

**ATTACHMENT A**

**FDEP DETERMINATION OF INCOMPLETENESS**

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: GAINESVILLE RENEWABLE  
ENERGY CENTER, LLC,  
Applicant.

DOAH Case No. 09-6641EPP  
DEP OGC Case No. 09-4002  
PPSA No. PA09-55

**DEPARTMENT OF ENVIRONMENTAL PROTECTION'S  
DETERMINATION THAT APPLICATION IS INCOMPLETE**

Pursuant to section 403.5066, Florida Statutes (F.S.), the Florida Department of Environmental Protection (Department) hereby finds the application incomplete. A description of all completeness issues is attached and incorporated by reference herein. Pursuant to section 403.5066, F.S., as a result of the Department's declaration that the application is incomplete, the Applicant, within 15 days after the filing of this statement by the Department, is required to file with the Division of Administrative Hearings, the Department, and all parties:

- (a) A withdrawal of the application; or,
- (b) A statement agreeing to supply the additional information necessary to make the application complete. The additional information shall be provided within 30 days after the issuance of the Department's statement on completeness of the application. The time schedules under this act shall not be tolled if the Applicant makes the application complete within 30 days after the issuance of the Department's statement on completeness of the application. A subsequent finding by the Department that the application remains incomplete, based upon the additional information submitted by the Applicant or upon the failure of the Applicant to timely submit the additional information, tolls the time schedules under this act until the application is determined complete;
- (c) A statement contesting the Department's determination of incompleteness; or
- (d) A statement agreeing with the Department and requesting additional time beyond 30 days to provide the information necessary to make the application complete. If the Applicant exercises this option, the time schedules under this act are tolled until the application is determined complete.

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by **electronic mail ONLY**, this **11th** day of **January, 2010**, to the parties on the attached Service List.

/s/ *Toni L. Sturtevant*

Toni L. Sturtevant, Assistant General Counsel  
Florida Bar I.D. No. 0661821  
STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION  
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**GAINESVILLE RENEWABLE ENERGY CENTER, LLC**  
**DOAH Case No. 09-6641**  
**SERVICE LIST**

Updated 12-01-09

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# Florida Department of Environmental Protection

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Tallahassee, Florida 32399-3000

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

January 11, 2010

TO: Toni Sturtevant, OGC

FROM: Mike Halpin, Siting Coordination Office

Pursuant to Section 403.5066, Florida Statutes, the Department of Environmental Protection (DEP), after consulting with affected agencies, has determined that the application submitted by Gainesville Renewable Energy Center, LLC (GREC LLC) for the site certification of Gainesville Renewable Energy Center (GREC) is not complete to support a recommendation concerning certification. The items listed below represent requests for additional or clarifying information from the respective reviewing agencies. The applicant should identify any items which may be more suitably handled through post-certification submittals, as well as propose related conditions of certification. Requests for completeness items related to federal permit applications are processed directly by the federally delegated or approved program and are not shown herein.

## **ITEM I: DEPARTMENT OF ENVIRONMENTAL PROTECTION**

### **A. Siting Coordination Office:**

#### **FDEPSCO-1**

- 1) According to the application, GREC's use of woody biomass fuel will not result in a net increase of carbon dioxide (CO<sub>2</sub>) emissions. Although the growth and decomposition of trees represents a natural atmospheric carbon cycle, woody biomass is generally only considered a carbon neutral source of energy if the level of potential sequestration of trees balances that of tree harvesting. Please justify the assertion that GREC's biomass fuel source is considered carbon neutral and provide supporting references or documentation. Be advised that the Department may require the applicant to comply with a carbon neutral requirement.

#### **FDEPSCO-2**

- 2) Please provide more details regarding the off-site fuel processing (i.e. sorting/chipping) locations discussed in Section 4.3 of the application. It is unclear as to whether these are independently owned and pre-existing

facilities; it is also unclear whether the off-site fuel processing facilities would be constructed primarily for the purpose of supporting GREC.

**FDEPSCO-3**

- 3) Please provide more details regarding transportation of the fuel sources to the GREC site. Does GREC plan to contract out these services, maintain their own fleet, or a combination thereof?

**B. Northeast District Office – Ground Water Section:**

**FDEPNEDGW-1**

- 1) Although a zero liquid discharge (ZLD) is proposed for all wastewater, a ground water monitoring plan for Water Facilities Program related activities is requested as an indicator system. In order to provide both pre- and post-operational monitoring, please submit a proposed ground water monitoring plan with a response to this correspondence. This plan should include background and compliance well monitoring.

**FDEPNEDGW-2**

- 2) Since there is a ZLD proposed for all wastewaters, a zone of discharge (ZOD) will not be established at this facility for Water Facilities Program related activities. Although the GRU-Deerhaven Power Plant has an existing ZOD that extends to their current property lines, it does not include any new activities.

