of water strictly for fire fighting purposes, health and medical purposes and the use of water to satisfy federal, state or local public health and safety requirements.
- (h) **Freeze protection** – the periodic and infrequent use of water to protect agricultural and nursery crops from damage due to low temperatures.
- (i) **Golf course use** – water used to irrigate an establishment designed and used for playing golf.
- (j) **Household use** – the use of water for personal needs or for household purposes such as drinking, bathing, heating, cooking, sanitation or cleaning, whether the use occurs in a residence or in a business or industrial establishment.
- (k) **Livestock use** – the use of water for watering or washing of livestock.
- (l) **Nursery use** – the use of water on premises or in which nursery stock is grown, propagated or held for sale or distribution or sold or reshipped.
- (m) **Recreation area use** – the use of water for the maintenance and support of intensive recreational areas such as, but not limited to, playgrounds, football, baseball, and soccer fields.
- (n) **Urban landscape irrigation** – the outside watering or sprinkling of shrubbery, trees, lawns, grass, ground covers, plants, vines, gardens and other such flora which are situated in such diverse locations as residential landscaping, recreational areas, cemeteries, public, commercial and industrial establishments, public medians and rights of way.
- (o) **Water based recreation use** – water used for public or private swimming and wading pools, including water slides. This terms does not include pools specifically maintained to provide habitat for aquatic life.
- (p) **Water utility use** – water used for withdrawal, treatment, transmission and distribution by potable water systems.



## SOURCES OF WATER (Summary Data Sheet)

Please supply information regarding the source(s) of water for your activities. Include information regarding **all** wells/pumps on the property.

**Table 1.**  
**SUMMARY OF GROUND WATER SOURCES      N/A**

Well or Pump Number	Wellfield or Facility Name	Casing Dia. (in.)	Casing Depth (ft)	Total Depth (ft)	Operation Hrs/wk	Pump Capacity (in gpm)	Date Drilled	Existing or Proposed (date)	Type of Use*

\*See use descriptions on page 4. If more than one use type, show predominate use

**Table 2.**  
**SUMMARY OF SURFACE WATER SOURCES      N/A**

Pump Number	Pump Capacity (gpm)	Operation Hrs/wk	Acareage of Surface Water Body	Name of Source	Status (date if proposed)	Type of Use

**PROPERTY CONTROL AND LOCATION**

**I. PROPERTY CONTROL**

- 1. **Property Ownership** - Provide a copy of the excuted deed indicating the current owner of the property which is the subject of this application.
- 2. **Leased Property** - Provide a copy of the current lease, or a letter signed by the property owner describing the lease arrangement and the duration of the lease.

**II. LOCATION MAPS**

Provide a recent map (preferably a USGS topographic quadrangle, a map from a county plat directory, or survey map) indicating the following:

- (a) property boundaries (include approximate lengths of boundaries in feet); (public supply water uses please show service areas)
- (b) All existing and proposed withdrawal point locations. Indicate well number and casing size for ground water withdrawals, and pump number and maximum pump capacity for surface water withdrawals;
- (c) a north arrow;
- (d) a scale designation - all maps should have a minimum scale of 1 inch = 2,000 feet; and
- (e) labeled landmarks such as roads and political boundaries.

Please provide identification numbers and date permitted if you obtained or are in the process of obtaining any of the following permits for this project

Environmental Resource Permit (ERP)	<u>App # 16-289373-001-E1</u>
EPA Ordered Environmental Impact Statements	_____
Agricultural Discharge	_____
FDEP Wastewater Site Identification No.	_____
FDEP Public Water Supply (PWS) Identification No.	_____
Florida Electrical Power Plant Siting Act - Site Certification	Pending

**III. ADJACENT PROPERTY OWNERS**

(not applicable to Secondary Users Permits)

Provide a complete list of adjacent property owners and mailing address as prescribed in Tables #3 and 4. Attach additional sheets as needed.

Name	Address	City	State	Zip Code
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See Figure 2.1-2 (Property Owner Map) in Section 2 of this SCA; all landowners within 3 miles of the GEC site will be notified of the project within 45 days of the SCA filing, as required by the Power Plant Siting Act procedures.

