MILLER LEGG

August 19, 2019

Ms. Deborah Burr (*via email: Deborah.Burr@MyFWC.com*)
Gopher Tortoise Program Coordinator
Division of Habitat and Species Conservation
Species Conservation Planning Section
FL Fish and Wildlife Conservation Commission
620 South Meridian Street Mail Station 2A
Tallahassee, FL 32399-1600

RE: Victoria Park Habitat Monitoring Report 2019
Miller Legg Project No. 09-00268
FFWCC Permit No. VOL-20
SJRWMD Permit No. 4-127-0369C-ERP/4-127-62770-7 ERP - Item #1316067

Dear Ms. Burr:

Enclosed is the 2019 Habitat Monitoring Report for FFWCC Permit No. VOL-20 the Victoria Park Gopher Tortoise/Scrub Jay Preserve in Deland, Florida. Victoria Park is a ±1,859-acre development that primarily consists of residential communities, golf courses, commercial tracts and numerous preservation areas including a ±151-acre preserve located in the northeast quadrant (north of Orange Camp Road and east of Martin Luther King Jr. Beltway). This preserve is comprised of ±111 acres of uplands and ±40 acres of wetlands and the uplands are primarily managed for the Florida scrub jay and gopher tortoise. This report documents the management activities and the status of the habitat within the preserve for this year.

Maintenance for 2019 occurred in North Preserve Management Units 1, 2, and 3 and South Preserve Management Unit 1 and consisted of mechanically mowing and exotic plant treatments to enhance the habitat. Land management activities in the preserve improved coverage as illustrated in the photographs and transect data. The Victoria Park Community Council is dedicated to working with the responsible agencies for support in management decisions. If you have any questions, please contact Paul Mann or Dylan Larson by email at pmann@millerlegg.com or dlarson@millerlegg.com or by phone at (954) 436-7000.

Sincerely,

Dylan Larson, PWS, CEP, GTA, CLI
Principal Environmental

Cc: Lee Kissick, SJRWMD – via email
Samantha Cobble, FFWCC – via email
Dawn Jennings, USFWS – via email
Michelle Saunders, Victoria Park Community Management – via email
Scott Morton, Kolter – via email
Brad Walker, Kolter – via email

DL/pm
Enclosure

V:\Projects\2009\09-00268 Victoria Park Monitoring - Kolter\Reports\Upland Habitat Monitoring\2019\09-00268 2019 Upland Report Cover Letter.docx

Central Florida Office: 631 S Orlando Avenue • Suite 400 • Winter Park, Florida 32789-7122
(407) 629-8880 • Fax: (407) 278-1264
www.millerlegg.com

MILLER LEGG

Annual Habitat Monitoring Report 2019

FLORA & FAUNA

"Improving Communities ... ... Creating Environments"

VICTORIA PARK
Gopher Tortoise/Scrub Jay Preserve

SJRWMD Permit No. 4-127-0369C-ERP
Miller Legg Project 09-00268

Prepared for:
Victoria Park Community Council

Victoria Park Gopher Tortoise/Florida Scrub Jay Preserve
Annual Habitat Monitoring Report 2019

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EXHIBITS

Victoria Park Gopher Tortoise/Florida Scrub Jay Preserve
Annual Habitat Monitoring Report 2019

I. INTRODUCTION

Victoria Park is a 1,859-acre multi-use Development of Regional Impact (DRI #698-06) located in southern Volusia County, Florida. The project includes residential communities, a golf course, commercial tracts and numerous preservation areas, including a ±151-acre preserve that is being managed and monitored primarily for the Florida scrub jay (*Aphelocoma coerulescens coerulescens*) and gopher tortoise (*Gopherus polyphemus*). The preserve is located in the northeast quadrant of the project and is comprised of ±111 acres of uplands and ±40 acres of wetlands. The Florida scrub jay and the gopher tortoise are both classified as "Threatened" by the Florida Fish and Wildlife Conservation Commission (FWC). This classification provides protection to this species and to various habitats in which resident scrub jays and gopher tortoises have been identified. This monitoring report is to document the status of the habitat and maintenance activities within the Victoria Park Gopher Tortoise/Florida Scrub Jay Preserve.

II. PROJECT LOCATION

The Victoria Park project is adjacent to County Road 4101 (Martin Luther King, Jr. Beltway), Orange Camp Road, Taylor Road, State Road 472, Blue Lake Road and Interstate 4 within Sections 22-27, 34, 35, and 36; Township 17 South and Range 30 East, near Deland in Volusia County, Florida. The project site is divided into four quadrants (NE, NW, SE, and SW). The Scrub Jay/Gopher Tortoise Preserve is found within the Northeast section (Exhibit 1).

III. LICENSE/PERMIT INFORMATION

A. The St. Johns River Water Management District (SJRWMD) Permit No. 4-127-0369C-ERP was issued to St. Joe Residential Acquisitions, Inc. on October 12, 1999 and regulates the property in perpetuity. This permit authorizes the Site Mitigation and Management Plan (SMMP) to provide for sufficient preservation of jay and tortoise habitat types to minimize development impacts to the environmental features of the site. This approach required the creation of an active and ongoing mitigation and management plan.