**FDEPNEDGW-3**

- 3) Please clarify if temporary storage areas will be used for the clarifier solids, crystallizer solids\ wet salt cake\ brine concentrate, chemical metal cleaning wastes, floor drainage, or any other wastewater byproducts, prior to transportation to an offsite landfill. Approximate amounts, storage time frames, and details of storage system should be provided, also.

**FDEPNEDGW-4**

- 4) On Figure 4.2.0-3, the Detailed Facility Layout does not seem to indicate a boiler blowdown or cooling tower blowdown holding area. Please address this issue and provide details of any applicable holding tanks\ basins.

**FDEPNEDGW-5**

- 5) Please provide flow diagrams of all Industrial and Domestic wastewater streams, including all wastewater and water treatment systems, along with locations and details of all storage areas and chemical treatment systems.

**FDEPNEDGW-6**

- 6) Section 4.6 of Volume One indicates non-hazardous laboratory waste will be discharged to plant drain and partially used for dust control. Due to the nature of some laboratory waste, it is requested that this waste be routed to the ZLD system, or 100 % used for cooling tower makeup.

**FDEPNEDGW-7**

- 7) It is indicated that clay liners are proposed under the fuel storage areas. Please provide details on the clay liners (i.e.: final compaction rates, thickness, final permeability rate, source of clay, type of clay, distance to surficial aquifer from bottom of liners, existing grade, proposed grade, elevations,

secondary containment system, etc.). In addition, please include preventative and corrective measures if the liners are breached by equipment, fractured, etc.

**FDEPNEDGW-8**

- 8) Please clarify if runoff swales and ponds are proposed around the fuel storage areas, and provide details on Figure 4.2.0-3, or similar figure, including details of any liners. If no runoff swales or ponds are proposed, then provide details of fuel storage area design that prohibits runoff. Use of a layer of compacted wood chips above the clay liner would not provide a sufficient barrier.

**FDEPNEDGW-9**

- 9) Due to naturally occurring organic acids that may leach from the wood material in the fuel storage areas, there is concern with the effects of potentially acidic leachate on the clay liners. Please address this issue, and provide data to support the long-term integrity of clay liners.

**FDEPNEDGW-10**

- 10) Please provide source for results in Table 4.3.4-1, Typical Constituent Analysis of Wood Fuel.

**FDEPNEDGW-11**

- 11) According to the analysis of the wood fuel, nitrate and sulfate may be constituents of concern. Additional constituents may include total dissolved solids, total phosphate, pH, and specific conductivity. A list of parameters and frequency of monitoring should be included with the proposed ground water monitoring plan.

**C. Northeast District Office – Potable Water Section:**

**FDEPNEDPW-1**

- 1) Will the potable water system comply with requirements as found in Chapters 62-550, 62-555, 62-560, 62-521, and 62-699, Florida Administrative Code (F.A.C.)? These rules can be found at <http://www.dep.state.fl.us/water/rulesprog.htm#dw>

**FDEPNEDPW-2**

- 2) Will the potable well(s) be constructed according to public well standards found in Chapter 62-532, F.A.C.? Especially be aware of required setbacks for the potable water well. The setback for fuel tanks are at least 50 feet if the tank is above ground and double walled, 100 feet if otherwise.

**FDEPNEDPW-3**

- 3) A Preliminary Design Report (PDR) or specifications, details, and design drawings are required for approval of a potable water system. The list of requirements for a PDR can be found in subsection 62-555.520(4), F.A.C.

**FDEPNEDPW-4**

- 4) On Appendix 10.12; Please note that the application form was not filled out properly. The person who signs on page 2; part I; item I, needs to match with

page 1; section I; item H, which would be the person that will own the project after it is placed into permanent operation. Please match the signatures.

**FDEPNEDPW-5**

- 5) Subsection 62-555.520(2), F.A.C., requires all permit applicants to submit to the Department DEP Form 62-555.900(1) executed in full, containing original signatures. Section II.B needs to be completed with signature and date as well as completing the information required in the corresponding Section II.D which includes signature, seal and date. Also, provide calculations for the new Total Permitted Maximum Day Operating Capacity of Plant.

**FDEPNEDPW-6**

- 6) The limited-use potable water system will need to be permitted through the Alachua County Dept. of Health.

\*Note: Questions number 1 and 3 really cover everything that will be needed for approval of the potable water system. Specification and details of all the components, treatment processes, size of tanks, pumps, etc. are necessary to determine if the water system will meet the requirements.

**D. Northeast District Office – Storm Water Section:**

**FDEPNEDSW-1**

- 1) Contour lines in the Pre- and Post-development Drainage Maps, Sheets 1 and 2 of 2, found in Volume 2, Appendix 10.4.2, are labeled incorrectly. Please revise.