**USE OF LOWEST ACCEPTABLE QUALITY WATER SOURCE**

- 1. Are you proposing to use the most appropriate (lowest quality) source of water? Yes
- 2. Is reclaimed water readily available as a source of water? Yes

**WATER CONSERVATION PLAN**

A water conservation plan must be submitted with this application. Please refer to Section 12.0 and Appendix I, Applicant's Handbook, Consumptive Uses of Water, for information on how to meet the District's requirements regarding water conservation. Available water conservation measures must be implemented pursuant to requirements in sections 10.2(e) and 12.0, A.H. These measures must be explained as part of this application.

A Water Conservation Plan will be prepared and implemented onsite prior to operation of the combines cycle unit.

**Table 3 - Ground Water Withdrawals**

Withdrawal Amount	Property Owners to be Listed
Less than 1,000,000 gallons maximum per day -and- Less than 100,000 gallons per day annual average	None required
Max day is between 1 and 5 million gallons - or- Average day is between 100,000 and 500,000 gallons	All property owners within 600 feet of well or 100 feet of property boundary.
Max day is between 5 and 10 million gallons - or- Average day between 500,000 and 1,000,000 gallons	All property owners within 1,320 feet of each well or 200 feet of the property boundary.
Max day exceeding 10 million gallons -or- Average day exceeds 1,000,000 gallons	All property owners within 2,640 feet of the well, or 400 feet of the property boundary.

**Table 4 - Surface Water Withdrawals**

Withdrawal Amount	Property Owners to be Listed
Surface area of the withdrawal lake is less than 80 acres	All riparian land owners on lake and those up to 600 feet downstream if the lake has an outlet
Surface area of the withdrawal lake is greater than 80 acres	All riparian land owners up to 600 feet from the withdrawal point
Withdrawals from a stream and average daily pumpage is less than 5 million gallons	All riparian land owners up to 600 feet upstream and 1,320 feet downstream from the withdrawal point
Withdrawals from a stream and average daily pumpage is greater than 5 million gallons	All riparian land owners up to 1,320 feet upstream and 2,640 downstream from the withdrawal point



## COMMERCIAL/INDUSTRIAL TYPE USES

(Submit 2 copies of application, supplemental information drawings, calculations, etc.)

### I. PROJECT DESCRIPTION

1. Type of business and/or operation, please describe:

Electric power generation

- 2 Requested Water Use:

	Existing (mgd)	Proposed (mgd) 5 years	Proposed (mgd) 10 years	Proposed (mgd) 15 years	Proposed (mgd) 20 Years
Average Daily Use	0	0.112	0.112	0.224	0.224
Maximum Daily Use	0	0.128	0.128	0.256	0.256
Average Off-Site Discharge	0	0.052	0.052	0.104	0.104

\*mgd - million gallons per day

3. Provide a graph (month vs mgd) or table summarizing monthly water use for the previous 3 years. N/A
4. Provide a flow chart (schematic diagram) depicting the flow of all sources of water, use and eventual discharge. See Figure 3.5-1 and 3.5-2 in Section 3 of SCA.
5. Please provide a table projecting expected growth over the next 15 years. What is the reason for the expected growth?

Power plant and associated water use will increase as demand/need for electric power in the the JEA services area increases.

### II. WASTEWATER DISPOSAL

Describe in detail the flow of wastewater from the plant to its ultimate disposal. Also, provide the applicable Florida Department of Environmental Protection, Environmental Protection Agency permit numbers (EPA, FDEP) issued for discharge to surface waters. Attach daily flow amounts for effluent discharged to surface waters for the last 12 months. Include this information in the above requested schematic diagram.

No existing discharge to surface or groundwater. Process and sanitary wastewater will be returned to JEA sanitary system. Cooling tower blowdown will be returned to JEA reclaimed water system.

### III. REUSE

1. Provide water quality data for effluent discharged from this facility during the last 12 months. Estimated water quality of discharge is provided in Table 5.2-1 of this SCA.
2. Provide the level of water quality required for each individual manufacturing and cooling process. Provide supporting documentation as to water quality and quantity limitation of reuse for each component of the process.