B. The FWC issued a Gopher Tortoise Take Permit, number VOL-20, to St. Joe/Arvida Co., LP on January 10, 2000. This permit was transferred to OK Victoria Park LLLC on March 31, 2015. The permittee is required to manage and maintain the protected 110.7 acres for gopher tortoises in accordance with the habitat management plan (SMMP). OK Victoria Park LLLC is authorized to move tortoises within the property boundaries to minimize taking.

C. The U.S. Fish and Wildlife Service (USFWS) Biological Opinion Dated January 19, 2000 authorizes the incidental take of Florida scrub jays and Eastern indigo snakes during the construction phase of the residential development. This also requires designation of a scrub conservation area, containing scrub habitat that will be restored and managed, long term, to provide scrub habitat for Florida scrub-jay territories. The Biological Opinion also specifies an annual monitoring program should take place on the management area to assess the success of the proposed habitat restoration and management techniques.

D. DEPARTMENT OF THE ARMY PERMIT No: 199707347(IP-SS), Permittee: ST. Joe Residential Acquisitions, Inc. /Arvida Corporation and regulates the property in perpetuity via the SMMP. This permit also required the following Reasonable and Prudent Measures to minimize the impacts of incidental take are agreed to by the permittee for Florida scrub jays. Designation of a scrub conservation area, containing scrub habitat that will be restored and managed, long term, to provide habitat for Florida scrub-jay territories. Stipulates an annual monitoring program should take place on the management area to assess the success of the proposed habitat restoration and management techniques. Recommends the onsite conservation area should be placed in a conservation easement and the integrity of the preserve habitat protected.

IV. HABITAT MONITORING

The Scrub Jay/Gopher Tortoise Preserve is mostly comprised of a sandhill community and oak shrub and brush habitat (Exhibit 2). The objective of the habitat management plan is to improve and maintain the habitat in the preserve for the Florida scrub jay and gopher tortoise. The habitat is monitored annually to assess the habitat quality and the success of the management activities.

1. Methods

A total of 16 habitat monitoring transects, 100 feet long and 15 feet wide, were randomly selected in the preserve (Exhibit 3). The approximate location of these transects are illustrated on the Habitat Monitoring Map. Qualitative data collected includes:

1) Dominant groundcover plant species,
2) Relative amount of bare ground,
3) Relative amount of leaf litter,
4) Approximate scrub oak coverage (under 13ft),
5) Average scrub oak height (under 13ft),
6) Approximate scrub oak coverage (over 13ft),
7) Approximate total canopy coverage, and
8) Dominant canopy species.

2. Results

Miller Legg staff conducted the habitat monitoring survey in April 2019 within the Florida Scrub Jay/ Gopher Tortoise Preserve. This monitoring was conducted shortly after the mowing and chemical treatments to illustrate the scope and effectiveness of the maintenance. Observations and photographs from the 2019 Florida sandhill crane aerial monitoring have also been incorporated into Exhibit 5. A follow up visit was conducted in May 2019 to confirm the chemical treatments were effective on the cogon grass. No other nuisance/exotic species were observed with any significant coverage during the monitoring.

The results of the habitat monitoring event are provided in the Observations Table (Exhibit 4). Photographs of each transect are included in Exhibit 5 which is a compilation of photographs from previous monitoring events displayed in chronological order. In addition, supplemental photographs of 2019 maintenance activities from ground level and aerial view points, Florida native fauna, and flora observed are contained within Exhibit 5.

The overall results of the 2019 monitoring event continue a positive trend. Transect data and direct observation shows predicted response from the previous maintenance activities with vigorous growth of the scrub oak and saw palmetto within and adjacent to the transects throughout the preserve. The composition of several transects have changed significantly due to this years maintenance activities as reflected in the transect data and photographs. Saw palmetto (*Serenoa repens*) and young scrub oaks (*Quercus* spp.) are the dominant species within the monitoring transects. As documented in previous reports, only three transects (No. 9, 10, and 12) do not contain saw palmetto or a combination of saw palmetto and fetterbush as the dominant species within the transect. Species typically considered scrub oaks were commonly observed within nine transects (Transects 1 and 6, and 9-16).

The sand live oak (*Quercus geminata*) and longleaf pine (*Pinus palustris*) trees are the most frequently observed canopy species along the monitoring transects. Leaf litter remained heavy only in Transect 13 this monitoring period. Minimal to moderate leaf litter occurred in the remaining transects. Areas with dense canopy coverage, equal to or greater than approximately 50%, continued to decreased and were observed along Transects 10-12 and 15. The number of transects with approximately 50% or greater coverage of scrub oaks below 13 feet remained constant.