**FDEPNEDSW-2**

- 2) Please indicate in the plans or in the general notes the vertical datum utilized in the design, North American Vertical Datum (NAVD88) or National Geodetic Vertical Datum (NGVD29).

**FDEPNEDSW-3**

- 3) Paragraph 40B-4.2030(8)(h), FAC, requires detention and retention systems to be designed to provide treatment volumes within 72 hours following the end of the design storm event. For retention systems, only percolation and evapotranspiration may be used to reduce storage and treatment volumes in the system. Please provide a recovery analysis for the swales and the dry retention ponds. Also, specify how runoff is conveyed from the switchyard, and paved/impervious areas into the proposed retention ponds.

**FDEPNEDSW-4**

- 4) Paragraph 40B-4.2030(8)(l), FAC, requires swales to be designed to treat, through percolation or evapotranspiration, a volume of stormwater equal to at least 80% of the runoff resulting from the design storm with a 3-yr, 1-hr rainfall depth. Based on design information and weir elevations provided for the proposed swales along the access road, it appears that most of the swales do not have adequate treatment capacity. Also, it is unclear how runoff from

Drainage Areas POST-301, 302, and 108 will be conveyed into the swales and through the culverts under the access road. Please provide revised calculations, design details and site plans.

**FDEPNEDSW-5**

- 5) It is not clear how runoff from drainage areas POST-100, 101, and 102 will be collected and conveyed to the proposed wet detention ponds for stormwater treatment and attenuation, since storm sewer pipes and inlets are not shown in the plans. In addition, site plans indicate that a swale will be provided along the west side of the access road in drainage area POST-102 for stormwater collection and conveyance, however, design details were not included. Please provide.

**FDEPNEDSW-6**

- 6) According to Attachment C-Drainage Calculations, Appendix 10.4.2 in Volume 2, the wet detention ponds are provided with a permanent pool volume that is double the required capacity. Please indicate the need and if the ground water table in the area will be impacted along with the proposed two water supply wells located between the wet ponds.

**FDEPNEDSW-7**

- 7) Please provide hydraulic calculations for the three proposed culverts at the beginning of the access road located at STA 1+84, 24" RCP; STA 3+49, 18" RCP, and STA 4+09, 18" RCP. These culverts were not included in the Pipe Size Calculations in Appendix 10.4.2. In addition, please indicate how runoff from new paved areas will be handled, specifically from STA 1+00 to 4+40.

**ITEM II: SUWANNEE RIVER WATER MANAGEMENT DISTRICT**

**SRWMD-1**

- 1) Please provide additional information on the frequency and duration of maximum daily water usage.

**SRWMD-2**

- 2) Please be advised, reduction in groundwater allocation for Deerhaven Generating Station does not qualify as an offset of actual groundwater usage and does not generate additional water available for use within the Florida Aquifer.

**SRWMD-3**

- 3) Please provide justification for cost associated with reuse feasibility studies, particularly the City of Alachua's reclaimed water. Please include a breakdown of cost associated with pipeline, storage and modification of system based on recent cost data specific to this area.

**SRWMD-4**

- 4) Please provide justification as to the feasibility of using ground water as a standby supply to supplement available reclaimed water.

**SRWMD-5**

- 5) Please provide a yearly schedule, including start-up, for proposed water use.

**SRWMD-6**

- 6) Please provide information on the seasonality of the water use.

**SRWMD-7**

- 7) Please provide assurance that the proposed withdrawal will not cause harm to the Lower Santa Fe River and springs, particularly Hornsby Springs. The District's current draft of the proposed MFL for the Lower Santa Fe River and springs limits the reduction of river and spring flow to no more than a cumulative reduction of 4.7% at all river gaging locations and for each individual spring. The evaluation should be conducted on an individual and cumulative basis.

**SRWMD-8**

- 8) Please be aware that since the development of the draft Lower Santa Fe River MFL technical document, additional legal users have received water use permits, thus potentially reducing the available water.

**SRWMD-9**

- 9) Please provide a description of the actions GREC plans to take to reduce their water demands during a water shortage order issued by the District pursuant to Chapter 40B-21, F.A.C.