Process wastewater discharged to JEA sanitary system will comply with Industrial Pretreatment Standards.

## 10.5 Monitoring Programs

No monitoring programs are proposed at this time.

## 10.6 Greenhouse Gas Initiatives

On July 13, 2007, Governor Crist issued Executive Order 07-127, entitled "Immediate Action to Reduce Greenhouse Gas Emissions within Florida." This order directed the Department of Environmental Protection (DEP) to adopt rules requiring greenhouse gas (GHG) emission reductions from electric utilities. On June 25, 2008, Governor Crist signed House Bill 7135 into law. Among other things, the new legislation established the Florida Climate Protection Act, Section 403.44, Florida Statutes, which authorizes DEP to adopt rules to reduce GHG emissions subject to approval by the Legislature. Section 403.44 specifies that DEP shall not adopt rules until January 1, 2010 and the rules shall not become effective until approved by the Legislature. Although DEP has not yet developed rules in response to the Governor's Order or Section 403.44.

In addition to reducing CO<sub>2</sub> emissions, carbon capture and sequestration has been identified to capture and store CO<sub>2</sub> instead of releasing into the atmosphere. At this time, carbon capture technology is not considered feasible for large-scale power applications, and the feasibility of long-term sequestration of CO<sub>2</sub> is uncertain because numerous technological, regulatory and legal issues remain unresolved.

JEA is committed to responsibly reducing its emissions of carbon dioxide (CO<sub>2</sub>), which is the primary GHG emitted by electric generating units. In light of the potential for new GHG regulatory programs at the state or federal level, this section summarizes JEA's existing and planned initiatives that will reduce JEA's CO<sub>2</sub> emissions. Specifically, Subsection 10.6.1 summarizes JEA's existing initiatives that have reduced CO<sub>2</sub> emissions. Subsection 10.6.2 summarizes JEA's recent and planned initiatives, including the Greenland Energy Center combined cycle conversion project, that will further reduce JEA's CO<sub>2</sub> emissions. Finally, Subsection 10.6.3 concludes with how the Greenland combined cycle conversion project fits into JEA's strategy for meeting its customers' growing electricity needs while reducing JEA's overall CO<sub>2</sub> emissions.

### 10.6.1 Existing CO<sub>2</sub> Reduction Initiatives

JEA has demonstrated a strong track record in improving the efficiency of its generating fleet, as well as implementing conservation measures and renewable energy projects, which have had the effect of reducing CO<sub>2</sub> emissions. The following subsections describe JEA's existing initiatives that reduce CO<sub>2</sub> emissions.

#### 10.6.1.1 Conservation and Demand-Side Management (DSM).

Throughout its history, JEA has demonstrated a strong commitment to conservation. Pursuant to the Florida Energy Efficiency and Conservation Act (FEECA), the Public Service Commission (PSC) adopts and periodically reviews energy



conservation goals for JEA and other jurisdictional utilities. The PSC approved JEA's current conservation plan on September 1, 2004. In reviewing the Plan, the PSC concluded that there were no cost-effective conservation measures available for use by JEA. Nevertheless, JEA voluntarily continues to conduct several DSM and conservation programs. To the extent that these programs help to reduce JEA's energy requirements, they result in corresponding reductions in CO<sub>2</sub> emissions. JEA's existing DSM and conservation programs have collectively reduced demand and energy by 4.3 MW and 31,100 MWh from 2005 through 2007 in addition to JEA's interruptible load. JEA's existing conservation and DSM programs are described in the following subsections.

**10.6.1.1.1 Energy Audits.**

JEA offers energy audits for both residential and commercial customers free of charge. A home energy audit can be completed online, in person, or by video. A business energy audit can also be done online or in person. The online audit considers the facility location, type of business or home, and floor space, among other factors. An audit completed in person involves a JEA representative performing an inspection and then offering cost-effective ideas to lower energy costs. A video audit is also available upon request and offers tips on energy and water conservation. In addition to the energy audits, JEA offers an appliance calculator, which performs energy calculations concerning lighting, refrigeration, washer, dryer, cooling systems, room air conditioners, water heaters, and thermostat adjustments, and provides customers with a way to measure their appliance energy use.

