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October 28, 2003

Lee Kissick
St. Johns River Water Management District
Altamonte Springs Service Center
975 Keller Road
Altamonte Springs, FL 32714

PROJ: Victoria Park (Volusia County)
RE: Annual Sandhill Crane Report
Permit No. 4-127-52151-1; aka No. 4-127-0369C-ERP

Dear Mr. Kissick:

This letter serves as an annual summary of the Sandhill Crane Surveys and Management Activities conducted at the Victoria Park project as per the conditions of the St. Johns River Water Management District (SJRWMD) Conceptual Permit for the site. The following includes a description of the Sandhill Crane Mitigation and Management Plan and the results of the surveys.

The Sandhill Crane surveys were conducted as described in the Florida Fish and Wildlife Conservation Commission's (FFWCC) Wildlife Methodology Guidelines for Section 18.D of the Application for Development Approval. Surveys consisted of 100% visual surveys of each freshwater marsh suitable for cranes (i.e. maidencane marsh) during the nesting season. Monthly surveys between the months of December and June occurred as per the conditions of the conceptual permit.

Surveys were conducted on clear, sunny days in the morning and early afternoons. Sandhill Cranes were observed on the property during the surveys on different occasions. These sightings occurred in the Northeast, Southeast and Southwest Quadrants of the property. No cranes were observed in the Northwest quadrant. Adult cranes were observed on several occasions throughout the property in pairs and lone individuals. Based on previous surveys and available habitat, it is very likely that cranes did,

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however, frequent the Northwest quadrant property, particularly the wetlands north of Taylor Road.

Four crane nests were observed during the 2003-monitoring surveys. The first nest was observed in Wetland 86 (Nest Site F) during the January monitoring event. The nest was constructed within a small patch of maidencane and pickerel weed near the northeast corner of the wetland. Two chicks and two adult cranes were later observed foraging near Wetland 86 (Nest Site F) during the March monitoring event. Another nest was discovered in Wetland 75 (Nest Site G) during the February monitoring event. This nest was constructed within a large patch of maidencane near the center of the wetland. Two chicks and two adult cranes were observed foraging within the mitigation area surrounding Wetland 75 (Nest Site G) during the March monitoring event. Adult cranes and individual cranes were observed foraging within Wetland 27 (Secondary habitat) and Wetland 17 (Nest Site C) during the February and March monitoring events. Two nests were observed within Wetland 27 (Secondary Habitat) during the February and April monitoring events. No eggs were observed within either of the abandoned nests. Although this pair of cranes most likely created the nest, there was no evidence of them laying eggs. In addition, there was no work being done anywhere near the nest sites that could potentially disturb the cranes. Finally, a pair of adult cranes was observed foraging in the pasture near Wetland 64 (Nest Site E) during the January monitoring event. However, this wetland did not appear to be as good a nesting habitat as previous monitoring years.

The following summarizes the overall Sandhill Crane Mitigation and Management plan for the Victoria Park project site:

MITIGATION AND MANAGEMENT PLAN

St. Joe/Arvida and its consultants designed a Sandhill Crane Mitigation and Management Plan that has been approved of by the Florida Fish and Wildlife Conservation Commission and the St. John River Water Management District during the review process of the Conceptual Permit (No. 4-127-0369 AC-ERP).

The Sandhill Crane Mitigation and Management Plan is centered on the preservation and management of seven (7) potential nesting sites. Each of these potential nesting sites will be comprised of a significant area of wetland and upland area for flightless cranes. These

nesting sites will consist of primary wetland and primary upland foraging areas. In addition, numerous secondary and ancillary forage areas that include natural wetlands, natural uplands, golf courses, parks, dry retention ponds and wet retention pond banks are planned as part of the Sandhill Crane Mitigation and Management Plan.

The development plan will be implemented in a phased manner to give the cranes adequate time for adaptation to the preserved versus developed areas. Additionally, the cattle will be removed from the site and the preserved crane areas will be managed (i.e. exotic/native invasive plant species eliminated). This will further increase nesting success.