**FWC-INTRO**

**ITEM III: FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

Based on a Geographical Information System (GIS) analysis of the proposed project site, the following imperiled species and associated habitats were identified:

- 16 protected species potentially occur onsite or in the vicinity of the proposed site (see table below)
- Historical wading bird rookery
- Florida Natural Areas Inventory-identified rare species habitat for the eastern indigo snake
- FWC-identified potential habitat and priorities wetlands for Florida black bear and wading birds

| <u>Common Name</u>   | <u>Scientific Name</u>                | <u>Status*</u> |
|----------------------|---------------------------------------|----------------|
| Gopher frog          | <i>Rana capito</i>                    | SSC            |
| Gopher tortoise      | <i>Gopherus polyphemus</i>            | ST             |
| Florida pine snake   | <i>Pituophis melanoleucus mugitus</i> | SSC            |
| Eastern indigo snake | <i>Drymarchon corais couperi</i>      | ST; FT         |
| Tricolored heron     | <i>Egretta tricolor</i>               | SSC            |

|                               |                                    |        |
|-------------------------------|------------------------------------|--------|
| Little blue heron             | <i>Egretta caerulea</i>            | SSC    |
| Limpkin                       | <i>Aramus guarauna</i>             | SSC    |
| Snowy egret                   | <i>Egretta thula</i>               | SSC    |
| White ibis                    | <i>Eudocimus albus</i>             | SSC    |
| Bald eagle                    | <i>Haliaeetus leucocephalus</i>    | P      |
| Florida sandhill crane        | <i>Grus canadensis pratensis</i>   | ST     |
| Southeastern American kestrel | <i>Falco sparverius paulus</i>     | ST     |
| Wood stork                    | <i>Mycteria americana</i>          | SE; FE |
| Sherman's fox squirrel        | <i>Sciurus niger shermani</i>      | SSC    |
| Florida black bear            | <i>Ursus americanus floridanus</i> | ST     |

\* SSC - Species of Special Concern; ST - State Threatened; SE - State Endangered; FT - Federally Threatened; FE - Federally Endangered; P - Protected under federal law and state management plan

## Issues and Recommendations

### **FWC-1**

- 1) Issue: The SCA aerial maps provided identify habitats based on the Florida Land Use and cover Forms classification system (FLCUFCS). While this is useful for identifying land uses, this classification system is not appropriate for identification of plant communities that provide habitat for wildlife.
  - a. We recommend that the plant communities be mapped and classified using the Florida Natural Areas Inventory Natural Communities Guide (2009 Version).

### **FWC-2a**

- 2) Issue: The SCA acknowledges that imperiled wildlife species were identified onsite, however, the application does not provide information regarding survey methodology including time of year, locations of observations, type of observed activity, etc.
  - a. If it has not already been done, we recommend that a desktop review of potential fish and wildlife issues be performed in advance of appropriate surveys, which should be conducted during the active (i.e., reproductive) season particular to each species.

### **FWC-2b**

- b. We recommend that the applicant provide a fish and wildlife status report that addresses at least the list of species we have identified in this letter. That report should include the survey methodologies (with source citations) used as well as the timing of the surveys.

### **FWC-3**

- 3) Issue: The SCA indicates that three isolated wetlands would be impacted. Isolated wetlands can provide significant and often endemic breeding habitat

for semi-aquatic wildlife species, as well as important foraging habitat for wading birds.

**FWC-3a**

- a. We recommend an amphibian breeding season survey be completed; at a minimum, the gopher frog should be a target species for this survey.

**FWC-3b**

- b. Please note that the document indicates that this site is dominated by flatwoods-type soils, which could support the flatwoods salamander (*Ambystoma cingulatum*, listed by Florida as a Species of Special Concern). Although our GIS analysis did not identify potential habitat for this species, the site falls within its known range and therefore this species should be considered when developing the survey.

**FWC-4**

- 4) Issue: The SCA indicates that a minimum 50-foot buffer along the perimeter of forested wetlands will be included; however, the wetland delineation and mitigation plan did not identify the conditions under which the buffer system would be maintained.

**FWC-4a**

- a. Buffers that are intended to meet minimum stormwater management requirements are not always sufficient to protect fish and wildlife needs associated with wetlands. For that reason, we recommend that the applicant develop their buffers based on the results of the fish and wildlife assessment and follow U.S. Fish and Wildlife Service wetland buffer guidelines (enclosed).

**Summary**

Guidance related to our recommendations can be found in the FWC's website at <http://myfwc.com/conservation/fwcg.htm>. At this time, we find the information included in the SCA to be insufficient for our determination of potential impacts to wildlife resources or to recommend specific site certification conditions for this proposal. We therefore have determined that this application is incomplete. If you or your staff would like to coordinate further on the issues and recommendations contained in this report, please contact me at 850-410-5272 or via email at [maryann.poole@myfwc.com](mailto:maryann.poole@myfwc.com). If you or your staffs have any specific questions regarding our comments, I encourage them to contact Ms. Stephanie Rousso at 904-731-3196 or via email at [Stephanie.rousso@myfwc.com](mailto:Stephanie.rousso@myfwc.com).

**ITEM IV: FLORIDA DEPARTMENT OF STATE**

The Department of State, Division of Historical Resources notes that while Section 5.9 of GREC's site certification application references a prior cultural resources assessment, it does not address the specifics of that assessment. A search of our records indicates that

what was then called the Deerhaven Generating Plant Expansion was subjected to a cultural resources assessment in 1977. Several cultural resources were identified but for various reasons were not recorded in the Florida Master Site File (FMSF).