**10.6.1.1.2 Green Built Homes of Florida.**

Green Built Homes of Florida is an incentive-based program offered by JEA and the Northeast Florida Builders Association (NEFBA), which was launched on June 1, 2006, to promote the use of energy and water efficient building practices in new single-family homes. To be eligible for the incentive, a home must be a newly constructed, single-family home in JEA's electric service area and be Energy Star<sup>®</sup> inspected and certified by a Class 1 Home Energy Rating Systems (HERS) rater. Energy Star<sup>®</sup> is a program developed by the Environmental Protection Agency and the Department of Energy to promote energy efficiency. Common features of an Energy Star<sup>®</sup> qualified home include tight construction, improved insulation, high performance windows, tightly sealed ducts, and high efficiency, appropriately sized heating and cooling equipment. To date, more than 500 homes served by JEA have been Energy Star certified.

#### **10.6.1.1.3 Chilled Water Services.**

JEA has developed a district cooling system. The central chilled water system circulates cold water in a continuous flow throughout buildings, then cools the warmed water in a centralized chiller plant. This system replaces central air conditioning in individual buildings. JEA's chilled water system is comprised of three plants. The Downtown Facility has a capacity of 5,800 tons and serves the new Library and Garage facilities, City Hall Annex, and will serve the new Courthouse. The Hogan's Creek facility has a capacity of 4,000 tons and serves the Baseball Grounds and the Arena. The Springfield Plant has a capacity of 6,500 tons and serves the University of Florida's Proton Beam Facility and Shands Healthcare. The chilled water system provides energy savings over individual central air conditioning systems and as a result reduces CO<sub>2</sub> emissions.

#### **10.6.1.1.4 Interruptible Load.**

Interruptible load represents energy usage that can be shed during times of peak demand. This reduces the need for capacity additions to meet future peak periods. Typically, interruptible load is sold as capacity that is available during off-peak times, but not guaranteed during times of peak demand. In exchange for interruptible services, the customer's billing rate is reduced. JEA is only allowed to interrupt electric power and energy delivery to the customer when it is required to (a) maintain service to JEA's firm power customers and firm power sales commitments, or (b) supply emergency interchange service to another utility for its firm load obligations only, or (c) when the price of power available to JEA from other sources exceeds 30 cents per kWh. JEA currently has 117 MW of summer interruptible capacity and 133 MW of winter interruptible capacity.

#### **10.6.1.1.5 Lighting Solutions.**

JEA offers, through a preferred vendor, small businesses indoor and outdoor lighting services including lighting energy audits, energy management programs, basic and advanced lighting design, retrofits and group re-lamping, lighting maintenance, and perimeter accent and site lighting for the facility. Customers receive a one-stop shopping point for the evaluations of lighting opportunities, design and engineering of lighting solutions, third party financing, turnkey installations, and ongoing maintenance.

#### **10.6.1.1.6 Conservation Education.**

JEA offers broad customer education measures for conservation. Education measures include television and radio commercials for conservation, bill stuffers, conservation speakers, and participation and sponsorship at numerous community events. JEA's Web site JEA.com includes a Conservation Center that contains tools and tips on how to conserve energy and water. JEA provides educational materials for teachers on conservation. In addition, JEA partners with numerous organizations to provide conservation education including the following:

- Sierra Club and American Lung Association of Florida.
- Earth Day.
- St. Johns River Celebration.
- Jacksonville Zoo.
- JaxPride.
- Communi-Tree.
- Mayor's Intensive Care Neighborhood Committee.
- Greenscape.
- Healthy Jacksonville.

#### **10.6.1.2 JEA's Clean Power Program.**

In 1999, JEA began working closely with the Sierra Club of Northeast Florida (Sierra Club), the American Lung Association (ALA), and local environmental groups to establish a process to maintain an action plan entitled "Clean Power Action Plan." The "Clean Power Action Plan" was formally adopted as a JEA policy by JEA's Board in 2004. The "Clean Power Action Plan" has an Advisory Panel, which is comprised of participants from the Jacksonville community, including representatives from Sierra Club, ALA, and the newest member, the City of Jacksonville Environmental Protection Board. These local members provide guidance and recommendations to JEA in the development and implementation of the Clean Power Program. Although the Clean Power Action Plan does not speak directly to CO<sub>2</sub> emissions, projects undertaken by JEA pursuant to the plan have reduced JEA's CO<sub>2</sub> emissions.