Some beneficial native plant species were observed during this monitoring event and were not listed in the Observations Table due to their low overall coverage within the individual transects. These significant species include turkey oak (*Quercus laevis*), live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), gopher apple (*Licania michauxii*), goldenrod (*Solidago* spp.), Florida rosemary (*Ceratiola ericoides*), winged sumac (*Rhus copallinum*), lopsided

indiangrass (*Sorghastrum secundum*), broomsedge bluestem (*Andropogon virginicus*), gallberry (*Ilex glabra*), shiny blueberry (*Vaccinium myrsinites*), tarflower (*Bejaria racemosa*), dahoon holly (*Ilex cassine*), prickly pear (*Opuntia humifusa*), blackroot (*Pterocaulon pycnostachyum*), greenbrier (*Smilax* spp.) and reindeer lichens (*Cladonia* sp.).

Maintenance for 2019 occurred in North Preserve Management Units 1, 2, and 3 and South Preserve Management Unit 1 and consisted of mechanically mowing and exotic plant treatments to enhance the habitat. These areas coincide with previous observations of Florida scrub jays and were managed in a manner that benefits the Florida scrub jay and scrub-specialized plants and animals. This generally follows habitat management guidelines targeted at Florida scrub jays, intended to mimic some of the effects of fire. These management treatments were applied in ways that minimize soil disturbance and reduced the possibility of introducing or expanding coverage of invasive or exotic species. As illustrated in the supplemental photographs the maintenance/habitat management efforts clearly meet this intent and are setting the stage for potential prescribed fire treatment in the future. Thinning activities along with resumption of normal hydroperiod after the prolonged drought continues to reduce the number of pine seedlings of various species from encroaching in the wetlands.

The Council is committed to ongoing monitoring to determine if these treatments are having the desired effect. Areas are being evaluated and identified in North Preserve Management Unit 4 and South Preserve Management Unit 3 and 4 for maintenance in 2020. Continued coordination with the regulatory agencies for approval of the maintenance plan is expected in August/September of 2019. The overall goal is to mechanically reduce the vegetation to heights that can safely lead to potentially utilizing a prescribed burn in the future. As previously stated the aim is to conduct maintenance activities in the Florida scrub jay habitat prior to nesting season and to minimize any and all disturbance to the protected species during the nesting season with weather permitting.

V. WILDLIFE OBSERVATIONS

The Victoria Park Gopher Tortoise/Florida Scrub Jay Preserve provides habitat for several state and/or Federally listed wildlife species. An interesting observation of a Florida black bear (*Ursus americanus floridanus*) in the South Preserve was reported by several Victoria Park residents in the spring of 2019. An ongoing review of the preserve for Florida scrub jays was conducted in conjunction with the Florida sandhill crane monitoring from December 2018 through June 2019 when weather conditions were more conducive per Florida scrub jay survey protocols. The main purpose of the review was to establish whether areas of the preserve are continuously occupied by scrub jays. Emphasis was given to areas where Florida scrub jays were previously observed in low-growing oak scrub when walking the transects and trails. A tape recording of Florida scrub jay typical territorial scolding as well as the female "hiccup" call was used in an attempt to attract the

jays. The Florida scrub jays were not observed during the 2019 season. No specific reason could be determined as to why the jays were not present in previous locations, but the sudden resumption of a typical hydroperiod in the wetlands may be a contributing factor in the movement of the jay families. The wetlands were literally dried up during the recent drought and may have supplemented adjacent jay habitat and foraging areas. Scrub jays were previously observed in the North Preserve upland areas between Transects 2 and 6. A family comprised of several individuals (five) were observed on one occasion in and around Wetland 6. In addition, multiple jays were observed along the entrance road separating the north and south portions of the preserve last year. Miller Legg will continue the efforts to determine if jays are utilizing the Preserve in future monitoring visits. Numerous potentially occupied gopher tortoise burrows were observed throughout the upland areas of the preserve. Photographs of wildlife observed are included within Exhibit 5.

The following list of faunal species have been observed, or evidence there-of, within or near the Gopher Tortoise/ Florida Scrub Jay Preserve. This list is cumulative and therefore includes observations from previous monitoring events.

AMPHIBIANS AND REPTILES

SPECIES	COMMON NAME
Anolis sagrei	**Brown anole**
Alligator mississippiensis	**American alligator**
Bufo quercicus	**Oak toad**
Cnemidophorus sexlineatus	**Six-lined racerunner**
Coluber constrictor constrictor	**Black racer**
Crotalus adamanteus	Eastern diamondback rattlesnake
Drymarchon corais couperi	Eastern indigo snake
Gopherus polyphemus	**Gopher tortoise**
Pantherophis guttatus	**Red rat snake**
Rana capito	Gopher frog

BIRDS

Aphelocoma coerulescens	Florida scrub jay
Ardea herodias	**Great blue heron**
Cardinalis cardinalis	**Northern cardinal**
Colinus virginianus	**Bobwhite quail**
Corvus brachyrhynchos	**American crow**
Dumetella carolinensis	**Gray catbird**
Gallinula chloropus	Common moorhen
Grus canadensis pratensis	**Florida sandhill crane**
Meleagris gallopavo	**Osceola turkey**
Mimus polyglottos	**Northern mockingbird**
Picoides pubescens	Downy woodpecker