Consequently, any recent searches of the FMSF would not reveal the presence of resources that may in fact still be located within the project area. Furthermore, the significance of historical resources on the property may have increased in the 32 years since the survey was conducted.

**FDOSDHR-1**

- 1) Because of this, it is the request of this agency that a professional archaeologist perform a cultural resource survey of the property, including subsurface testing, in order to relocate cultural resources identified in the 1977 survey and to assess the probability that additional archaeological sites and/or historical properties might be present.

**FDOSDHR-2**

- 2) If the application is referencing a more recent cultural resources assessment, a new survey may not be necessary. Regardless, detailed references to specific cultural resource assessment(s) and associated finding should be incorporated into your application.

Enclosures: Copies of submitted letters/comments from the Suwannee River Water Management District, Florida Fish and Wildlife Conservation Commission, and Florida Department of State.



# SUWANNEE RIVER WATER MANAGEMENT DISTRICT

December 30, 2009

DON QUINCEY, JR.  
Chairman  
Chiefland, Florida

N. DAVID FLAGG  
Vice Chairman  
Gainesville, Florida

GEORGIA JONES  
Secretary/Treasurer  
Lake City, Florida

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Lake City, Florida

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O'Brien, Florida

DAVID STILL  
Executive Director  
Lake City, Florida

Mr. Mike Halpin, Administrator  
Siting Coordination Office  
Florida Department of Environmental Protection  
3900 Commonwealth Blvd., Mail Station 48  
Tallahassee, FL 32399

Subject: WUP09-0040, Request for Comments, Gainesville  
Renewable Energy Center, Alachua County

Dear Mr. Halpin:

As directed by Section 403.941, Florida Statutes, and your office, the Suwannee River Water Management District (District) offers the following comments:

1. Please provide additional information on frequency and duration of maximum daily water usage.
2. Please be advised, reduction in groundwater allocation for Deerhaven Generating Station (DGS) does not qualify as an offset of actual groundwater usage and does not generate additional water available for use within the Floridan Aquifer.
3. Please provide justification for cost associated with reuse feasibility studies, particularly City of Alachua's reclaimed water. Please include a breakdown of cost associated with pipeline, storage and modification of system based on recent cost data specific to this area.
4. Please provide justification as to feasibility of using ground water as a standby supply to supplement available reclaimed water.
5. Please provide a yearly schedule, including start-up, for proposed water use.
6. Please provide information on the seasonality of the water use.
7. Please provide assurance that the proposed withdrawal will not cause harm to the Lower Santa Fe River and springs, particularly Hornsby Springs. The District's current draft of the proposed MFL for the Lower Santa Fe River and springs limits the reduction of river and spring flow to no more than a cumulative reduction of 4.7% at all river gaging locations and for each individual spring. The evaluation should be conducted on an individual and cumulative basis.

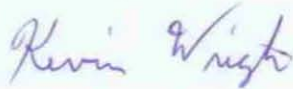
Water for Nature, Water for People

Mr. Mike Halpin  
December 28, 2009  
Page 2

8. Please be aware that since the development of the draft Lower Santa Fe River MFL technical document, additional existing legal users have received water use permits, potentially reducing the available water.
9. Please provide a description of the actions Gainesville Renewable Energy Center plans to take to reduce their water demands during a District-issued water shortage order, pursuant to 40B-21, Florida Administrative Code.

The District appreciates the opportunity to comment. If you have questions, please contact me at 386.362.1001, or toll free at 800.226.1066. Prior to the applicant attempting to resolve these issues, it is strongly suggested that the applicant schedule a meeting with District staff to discuss these issues in depth.

Sincerely,



Kevin Wright  
Resource Management Staff

KW/lgw



**Florida Fish  
and Wildlife  
Conservation  
Commission**

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Kathy Barco  
Vice Chair  
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January 3, 2010

Mr. Mike Halpin, Administrator  
Siting Coordination Office, Mail Station 48  
Florida Department of Environmental Protection  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399

Re: Gainesville Renewable Energy Center; Site Certification Application Review  
Alachua County

Dear Mr. Halpin:

The Division of Habitat and Species Conservation, Habitat Conservation Scientific Services Section, of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated our agency's review of the referenced project in accordance with the Florida Electrical Power Plant Siting Act, Section 403.5252, Florida Statutes.

### **Project Description**

The Gainesville Renewable Energy Center, LLC, has submitted a Site Certification Application (SCA) for the proposed construction and operation of an electrical power plant and associated facilities within the City of Gainesville, Alachua County, Florida. The proposed facility would use woody biomass material as fuel to generate electrical energy. The 131-acre development footprint is located within the existing Deerhaven Generating Station.