JEA has made considerable progress toward the goals set forth in the Clean Power Action Plan through installation of clean power systems, purchase power agreements, legislative and public education activities, and research into and development of clean power technologies. In particular, JEA has conducted a number of generation efficiency improvements, such as turbine upgrades, which increase the output of generating units without increasing the amount of fuel burned or the amount of CO<sub>2</sub> emitted. As further discussed below, JEA also has undertaken several renewable energy projects as part of

the Clean Power program, including installation of solar photovoltaic (PV), solar thermal, landfill and wastewater treatment biogas capacity, and wind capacity.

#### **10.6.1.2.1 Solar Energy.**

JEA has installed 35 solar PV systems, totaling 220 kW, on all of the public high schools in Duval County, as well as many of JEA's facilities, and the Jacksonville International Airport (one of the largest solar PV systems in the Southeast). To further promote the acceptance and installation of solar energy systems, JEA implemented the Solar Incentive Program in early 2002. This program provided cash incentives for customers to install solar PV and solar thermal systems on their homes or businesses.

JEA provided customer incentives for more than 25 solar PV systems (for a total of 98 kW) until January 2005, when the PV incentive was discontinued in favor of the solar water heating program discussed below which provides more cost-effective CO<sub>2</sub> reduction. In addition to the PV incentive program, JEA established a residential net-metering program to encourage the use of customer-sited solar PV systems. JEA also offers incentives for the installation of solar water heaters. To date, the program has resulted in more than 500 incentives or approximately 1574 kWp of capacity savings.

#### **10.6.1.2.2 Wind.**

As part of its ongoing effort to utilize more sources of renewable energy, in 2004 JEA entered into a 20 year agreement with Nebraska Public Power District (NPPD) to participate in a wind generation project located in Ainsworth, Nebraska. JEA's participation in NPPD's wind generation project allows JEA to receive environmental credits associated with this green power project. Under the wind generation agreement, JEA has agreed to purchase 10 MW of capacity from NPPD's wind generation facility for a 20 year period. In turn, NPPD will buy back the energy at specified on/off peak charges. JEA retains the rights to the environmental attributes (RECs) and will sell the RECs unless JEA needs them to meet state or federal environmental requirements.

#### **10.6.1.2.3 Landfill Gas and Biogas.**

Since 1997, JEA has owned and operated internal combustion engine generators fueled by landfill gas produced by the City of Jacksonville's Girvin Road landfill. In addition, JEA has received landfill gas from the City of Jacksonville's North Landfill, which is pumped to the Northside Generating Station and has been used to generate power at Northside Unit 3. Also, biogas produced at the Buckman Wastewater Treatment Facility is utilized, in lieu of natural gas, to dry the process solids. During times when the dryer is not in service, the biogas is utilized in an on-site internal combustion engine generator to produce electricity.

#### **10.6.1.2.4 Biomass.**

JEA has issued several requests for proposals (RFPs) for renewable energy resources. The only two bids that were cost-effective were for the Trail Ridge Landfill project discussed in Subsection 10.6.2.2 and a yard waste power project proposed by Evergreen. JEA attempted to negotiate a purchase power agreement with Evergreen, but the parties were unable to reach agreement prompting JEA (in agreement with the City of Jacksonville) to suspend negotiations. JEA will continue to work with the City of Jacksonville and potential third party developers to pursue utilization of yard waste, which would be included in a biomass project that will be beneficial to both JEA customers and the residents of Jacksonville.

The most recent of the RFPs issued for biomass was JEA's 2007 RFP for biomass for which the bids were due in September 2007. JEA received four acceptable proposals from the RFP; however, the bids resulted in significant costs to JEA's system over the 20 year evaluation period. Because of the high cost of the bids, and the inability to demonstrate fuel or site availability or project financing, JEA did not enter into contracts with any of the bidders.