Pipilo erythrophthalmus	Eastern towhee
Toxostoma rufum	Brown thrasher
Thryothorus ludovicianus	**Carolina wren**
Zenaida macroura	**Mourning dove**

MAMMALS

Canis latrans	**Coyote**
Dasypus novemcinctus	**Nine-banded armadillo**
Odocoileus virginianus	**White-tailed deer**
Procyon lotor	**Raccoon**
Lynx rufus floridanus	**Bobcat**
Sylvilagus palustris	**Marsh rabbit**
Ursus americanus floridanus	**Florida black bear**

* **Bold** indicates observed for the first time this monitoring event

VI. MAINTENANCE

The upland habitats in the Scrub Jay/Gopher Tortoise Preserve Area are maintained using the following techniques: mechanical chopping, timbering, and mowing. Controlled burns, were originally planned to be used but has been utilized minimally because the proper conditions to allow a burn at this location rarely occur long enough to allow a complete burn. Up to this point, mechanical clearing has been the primary tool utilized for habitat management. Following agency recommendations prescribed fire has been reevaluated and the prescribed fire assessment provided in the 2016 assessment is being followed and utilized to maintain the pre-existing trail network to be used as fire breaks. The ongoing maintenance efforts and plan will consider preparation of fire breaks and reduction of fuel load for the potential and possibility of prescribed burns when it can be feasibly implemented.

As permitted, the preserve is divided into four management units per preserve (north and south); thereby, allowing the differences in vegetative density and age to be considered when determining type and intensity of management. Unit management was intended to allow as much of the preserve as possible to be maintained in optimal condition. The management units will be treated individually with the areas of active management being rotated to minimize short-term impacts to wildlife species and to create mosaics in stand age, vegetative diversity, and vegetative density within the area.

Mowing has been utilized to keep saw palmetto and vegetation overall at lower heights, to increase native herbaceous species, and to discourage woody saplings from eliminating the understory. Mowing will mostly assist in maintaining optimal habitat for gopher tortoises, but will also provide significant management value for jays. The scrub jays observed during the previous monitoring period were utilizing areas mowed two years ago. These methods will also be used to decrease the density of scrubby species in the understory to maintain the necessary ratio of scrub

oaks to open space for optimal scrub jay nesting habitat. Bush hogging and chopping will also aid in keeping the trees from closing in the canopy.

The management plan for the preserve includes the removal of pine trees. Selective thinning of large trees will be evaluated/conducted in the preserve to provide better habitat for the scrub jays and to allow sun to penetrate to the ground layer. Trimming of scrub oaks may occur (as needed) to keep oaks at heights no greater than 13 feet – the optimal height for scrub jay use, with the exception of a few scattered sentinel trees up to 15 feet in height. Sentinel trees may consist of any species and may even be dead.

Maintenance for 2019 occurred in North Preserve Management Unit 1, 2, and 3 and South Preserve Management Unit 1 and consisted of mechanically mowing of habitat. These areas coincide with previous observations of Florida scrub jays and were managed in a manner that benefits the Florida scrub-jay and scrub-specialized plants and animals. This generally follows habitat management guidelines targeted at Florida scrub-jays, intended to mimic some of the effects of fire. These treatments were applied in ways that minimize soil disturbance and reduced the possibility of introducing or expanding coverage of invasive or exotic species. As illustrated in the supplemental photographs the maintenance/habitat management efforts clearly meet this intent and are setting the stage for potential prescribed fire treatment in the future. Thinning activities along with resumption of normal hydroperiod after the prolonged drought continues to reduce the number of pine seedlings of various species from encroaching in the wetlands.

As previously stated, areas are being evaluated and identified in North Preserve Management Unit 4 and South Preserve Management Unit 3 and 4 for maintenance for late 2019 - 2020. Coordination with the regulatory agencies for approval of the maintenance plan is expected in August/September of 2019. The overall goal is to mechanically reduce the vegetation to heights that can lead to potentially utilizing a prescribed burn in the future. As previously stated the aim is to conduct maintenance in the Florida scrub jay habitat prior to nesting season with weather permitting. Habitat management of the north preserve should be conducted between October and February to minimize disruption of courtship and reproductive activities of Florida scrub jays if present. This timing will also coincide with the spring growing season, enabling quicker recovery for plant species.

VII. NEXT MONITORING REPORT

The next habitat monitoring report will be prepared for review in September 2020.

VIII. SUMMARY

Habitat monitoring in the Victoria Park Gopher Tortoise/Florida Scrub Jay Preserve is conducted to document habitat conditions, determine the success, and need for future management activities. Saw palmetto and young scrub oaks are the dominant species within the monitoring transects. Overall in 2019 the amount of bare ground coverage has increased, the level of leaf litter decreased slightly, and the level of vegetative coverage has decreased slightly overall in the preserve. The coverage of scrub oaks with a height of below 13 feet increased during this period. Land management activities in the North and South Preserve included reduction and thinning of multiple areas that improved coverage as illustrated in the supplemental photographs.