All of the Sandhill Crane Primary upland areas will be subjected to mowing to benefit the Florida Sandhill Crane. Two of these areas will also be logged and managed with fire and mechanical clearing as planned for the Scrub Jay Preserve. One of the logged areas is located in the NE Quadrant, adjacent to Wetland 40. This area is part of Sandhill Crane Nest Site D. The other area where logging is to occur is in the NW Quadrant. This area is part of Nest Site A and is north of Taylor Road and West of the Martin Luther King, Jr. Beltway.

Northwest Quadrant

The NW Quadrant is separated into three tracts by existing roadways (Taylor Rd. and Blue Lake Rd.). The Sandhill Crane Mitigation and Management Plan includes the preservation of two (2) potential nesting sites (Site A and B) in the NW Quadrant. These sites will be comprised of primary wetland and upland areas for nesting and foraging. Several secondary upland and wetland areas will also exist in this quadrant.

Nest Site A:

Potential nesting site A will be comprised of a total of **18.5 acres** of primary wetland habitat and **19.4 acres** of primary upland foraging habitat. Each potential nest site is comprised of at least one wetland that is comprised of good nesting and foraging habitat for Sandhill Cranes. The primary upland habitat for cranes consist of those upland areas that are comprised of suitable foraging habitat for cranes and are contiguous to the primary wetlands for the Potential Nest Site. The primary wetland habitat at this nesting site will consist of Wetlands 106, 107, 112, 113, 114, 115 and 116. These shallow wetlands consist of ideal nesting and foraging habitat for cranes. A small section of W107 is comprised of open forested wetland cover. This wetland area is comprised of

open groundcover that will provide foraging habitat for cranes. A nest was observed in W116 during Year 2000 crane nest survey.

The primary upland foraging habitat for this nesting site will consist of a large grass-dominated area. These upland areas currently consist of shrub and brushland and pine flatwoods vegetative communities. The Crane Management plan includes clearing these areas via mechanical chopping; timbering and conducting controlled burns as planned in the Scrub Jay preserve. The upland areas will be periodically mowed and managed with respect to crane habitat needs.

Each potential nest site for Sandhill Cranes will also consist of secondary habitat. An additional **0.6 acres** of secondary uplands and **3.0 acres** of secondary wetlands will exist in this tract (north of Taylor Rd.) for Nest Site A. These secondary areas will consist of retention pond bank, herbaceous wetlands and open forested wetlands.

In all, a total of **41.4 acres** of habitat will be provided at Nest Site A.

Nest Site B:

The second nest site, Site B is located in the tract south of Taylor Rd. and bordering Martin Luther King Beltway. A nesting crane was observed in this wetland during the 1998 survey. The majority of the adjacent upland habitat surrounding this wetland is comprised of a dense sandhill community to the north, west and east. A very small open upland area does exist and will be preserved between W87 and W88. An area south of W87, which is off-site, is comprised of suitable upland forage habitat. Nonetheless, the Sandhill Crane Mitigation and Management Plan includes the preservation of this potential nesting site because it can use the adjacent offsite areas for forage needs. This nesting site will consist of **2.4 acres** of primary wetland habitat that is herbaceous wetland (W87, W88 and W89).

A total of **4.9 acres** of secondary wetlands and **2.7 acres** of secondary upland habitat are also planned for this nest site. These secondary areas are located in the tract south of Taylor Rd. and bordering Martin Luther King Beltway and will consist of retention pond bank and herbaceous wetlands (W91, W98, W99. W101, W102, W103).

In all, a total of **10.0 acres** of habitat will be provided at Nest Site B.

A dense sandhill community surrounding this nest site will function as a valuable buffer from any adjacent development. This greenspace area covers approximately 5 acres.

Northeast Quadrant

The Sandhill Crane Plan includes three (3) potential nesting sites in the NE Quadrant (Sites C, D, and E). These sites consist of primary wetland and upland habitat. Several secondary and ancillary wetland and upland areas also exist. Two nest sites (Wetlands 40 and 64) were observed on this tract during the 1998 survey, however, neither attempt was successful due to the nests being destroyed by cattle, or from predation. One of the 1998 nest sites was located adjacent to Interstate 4 (W64) and the other was in the interior of the quadrant (W40).