### **Potentially Occurring Fish and Wildlife Resources**

Based on a Geographical Information System (GIS) analysis of the proposed project site, the following imperiled species and associated habitats were identified:

- 16 protected species potentially occur onsite or in the vicinity of the proposed site (see table below)
- Historical wading bird rookery
- Florida Natural Areas Inventory-identified rare species habitat for the eastern indigo snake
- FWC-identified potential habitat and priorities wetlands for Florida black bear and wading birds

| <u>Common Name</u>   | <u>Scientific Name</u>                | <u>Status*</u> |
|----------------------|---------------------------------------|----------------|
| Gopher frog          | <i>Rana capito</i>                    | SSC            |
| Gopher tortoise      | <i>Gopherus polyphemus</i>            | ST             |
| Florida pine snake   | <i>Pituophis melanoleucus mugitus</i> | SSC            |
| Eastern indigo snake | <i>Drymarchon corais couperi</i>      | ST; FT         |
| Tricolored heron     | <i>Egretta tricolor</i>               | SSC            |
| Little blue heron    | <i>Egretta caerulea</i>               | SSC            |

|                               |                                    |        |
|-------------------------------|------------------------------------|--------|
| Limpkin                       | <i>Aramus guarauna</i>             | SSC    |
| Snowy egret                   | <i>Egretta thula</i>               | SSC    |
| White ibis                    | <i>Eudocimus albus</i>             | SSC    |
| Bald eagle                    | <i>Haliaeetus leucocephalus</i>    | P      |
| Florida sandhill crane        | <i>Grus canadensis pratensis</i>   | ST     |
| Southeastern American kestrel | <i>Falco sparverius paulus</i>     | ST     |
| Wood stork                    | <i>Mycteria americana</i>          | SE; FE |
| Sherman's fox squirrel        | <i>Sciurus niger shermani</i>      | SSC    |
| Florida black bear            | <i>Ursus americanus floridanus</i> | ST     |

\* SSC - Species of Special Concern; ST - State Threatened; SE - State Endangered; FT - Federally Threatened; FE - Federally Endangered; P - Protected under federal law and state management plan

### Issues and Recommendations

1. Issue: The SCA aerial maps provided identify habitats based on the Florida Land Use and cover Forms classification system (FLCUFCS). While this is useful for identifying land uses, this classification system is not appropriate for identification of plant communities that provide habitat for wildlife.
  - a. We recommend that the plant communities be mapped and classified using the Florida Natural Areas Inventory Natural Communities Guide (2009 Version)
2. Issue: The SCA acknowledges that imperiled wildlife species were identified onsite, however, the application does not provide information regarding survey methodology including time of year, locations of observations, type of observed activity, etc.
  - a. If it has not already been done, we recommend that a desktop review of potential fish and wildlife issues be performed in advance of appropriate surveys, which should be conducted during the active (i.e., reproductive) season particular to each species.
  - b. We recommend that the applicant provide a fish and wildlife status report that addresses at least the list of species we have identified in this letter. That report should include the survey methodologies (with source citations) used as well as the timing of the surveys
3. Issue: The SCA indicates that three isolated wetlands would be impacted. Isolated wetlands can provide significant and often endemic breeding habitat for semi-aquatic wildlife species, as well as important foraging habitat for wading birds.
  - a. We recommend an amphibian breeding season survey be completed; at a minimum, the gopher frog should be a target species for this survey.
  - b. Please note that the document indicates that this site is dominated by flatwoods-type soils, which could support the flatwoods salamander (*Ambystoma cingulatum*, listed by Florida as a Species of Special Concern). Although our GIS analysis did not identify potential habitat for

this species, the site falls within its known range and therefore this species should be considered when developing the survey.

4. Issue: The SCA indicates that a minimum 50-foot buffer along the perimeter of forested wetlands will be included; however, the wetland delineation and mitigation plan did not identify the conditions under which the buffer system would be maintained.
  - a. Buffers that are intended to meet minimum stormwater management requirements are not always sufficient to protect fish and wildlife needs associated with wetlands. For that reason, we recommend that the applicant develop their buffers based on the results of the fish and wildlife assessment and follow U.S. Fish and Wildlife Service wetland buffer guidelines (enclosed).

### Summary

Guidance related to our recommendations can be found in the FWC's at <http://myfwc.com/conservation/fwcg.htm>. At this time, we find the information included in the SCA to be insufficient for our determination of potential impacts to wildlife resources or to recommend specific site certification conditions for this proposal. We therefore have determined that this application is incomplete. If you or your staff would like to coordinate further on the issues and recommendations contained in this report, please contact me at 850-410-5272 or via email at [maryann.poole@myfwc.com](mailto:maryann.poole@myfwc.com). If you or your staffs have any specific questions regarding our comments, I encourage them to contact Ms. Stephanie Rouso at 904-731-3196 or via email at [Stephanie.rousso@myfwc.com](mailto:Stephanie.rousso@myfwc.com).