Areas are being evaluated and identified in North Preserve Management Unit 4 and South Preserve Management Unit 3 and 4 for maintenance in 2020. Continued coordination with the regulatory agencies for approval of the maintenance plan is expected in August/September of 2019. The goal is to conduct maintenance in the Florida scrub jay habitat prior to nesting season with weather permitting. Thinning activities along with a normal hydroperiod were very effective at reducing the number of pine seedlings of various species from encroaching in the wetlands.

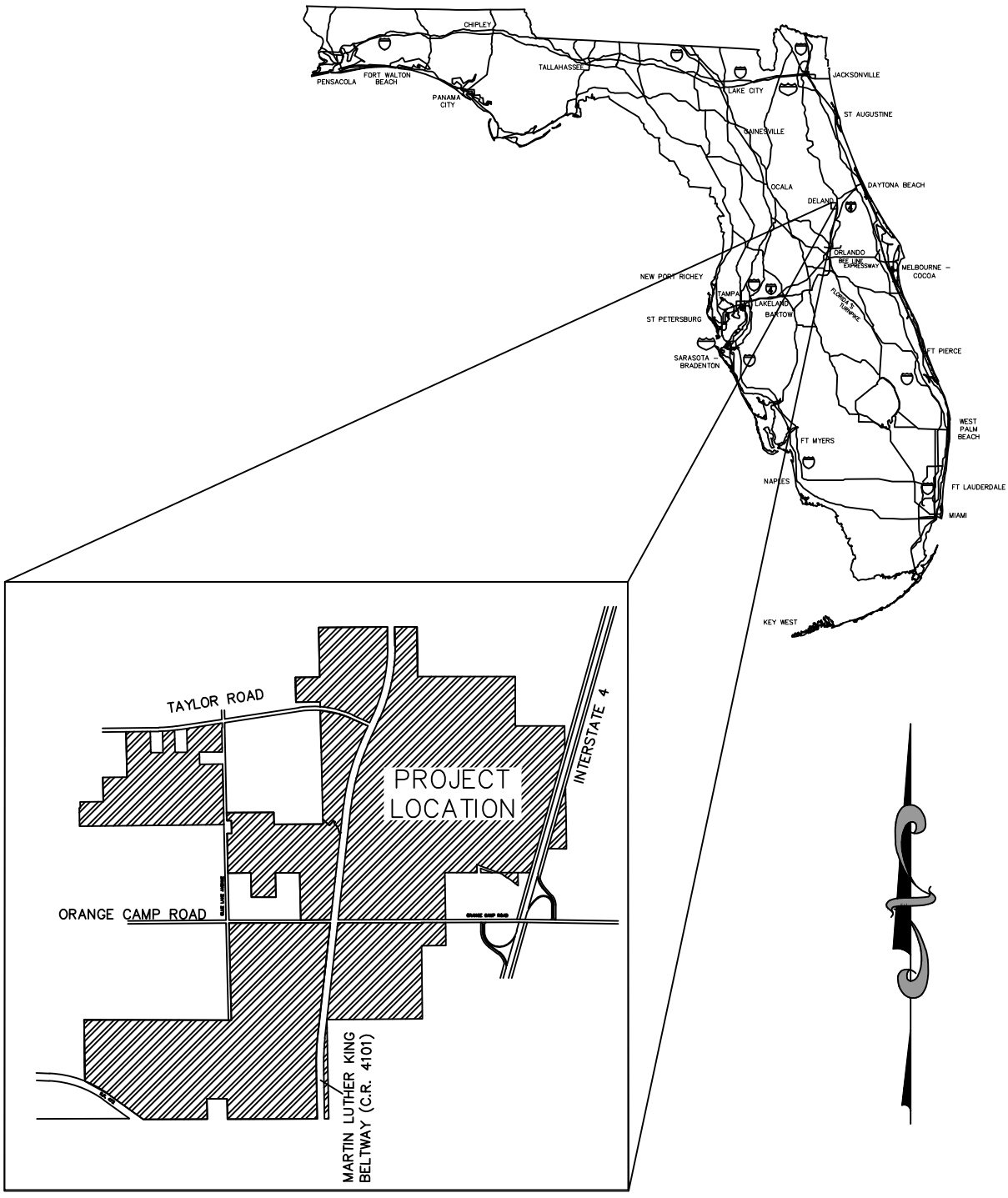
Fence repairs and additional signs along Dr. Martin Luther King Jr. Beltway were in place at the time of this monitoring and appear to be deterring unauthorized access. The Victoria Park Community Council and management company are continuously working on measures to prevent unauthorized off road vehicle access with posted signage, fence installation/repair, and utilizing physical barriers to maintain compliance.