St. Joe/Arvida plans to regularly burn the ancillary upland areas as part of the site management plan. The ancillary areas will be primarily managed for Scrub Jays and gopher tortoises. A combination of management techniques will be used in the upland preservation areas including controlled burns and mechanical chopping and mowing. Fire will be the primary tool utilized for upland habitat management in the Scrub Jay and gopher tortoises. An initial prescribed burn in the jay/tortoise preserve areas will be conducted prior to development. Fire management in this manner will prevent undesirable plant species and result in an increase in plant density that would otherwise transform good habitat into unsuitable habitat. The use of fire as a management tool in these preserve areas will closely mimic the natural element of fire in the ecology of scrub habitats. All burns will be sensitive to critical periods for all protected species utilizing the Victoria Park site (i.e. the nesting season). The planned management activities (i.e. controlled fire, mechanical thinning) in the ancillary areas will provide more suitable foraging habitat for Sandhill Cranes. The objective of these habitat management activities will be to open up the groundcover, which will benefit Sandhill Cranes.
Controlled burns will be conducted within the managed upland preservation areas as described in the gopher tortoise and Scrub Jay Management Plan of the Site Mitigation and Management Plan (SMMP; dated May 1, 2000).

Nest Site C:

Nest site C will consist of **25.4 acres** of primary wetland habitat and **6.4 acres** of primary upland foraging habitat. All of the preserved herbaceous wetlands in this nesting area are relatively shallow and will provide nesting habitat. These wetlands (W1, W2, W3, W4,

W5, W6, W16, W17, W18 and W20) will be contiguous to each other for flightless cranes, as they are connected by existing trails. The primary upland foraging habitat is comprised of a large pasture area adjacent to W17.

Approximately **48.1 acres** of secondary and ancillary upland habitat also exist at this nesting site. The primary purpose of the ancillary forage habitat is to provide habitat for gopher tortoises and the Florida Scrub Jay. However, Sandhill Cranes were observed foraging within this area on numerous occasions. The planned management activities (i.e. controlled fire, mechanical thinning) in the ancillary areas will provide more suitable foraging habitat for cranes. The objective of these habitat management activities will be to open up the groundcover, which will benefit Sandhill Cranes.

In all, a total of **79.9 acres** of habitat will be provided at Nest Site C.

Nest Site D:

Nest Site D will be comprised of **13.6 acres** of primary wetlands and **17.6 acres** of primary upland foraging areas. The primary wetland habitat is comprised of shallow herbaceous wetlands. These include Wetland 33, 34, 36, 38, 39, 40, 47, 48 and 49, which will provide contiguous wetland habitat. The primary uplands will consist of existing pastureland and scrubby uplands. The primary scrubby upland areas at this potential nest site are currently comprised of a dense thicket of vegetation that has resulted due to a lack of fire. These areas will be converted into foraging habitat via mechanical clearing and controlled burns. These areas will be cleared (i.e. timbering, mechanical thinning) and subjected to controlled burns similar to being done in the Scrub Jay preserve. These areas will then be regularly managed as needed to provide foraging habitat for Sandhill Cranes.

A total of **21.4 acres** of secondary wetlands will exist for this nesting site. These areas are separated from Nesting Site D by entrance roads from Martin Luther King Beltway and Orange Camp Road. Secondary wetland habitat for Nest Site D will consist of Wetlands 21, 23, 24, 26, 27, 30, 31, 32, 35, 43, 44, 45, 46, 51 and 53. These wetlands will be preserved and managed for cranes. In addition, enhancement activities are also planned for the majority of these wetlands.

An additional **77.3 acres** of secondary/ancillary uplands will be provided for Nest Site D. The secondary/ancillary upland foraging areas for this nest site will be comprised of approximately **69.9 acres** of managed uplands (via controlled burns, chopping and

mowing) and **7.4 acres** of park and retention pond banks. The controlled burn program for the managed upland areas at this nest site will be identical to Nest Site C.