Sincerely,



Mary Ann Poole  
Commenting Program Administrator

map/jw  
Gainesville Renewable Energy Center\_2532\_1-3-10  
ENV 2-11-2/3  
Enclosure

cc: Josh Levine, Director- Project Development ([jlevine@amrenewables.com](mailto:jlevine@amrenewables.com))  
Jack Doolittle, ECT Consulting ([jdoolittle@ectinc.com](mailto:jdoolittle@ectinc.com))  
Tom Davis, ECT Consulting ([tdavis@ectinc.com](mailto:tdavis@ectinc.com))  
Jessica Dalton, FDEP, Tallahassee

# Buffers: An Efficient Tool for Watershed Protection

## What Are Buffers?

A **buffer** is a strip of naturally vegetated land along a lake, stream, or wetland that provides numerous benefits. Preserving a buffer zone protects water resources from neighboring land uses. Nutrient inputs are of great concern because of their abundant sources (fertilizer, septic tank drain fields, leaking sewage lines, animal waste). Excess nutrients in lakes and estuaries cause toxic algal blooms and depleted oxygen. Natural chemical and biological processes within buffers alter or uptake nutrients and pollutants *before* they enter a water body, thus providing a cost-effective treatment system. Buffers preserve native habitat for wildlife and enhance aquatic habitat. The range of benefits provided by buffers includes:

- Water quality protection 
- Erosion control
- Storage of floodwaters and flood damage reduction
- Aquatic habitat enhancement 
- Habitat for terrestrial riparian wildlife 
- Maintenance of base flow in streams
- Improved aesthetic appearance of stream corridors
- Recreational and educational opportunities

**Riparian** refers to the land adjoining a body of water, usually a river or stream.

## Buffer Width: Bigger is Better

Choosing a buffer width depends on your planning goals. As buffer width increases, the buffer provides greater benefits. As seen in the table below, a 30-foot buffer provides minimal service. At 50 feet, the buffer meets minimum water quality protection recommendations and gives some aquatic habitat benefits. For effective water quality and aquatic habitat protection, a buffer width of 100 feet is needed. Buffers to enhance riparian wildlife should be 300 feet or greater. Special buffer zones may be required to protect vulnerable species.  Width should be increased where slope, impervious surface, and soil type reduce buffer effectiveness. The consequences of an inadequate buffer may be an increased need for stormwater ponds, increased flooding, decreased abundance of sportfish, and/or loss of certain species such as some salamanders or crayfish.

| Benefit Provided:                                | Buffer Width:                                                                       |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |
|--------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                  | 30 ft                                                                               | 50 ft                                                                               | 100 ft                                                                              | 300 ft                                                                                | 1,000 ft                                                                              | 1,500 ft                                                                              |
| Sediment Removal - Minimum                       |  |  |  |  |  |  |
| Maintain Stream Temperature                      |  |  |  |  |  |  |
| Nitrogen Removal - Minimum                       |                                                                                     |  |  |  |  |  |
| Contaminant Removal                              |                                                                                     |  |  |  |  |  |
| Large Woody Debris for Stream Habitat            |                                                                                     |  |  |  |  |  |
| Effective Sediment Removal                       |                                                                                     |                                                                                     |  |  |  |  |
| Short-Term Phosphorus Control                    |                                                                                     |                                                                                     |  |  |  |  |
| Effective Nitrogen Removal                       |                                                                                     |                                                                                     |  |  |  |  |
| Maintain Diverse Stream Invertebrates            |                                                                                     |                                                                                     |  |  |  |  |
| Bird Corridors                                   |                                                                                     |                                                                                     |                                                                                     |  |  |  |
| Reptile and Amphibian Habitat                    |                                                                                     |                                                                                     |                                                                                     |                                                                                       |  |  |
| Habitat for Interior Forest Species              |                                                                                     |                                                                                     |                                                                                     |                                                                                       |  |  |
| Flatwoods Salamander Habitat – Protected Species |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |  |

## Sources

- Burke, V.J. and J.W. Gibbons, 1995, Terrestrial Buffer Zones and Wetland Conservation: A Case Study of Freshwater Turtles in a Carolina Bay, *Conservation Biology* 9 (6), pp. 1365-1369.
- Desbonnet, A., V. Lee, P. Pogue, D. Reis, J. Boyd, J. Willis, and M. Imperial, 1995, Development of Coastal Vegetated Buffer Programs, *Coastal Management* 23, pp. 91-109.
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- Semlitsch, R.D., 1998, Biological Delineation of Terrestrial Buffer Zones for Pond-Breeding Salamanders, *Conservation Biology* 12 (5), pp. 1113-1119.
- U.S. Fish and Wildlife Service, April 1, 1999, Endangered and Threatened Wildlife and Plants: Final Rule to List the Flatwoods Salamander as a Threatened Species, *Federal Register* 62(241): 15691-15704.
- Wenger, S., 1999, *A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation*, Office of Public Service and Outreach, Institute of Ecology, University of Georgia, Athens, Georgia.
- Wenger, S. and L. Fowler, 2000, *Protecting Stream and River Corridors: Creating Effective Local Riparian Buffer Ordinances*, Carl Vinson Institute of Government, University of Georgia, Athens, Georgia.