The ongoing monitoring of the habitat management techniques that maintain the integrity of the habitat protected by the Victoria Park Gopher Tortoise/Florida Scrub Jay Preserve clearly illustrates the success of this project. We look forward to reporting on the continuing success of the Preserve in the future.

EXHIBIT I

LOCATION MAP

V:\Projects\2009\09-00268 Victoria Park Monitoring - Kolter\Drawings\Location Map.dwg Tues 10/13/2015 7:18pm By Paul Mann

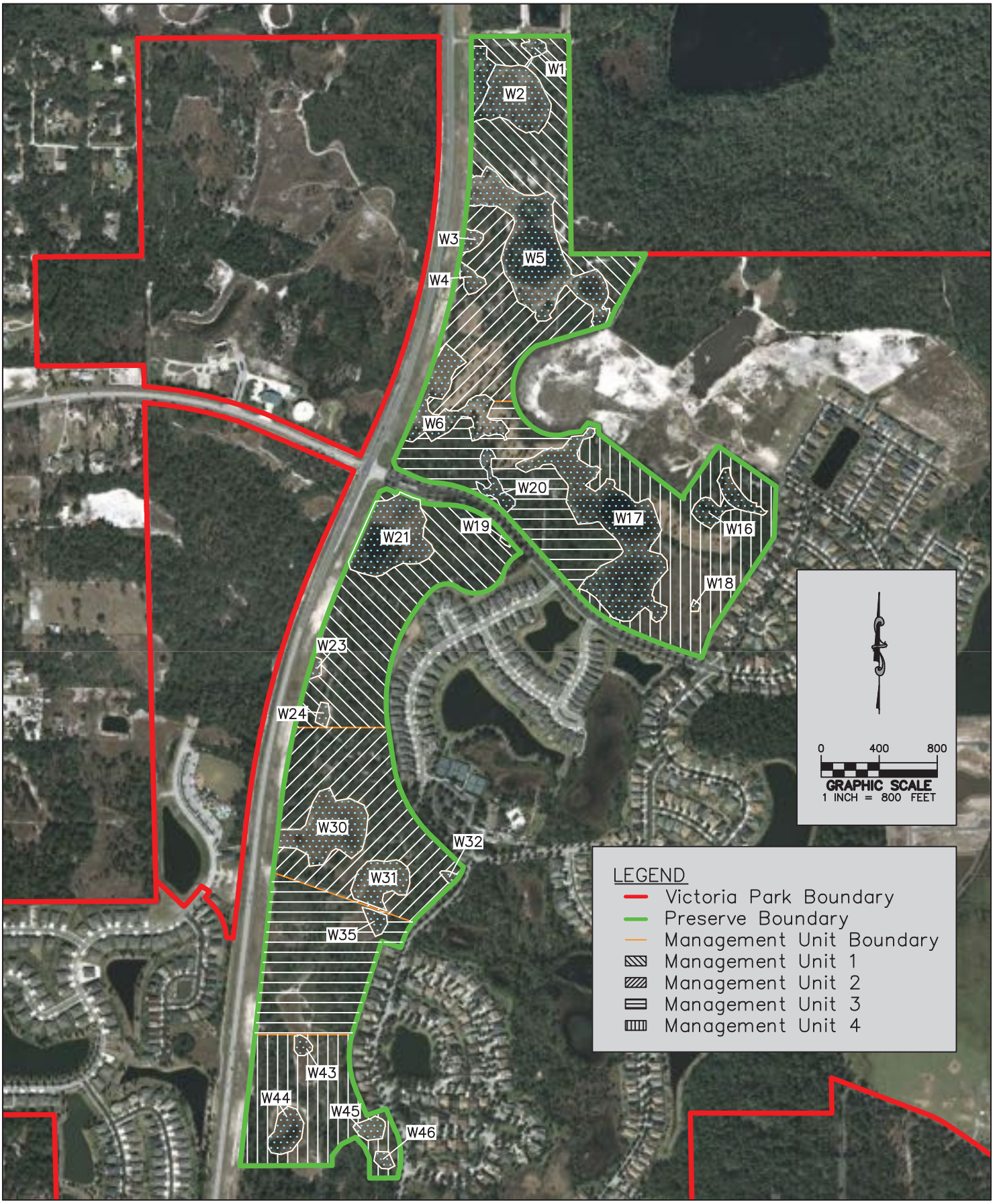


Project/File No.: 09-00268 Twp/Rng/Sec: 17/30/22-27,34-36 Date Drawn: 10/13/2015	MILLER LEGG Central Florida Office: 631 S. Orlando Avenue · Suite 200 Winter Park, Florida · 32789-7122 407-629-8880 · Fax: 407-629-7883 www.millerlegg.com	**VICTORIA PARK** **DELAND, FLORIDA** **FOR: Victoria Park Community Council**	*LOCATION MAP*

EXHIBIT 2

PRESERVE MANAGEMENT UNITS

V:\Projects\2009\09-00268 Victoria Park Monitoring - Kolter\Drawings\Burn_Units.dwg Tues 10/13/2015 6:38pm By Paul Mann