In all, a total of **129.9 acres** of habitat will be provided at Nest Site D.
Nest Site E:

Nest Site E will be comprised of **1.1 acres** of primary wetlands and **8.6 acres** of primary upland foraging areas. The primary wetland habitat will consist of herbaceous wetlands (W64). The primary uplands for this nest site will consist of mostly pastureland. These areas will provide valuable foraging habitat for flightless cranes.

An additional **13.3 acres** of secondary wetlands and **7.8 acres** of secondary uplands will also be available for nest site E. Secondary wetlands will be comprised of herbaceous and open forested wetlands. Secondary upland foraging areas for this nest site include retention pond banks and managed upland buffers.

Due to the long-term plan for this nest site, the management plan anticipates that the potential for cranes utilizing this area will be shifted to the large crane management area to the west. As with each of the 1998 nesting sites, no chicks were fledged from this site most likely due to either a predator or abandonment by the adults due to its location in a dense cattle area. This area in a post-development condition will have higher quality habitat for nesting even though the immediately adjacent upland forage areas will be smaller. However, the Florida Sandhill Crane has a propensity for adaptation to humans and will forage on any grassed area. There is a good chance that the cranes will continue to utilize this area even though high quality replacement habitat has been provided.

In all, a total of **30.8 acres** of habitat will be provided at Nest Site E.

Southwest Quadrant

The Sandhill Crane Mitigation and Management Plan includes one (1) potential nesting site in the SW Quadrant (Sites F). This site consists of primary wetland and upland habitat and several secondary wetland and upland areas. These areas are comprised of herbaceous wetland cover that will be enhanced, open sandhill or Longleaf Pine/Xeric Oak areas, retention pond banks, golf course and power/gas easements.

Nest Site F:

Nest Site F in the SW Quadrant will be comprised of **8.0 acres** of primary wetland habitat and **43.9 acres** of primary upland foraging habitat. Crane nests were not observed in this quadrant during surveys conducted in 1998 or 1999. However, several cranes were observed foraging within the primary areas of Nest Site F on a routine basis.

The primary wetland habitat will consist of W82, 83 and 86. Wetlands 82 and 86 are shallow, herbaceous depressions that will be greatly enhanced by the management activities planned by St. Joe/Arvida. Wetlands 82 and 86 will provide ideal nesting habitat for cranes once the management activities are implemented. Wetland 83, which is not as disturbed as W82 and 86, will provide good foraging habitat for cranes.

The primary upland foraging habitat for this potential nest site will consist of **35.0 acres** of managed uplands and **8.9 acres** of easements (grass-dominated). Periodic mowing and the removal of undesirable vegetation will be implemented in these upland areas to ensure ideal ground cover for cranes. This area, which will be contiguous with the primary wetlands, will be managed for cranes and provide valuable forage habitat for flightless cranes.

An additional **190.6 acres** of secondary upland foraging habitat will also exist in this quadrant. Secondary upland habitat for this nest site will be comprised of **116.9 acres** of golf course, **5.3 acres** of retention pond banks and **68.5 acres** of natural areas that will be regularly managed. These areas will be managed to remain vegetatively similar to existing condition, which is mostly rangeland with scattered pines and timbered sandhill communities. These natural upland areas will be contiguous with golf course fairways and rough. St. Joe/Arvida and its consultants have designed an ecologically sensitive pesticide management plan for the golf course, which will also be beneficial for foraging cranes.

In all, a total of **242.5 acres** of habitat will be provided at Nest Site F.

Southeast Quadrant

The Sandhill Crane Plan includes one (1) potential nesting site in the SE Quadrant (Site G). This site consists of primary wetland and upland habitat and several secondary wetland and upland areas. These areas are comprised of herbaceous wetland cover that

will be created and enhanced, as well as open sandhill areas, pastureland, retention pond banks and other greenspace areas.