#### **10.6.2.5 Steam Turbine Upgrades.**

JEA has upgraded existing steam turbines to obtain more generation without increasing the amount of fuel used. That increase in capacity is therefore achieved without additional emissions of CO<sub>2</sub>.

#### **10.6.1.2.6 JEA Fleet Services Alternative Vehicle Fuel and Petroleum Displacement.**

JEA has the ability to operate more than 500 vehicles on alternative fuels. JEA uses B100 biodiesel for its diesel fleet and can utilize E10 gasoline containing ethanol in its gasoline fleet vehicles. JEA also uses electric vehicles in plant operations and has partnered with the Electric Power Research Institute for the production of plug-in hybrid bucket trucks. JEA's fleet management program earned JEA recognition as one the Top 100 Alternative Fuel Vehicle Fleets in the US in 2007 by Automotive Fleet Magazine.

#### **10.6.1.2.7 Generation Efficiency and New Natural Gas Generation.**

In the late 1990s, JEA began to modernize its natural gas/oil fleet of generating units by replacing less efficient steam units and less efficient combustion turbines with more efficient combined cycle units and more efficient combustion turbines. In addition to efficiency improvements, natural gas combustion emits approximately 70 percent of

the CO<sub>2</sub> of No. 6 oil combustion. The installation of these more efficient natural gas fired units results in significant reductions of CO<sub>2</sub> on a per MWh basis.

As a result of its system efficiency improvement efforts, JEA has retired the following units:

- Kennedy Steam Unit 8--43 MW Summer Heavy Oil/Natural Gas.
- Kennedy Steam Unit 9--43 MW Summer Natural Gas/Heavy Oil.
- Kennedy Steam Unit 10--97 MW Summer Natural Gas/Heavy Oil.
- Kennedy Combustion Turbine Unit 4--51 MW Summer No. 2 Oil.
- Kennedy Combustion Turbine Unit 5--51 MW Summer No. 2 Oil.
- Southside Steam Unit 4--67 MW Summer Natural Gas/Heavy Oil.
- Southside Steam Unit 5--142 MW Summer Natural Gas/Heavy Oil.

The retirement of these units and their replacement with efficient combined cycle and efficient simple cycle combustion turbines significantly reduces CO<sub>2</sub> emissions. JEA's replacement units include Brandy Branch Unit 1, a 7FA simple cycle combustion turbine; Brandy Branch Combined Cycle, a 2x1 7FA combined cycle; and Kennedy 7, a 7FA simple cycle 7FA combustion turbine. These units all burn natural gas as their primary fuel with low sulfur diesel as a backup fuel.

### **10.6.2 Recent and Planned CO<sub>2</sub> Reduction Initiatives**

JEA has a number of initiatives underway and planned which will reduce JEA's CO<sub>2</sub> emissions including the proposed combined cycle conversion of the Greenland Energy Center combustion turbines. These initiatives are discussed in the following subsections.

#### **10.6.2.1 JEA's New DSM Portfolio.**

In June 2007, JEA's Board of Directors approved an aggressive new DSM portfolio with additional DSM measures. The five programs in the portfolio are either in the early stages of roll out or are still in final development. Implementation of JEA's new DSM portfolio is projected to result in a cumulative 128 MW savings by 2012. The savings from the new DSM portfolio are considered very aggressive and remain to be demonstrated. The five programs are described in the following subsections. The estimated cost for the new DSM portfolio is \$36.3 million through 2012.

##### **10.6.2.1.1 Residential Lighting.**

This program promotes the use of energy efficient compact fluorescent light (CFL) bulbs in homes and small businesses by offering a financial incentive to its customers. JEA has aligned itself with the Department of Energy's "Change a Light,

Change the World” campaign in an effort to educate its customers in the use of energy efficient lighting products. JEA includes appropriate messaging concerning the proper recycling of CFL bulbs. In 2008, JEA has incentivized more than 200,000 bulbs.

**10.6.2.1.2 Neighborhood Efficiency.**

This program offers education concerning the efficient use of energy & water as well as the direct install of an array of energy & water efficient measures at no cost to income qualified customers. The Neighborhood Efficiency Program is a partnership with the City of Jacksonville (COJ) and its allies of non-profit low income agencies.