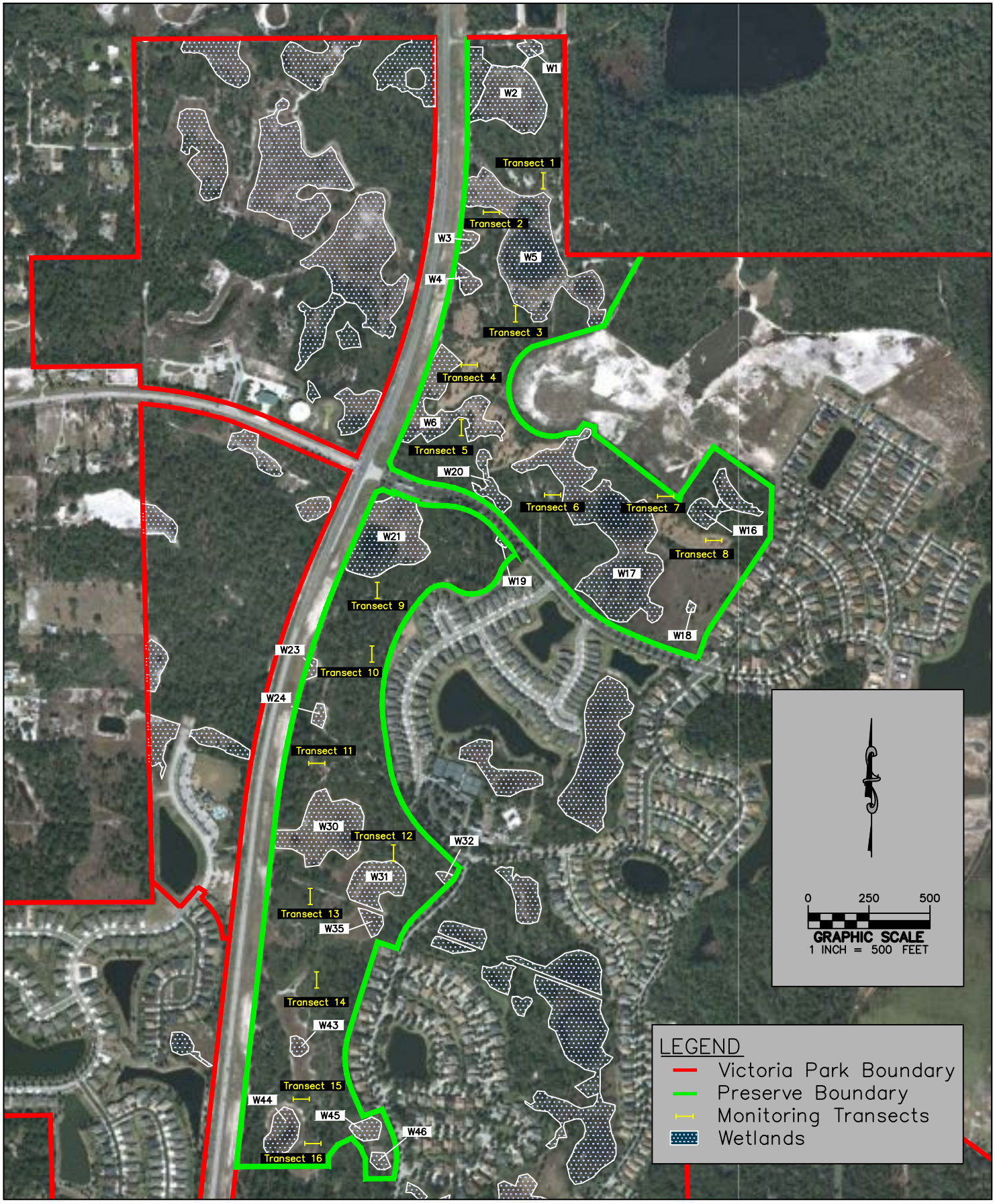


Project/File No.: 09-00268 Twp/Rng/Sec: 17/30/22-27,34-36 Date Drawn: 10/14/15	MILLER LEGG Central Florida Office: 631 S. Orlando Avenue · Suite 200 Winter Park, Florida · 32789-7122 407-629-8880 · Fax: 407-629-7883 www.millerlegg.com	**VICTORIA PARK** **DELAND, FLORIDA** **FOR: Victoria Park Community Council**	*GT/FSJ PRESERVE MANAGEMENT UNITS*

EXHIBIT 3

HABITAT MONITORING MAP

V:\Projects\2009\09-00268 Victoria Park Monitoring - Kolter\Drawings\Habitat_Monitoring.dwg Tues 10/13/2015 6:38pm By Paul Mann