Nest Site G:

A potential nesting site (Site G) is planned for the SE Quadrant that will consist of **20.6 acres** of primary habitat for adult and flightless cranes. A crane nest was observed in W74 during the 1998 survey.

The primary wetland habitat for this potential nest site will consist of **15.8 acres** of shallow herbaceous natural wetlands and created herbaceous wetlands. This acreage includes Wetlands 73, 74, 75 and 76 and a **6.8-acre** created wetland. As with the other nesting areas, these wetland areas will be managed for crane usage.

The created wetland has been completed. Native plant species from adjacent wetland areas have begun to recruit into the created wetland. The native seed source will result in a coverage of native plants such as pickerelweed, maidencane and yellow-eyed grass in the created wetland. The hydrology of the created wetland will be very similar to that of Wetland 74, a 1998 nesting site for cranes that was unsuccessful. The created wetland also consist of varying topography to allow shallow and deeper areas throughout each year. This will create a varying plant composition in these areas as well as varying water depths.

Primary upland foraging habitat for this nest will consist of **4.1 acres** of pastureland and **0.7 acres** of managed uplands. Periodic mowing and controlling undesirable plants will be implemented in these upland areas to ensure ideal vegetation height for cranes. The large lake in this tract, a park and the natural buffer that will exist along the west and north side of this lake will provide **14.5 acres** secondary upland foraging areas for this potential nest site.

In all, a total of **35.1 acres** of habitat will be provided at Nest Site G.

All crane preserve areas will be managed to provide ideal foraging and nesting habitat. This management will include the chopping and burning of pine flatwoods, the management of scrub communities to provide more open areas, regular mowing of upland forage areas and the control of exotic plant species, invasive native plant species and invasive tree species. Carolina willow *(Salix* spp.) and longleaf pine *(Pinus* spp.) have recruited into several of the herbaceous wetlands. These invasive species, which

will be removed from the preserve areas, can become a serious problem with respect to the habitat requirements of cranes. Removing cattle from the property has also greatly enhanced many of the preserved herbaceous wetlands by increasing vegetative diversity and density.

The Florida Sandhill Crane is a highly adaptive, opportunistic bird. Sandhill cranes adapt to humans and the habitat that is generated by developments particularly golf course roughs, stormwater pond banks, and open fields. In all, a total of approximately **570 acres** of habitat will exist for cranes at the post development Victoria Park project. One of the crane's primary forage habitat is shallow herbaceous wetlands. A total of approximately **186 acres** of primary habitat (contiguous with a potential nest site) will exist on the site. These primary areas will be protected by a Conservation Easement in perpetuity. An additional **384 acres** of secondary and ancillary habitat will exist as well. These areas will consist of natural wetland and upland areas, golf course, retention pond banks and parks.

It is important to note that the crane preserve areas will be protected and managed years before the impacts occur to most of the existing crane foraging areas. In summary, seven potential crane nesting areas will be exist at the Victoria Park site in post development. These areas include both wetlands and uplands that will be managed for the cranes and other listed species. The existing crane population has had poor nesting success the past two years due to the cattle operation and predators.

Habitat Monitoring

The success of the Sandhill Crane habitat management efforts and the need for any management plan modifications will be determined by the FFWCC and SJRWMD based upon a monitoring program at the Victoria Park site. Crane monitoring will include an inspection of suitable nesting habitat on a monthly basis during the crane-nesting season. The monitoring will include a visual survey of each wetland community that is suitable for nesting by cranes. A single aerial survey will also be conducted each nesting period.

All monitoring will be conducted by a qualified biologist during the crane-nesting season (Dec. – June) as per the SJRWMD Conceptual Environmental Resource Permit (No. 4-127-0369AC-ERP). Results of the monitoring will be submitted to the FFWCC and SJRWMD each year.

Should you have any questions regarding this matter, please contact this office at (352) 394-2000. Thank you.

Sincerely,

Bob Margeson
Field Biologist

James Modica
President

cc: Bill Gardiner, St. Joe/Arvida
Brad Walker, St. Joe/Arvida
Steve Lau, Florida Fish and Wildlife Conservation Commission

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