## For Further Information Contact:

### U.S. Fish and Wildlife Service

Panama City Field Office  
1601 Balboa Avenue  
Panama City, Florida 32405  
Tel: (850) 769-0552  
Fax: (850) 763-2177  
E-mail: FW4\_ES\_FR\_Panama\_City@fws.gov



DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

DEC 28 2009

FLORIDA DEPARTMENT OF STATE SITING COORDINATION

**Kurt S. Browning**

Secretary of State

DIVISION OF HISTORICAL RESOURCES

Mr. James S. Gordon  
Gainesville Renewable Energy Center  
75 Arlington Street, 5<sup>th</sup> Floor  
Boston, Massachusetts 20009

December 22, 2009

Re: DHR Project File No.: 2009-6973 / Received by DHR: December 1, 2009  
Gainesville Renewable Energy Center  
Site Certification Application  
Alachua County

Dear Mr. Gordon:

Our office has reviewed the referenced project in accordance with Chapters 267 and 403, *Florida Statutes*, regarding possible impact to historic properties listed, or eligible for listing, in the National Register of Historic Places, or otherwise of historical, architectural or archaeological value.

We note that while Section 5.9 of this application references a prior cultural resources assessment, it does not address the specifics of that assessment. A search of our records indicates that what was then called the Deerhaven Generating Plant Expansion was subjected to a cultural resources assessment in 1977. Several cultural resources were identified but for various reasons were not recorded in the Florida Master Site File (FMSF). Consequently, any recent searches of the FMSF would not reveal the presence of resources that may in fact still be located within the project area. Furthermore, the significance of historic resources on the property may have increased in the 32 years since the survey was conducted. Because of this, it is the request of this agency that a professional archaeologist perform a cultural resource survey of the property, including subsurface testing, in order to relocate cultural resources identified in the 1977 survey and to assess the probability that additional archaeological sites and/or historic properties might be present.

If this application is referencing a more recent cultural resources assessment, a new survey may not be necessary. Regardless, detailed references to specific cultural resource assessment(s) and associated findings should be incorporated into your application.

Because this letter and its contents are a matter of public record, cultural resource consultants who have knowledge of our survey request may contact an applicant or the project agent. This should in no way be interpreted as an endorsement by this agency. The Division of Historical Resources does not maintain a list of professional consultants who are qualified to work in the State of Florida and/or who meet *The Secretary of the Interior's Historic Preservation Professional Standards* [Volume 62, Number 119, page 33707 (June 20, 1997)], ("Professional Qualifications"), or as amended in the future. However, the American Cultural Resources Association (ACRA) maintains a listing of

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office  
(850) 245-6300 • FAX: 245-6436

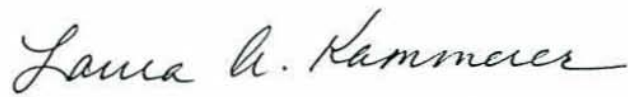
☐ Archaeological Research  
(850) 245-6444 • FAX: 245-6452

☒ Historic Preservation  
(850) 245-6333 • FAX: 245-6437

professional consultants ([www.acra-crm.org/southeast.html](http://www.acra-crm.org/southeast.html)). In addition, the Register of Professional Archaeologists (RPA) maintains a membership directory for locating professional archaeologists as well as other professional preservation consultants ([www.rpanet.org/about.htm](http://www.rpanet.org/about.htm)). Many qualified historic preservation professionals are not members of these organizations, and omission from the directories does not imply that someone does not meet the Secretary's Standards or that the resultant work would not be acceptable. Conversely, inclusion on the lists is no guarantee that a product will automatically be acceptable.

If you have any questions concerning our comments, please contact Samantha Earnest, Historic Preservationist, by electronic mail at [swearnest@dos.state.fl.us](mailto:swearnest@dos.state.fl.us), or by telephone at 850-245-6333 or 800-847-7278.

Sincerely,

A handwritten signature in cursive script that reads "Laura A. Kammerer".

Laura A. Kammerer  
Historic Preservationist Supervisor  
Compliance Review Section  
Bureau of Historic Preservation

PC: Mr. Mike Halpin, DEP 3700