**10.6.2.1.3 New Construction (aka Green Built Homes of Florida).**

This program is a continuation of the existing program and promotes the use of energy and water efficient building practices in new home construction. JEA promotes the program in cooperation with the Northeast Florida Builders Association (NEFBA). The program encourages the construction of energy efficient homes by offering financial incentives to contractors who build to Energy Star standards.

**10.6.2.1.4 Direct Load Control (DLC).**

This Program offers financial incentives to residential and small commercial customers to control central air conditioners, central electric heating systems, water heaters, and pool pumps during critical periods to reduce JEA’s winter and summer peak demands. Of the five DSM programs, the DLC program offers the highest peak capacity impacts.

**10.6.2.1.5 Curtailable Load.**

This program will offer financial incentives to mid-to-large-sized commercial/ industrial customers to curtail loads when requested by JEA in response to winter and summer peaks or system emergencies. The program will be available to those customers who are able to reduce electric loads during control periods by at least 50 kW. Customers with onsite generation may also be targeted if there is significant capacity and if emissions regulations allow generation for purposes of load curtailment.

**10.6.2.2 Landfill Gas.**

In 2006, JEA signed a purchase power agreement with Landfill Energy Systems to obtain energy from a 9.6 MW landfill gas-to-energy facility at the Trail Ridge Landfill in Jacksonville. Once the facility is completed, it will be one of the largest landfill gas-to-energy facilities in the Southeast, providing enough renewable energy to supply

electricity to approximately 2,275 homes. The projected date of completion for the facility is late 2008. It is anticipated that an additional 10 MW of energy will be available from the Trail Ridge facility in the future.

#### **10.6.2.3 Biomass.**

In a continuing effort to obtain cost-effective biomass generation, JEA is conducting a detailed feasibility study of both a self build stand alone biomass unit and the co-firing of biomass in Northside 1 and 2. In addition, JEA also periodically receives unsolicited offers for biomass and other renewable generation. JEA evaluates feasible unsolicited offers, but has been unable to execute a contract that resulted in the successful completion of a developer's proposed renewable project. One notable example is the 70 MW biomass project burning E-grass that JEA executed in 2002 with Biomass Investment Group (BIG). Even though JEA executed the purchase power agreement, BIG has not implemented the project. However, JEA intends to continue to evaluate such offers.

#### **10.6.2.4 Ongoing Research Efforts.**

Many of Florida's renewable resources such as offshore wind, tidal, and energy crops have potential and need additional research and development before they can become large-scale technologies. JEA's renewable energy research efforts have focused on the development of technologies through a partnership with the University of North Florida's (UNF) Engineering Department. JEA is currently working on the following projects:

- JEA is working with the UNF to quantify the winter peak reductions of solar water systems.
- UNF along with the University of Florida has evaluated the effect of biodiesel fuel in a pilot-scale combustion turbine. Biodiesel has been extensively tested on diesel engines, but combustion turbine testing has been very limited.
- UNF is evaluating the tidal hydro-electric potential for North Florida particularly in the Intercoastal Waterway.
- UNF is in the preliminary stage of evaluating fuel cell technology utilizing methane produced at JEA's Buckman Wastewater Treatment Facility.
- JEA, UNF, and other Florida municipal utilities have partnered on a grant proposal to the Florida Department of Environmental Protection to evaluate the potential for wind development in Florida.



- JEA is also providing solar PV equipment to UNF for installation of a solar system at the UNF Engineering Building to be used for student education.
- JEA developed a 15 acre biomass energy farm where the energy yields of various hardwoods and grasses were evaluated over a 3 year period.
- JEA participated in the research of a high temperature solar collector that has the potential for application to electric generation or air conditioning.
- JEA is evaluating the use of biofuels such as fats, oils and greases for potential use in the solid fuel units.

#### **10.6.2.5 Nuclear Energy.**

Adding power from nuclear sources to JEA's portfolio is part of a resource strategy resulting in less dependence on fossil fuels and a reduction in CO<sub>2</sub> emissions. JEA's Board has authorized JEA to provide up to 10 percent of JEA's energy from nuclear energy. In June 2008, JEA entered into a 20 year agreement with the Municipal Electric Authority of Georgia (MEAG) to purchase 206 MW of nuclear power to be produced by the new nuclear reactors that MEAG and Georgia Power are in the process of licensing at Vogtle nuclear complex in Burke County, Georgia.

#### **10.6.2.6 Solar and Wind Request for Proposal (RFP).**

JEA issued an RFP on March 17, 2008 for renewable energy, in particular solar and wind resources (Solar and Wind RFP) and bids were received on May 16, 2008. The RFP requested projects greater than 1 MW that generate electricity from solar (including photovoltaic or thermal electric) or wind. Solar projects greater than 250 kW at a JEA commercial customer's site were also included if the aggregate installation is greater than 1 MW. The RFP also requested proposals for solar photovoltaic equipment (panels and inverters) for installation by JEA. These proposals were scored on technical and economic factors.

JEA received 10 solar photovoltaic proposals and two proposals for solar photovoltaic panels (equipment purchase only). JEA did not receive any proposals for solar thermal electric or wind projects. Of the ten solar photovoltaic proposals received, eight were for ground-mounted systems from 8 MW to 12 MW in size and two were for roof-top distributed mounted systems from 2 MW to 4 MW in total size. All proposals submitted were for projects to be developed in the JEA service area.

While all the proposals were significantly above JEA's avoided costs, one proposal for a purchase power agreement, which was for a project that used thin film photovoltaics, was priced at a lower premium above avoided costs than other solar

projects that were bid to JEA. As a result, JEA is pursuing negotiations with that bidder for a purchase power agreement for up to 12 MW of solar photovoltaic capacity.

#### **10.6.2.7 Generation Efficiency and New Natural Gas Generation.**

JEA continues to modernize its generation fleet, replacing inefficient generation with new efficient units burning clean natural gas resulting in reduced CO<sub>2</sub> emissions. JEA is installing Kennedy Combustion Turbine Unit 8, which is an efficient 7FA simple cycle combustion turbine designed to burn natural gas as its primary fuel and ultra low sulfur diesel as a backup. The installation of Kennedy Combustion Turbine Unit 8 will result in the retirement of Kennedy Combustion Turbine Unit 3, an inefficient diesel fired unit, further increasing the efficiency of JEA's generating fleet. Commercial operation of Kennedy Combustion Turbine Unit 8 is scheduled for March 2009.

JEA is in the process of permitting the installation of Greenland Units 1 and 2, which will be efficient 7FA simple cycle combustion turbines designed to burn natural gas as their primary fuel with ultra low sulfur oil as backup. The installation of Greenland Units 1 and 2 further increases the efficiency of JEA's natural gas fueled generating fleet.

The conversion of Greenland Units 1 and 2 to combined cycle is a key part of JEA's generating unit efficiency improvement program. The conversion allows the output of the combined cycle unit to increase over 60 percent without any increase in CO<sub>2</sub> emissions. The installation of the combined cycle conversion of the Greenland combustion turbines along with the Brandy Branch combined cycle allows JEA to generate a large amount of energy with natural gas with its attendant lower CO<sub>2</sub> emissions per unit of electrical output.

The Greenland combined cycle project replaces capacity and energy that JEA planned to receive as its share in the suspended Taylor Energy Center Supercritical Pulverized Coal Unit. Replacing JEA's share of Taylor Energy Center capacity with capacity and energy from the Greenland combined cycle reduces JEA's CO<sub>2</sub> emissions by more than 1 million tons per year from what would have been emitted by JEA's share of Taylor Energy Center.

#### **10.6.3 Conclusion**

JEA continues to demonstrate its commitment to reduce CO<sub>2</sub> emissions by expanding our conservation and DSM programs and increasing generation from renewable and nuclear energy. However, at the present time, those initiatives alone cannot meet the growing energy needs of JEA's customers. Clean, efficient natural gas

generation is also a necessary component of JEA's plans to meet customer demand while reducing overall CO<sub>2</sub> emissions.