Project/File No.: 09-00268 Twp/Rng/Sec: 17/30/22-27,34-36 Date Drawn: 10/13/15	MILLER LEGG Central Florida Office: 631 S. Orlando Avenue · Suite 200 Winter Park, Florida · 32789-7122 407-629-8880 · Fax: 407-629-7883 www.millerlegg.com	**VICTORIA PARK** **DELAND, FLORIDA** **FOR: Victoria Park Community Council**

GT/FSJ PRESERVE
Habitat Monitoring Map

EXHIBIT 4

OBSERVATIONS TABLE

Habitat Monitoring Observations at Transects 1-16 in the Scrub Jay/Tortoise Preserve 2019

Transect Number	Dominant Groundcover Species	Bare Ground Coverage	Leaf Litter	Scrub Oak Coverage (below 13ft)	Avg. Scrub Oak Height (below 13ft)	Scrub Oak Coverage (above 13ft)	Total Canopy Coverage	Dominant Canopy Species
1	*Serenoa repens* (1-2ft), Quercus chapmanii, *Lyonia mariana*	45%	light	35%	8'	5%	10%	*Quercus chapmanii*
2	*Serenoa repens* (4-6ft), *Lyonia lucida, Lyonia mariana, Vitis* sp.	10%	moderate	15%	8'	25%	25%	*Quercus geminata**
3	*Serenoa repens* (1-2ft), *Lyonia mariana*	20%	moderate	5%	4'	0%	10%	*Pinus palustris*
4	*Serenoa repens* (1-2ft), *Lyonia mariana*	25%	minimal	0%	0	5%	15%	*Pinus palustris, Quercus laevis, Quercus myrtifolia*
5	*Serenoa repens* (6ft), *Lyonia mariana*	20%	minimal	0%	0	5%	15%	*Pinus palustris, Ilex cassine*
6	*Serenoa repens* (1-2ft), *Lyonia lucida, Q.chapmanii, Q. myrtifolia, Q. Geminata*	80%	minimal	5%	6'	0%	5%	*Pinus palustris*
7	*Serenoa repens* (5-6ft), *Lyonia lucida*	minimal	minimal	10%	6'	0%	15%	*Pinus palustris*
8	*Serenoa repens* (4-5ft), *Lyonia lucida, Aristida stricta*	10%	moderate	10%	8'	15%	20%	*Pinus palustris*
9	*Quercus minima, Licania michauxii*	80%	light	10%	6'-8'	10%	10%	*Quercus geminata*, Quercus laevis, Quercus myrtifolia*
10	*Quercus geminata, Q. myrtifolia, Q. chapmanii*	minimal	moderate	80%	8-10'	75%	85%	*Quercus geminata*, Pinus palustris, Quercus laevis*
11	*Serenoa repens* (4-6ft), *Quercus myrtifolia, Q. chapmanii, Lyonia ferruginea, L. fruticosa*	20%	moderate	85%	10'-12"	65%	65%	*Quercus myrtifolia*, Quercus geminata, Lyonia ferruginea, Pinus clausa*
12	*Quercus myrtifolia, Q. laurifolia, Q. chapmanii, Aristida stricta, O. laevis*	25%	moderate	55%	8-10'	35%	55%	*Quercus geminata*, Pinus palustris*
13	*Serenoa repens* (4-6ft), Ilex cassine, *Quercus myrtifolia, Q. geminata*	minimal	heavy	65%	8'-12'	0%	30%	*Pinus palustris, Ilex cassine*
14	*Serenoa repens*, *Quercus myrtifolia, Q. geminata, Q. chapmanii*	20%	light	5%	8'-10'	0%	45%	*Quercus geminata*, Pinus palustris*
15	*Serenoa repens*, *Quercus chapmanii, Vaccinium* sp., *Paspalum notatum, Andropogon spp.*	25%	moderate	25%	8'-10'	45%	65%	*Quercus geminata*, Q. laevis, Pinus palustris*
16	*Serenoa repens*, *Quercus minima, Q. myrtifolia, Andropogon virginicus*	10%	moderate	65%	8-10'	40%	45%	*Quercus geminata*, Q. laurifolia, Pinus palustris*

* Scrub oak species measuring 13ft and above, providing canopy coverage.

—Indicates a change from the previous monitoring event.

EXHIBIT 5

PHOTOGRAPHS

Transect 1 (Facing South)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 1 continued

2018

2019

Transect 2 (Facing West)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 2 continued

2018

2019

Transect 3 (Facing South)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 3 continued

2018

2019

Transect 4 (Facing West)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 4 continued

2018

2019

Transect 5 (Facing North)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 5 continued

2018

2019

Transect 6 (Facing East)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 6 continued

2018

2019

Transect 7 (Facing West)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 7 continued

2018

2019

Transect 8 (Facing South)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 8 continued

2018

2019

Transect 9 (Facing North)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 9 continued

2018

2019

Transect 10 (Facing South)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 10 continued

2018

2019

Transect 11 (Facing East)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 11 continued

2018

2019

Transect 12 (Facing South)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

*Transect 12 could not be located in 2010, therefore a new location was established in the vicinity.

Transect 12 continued

2018

2019

Transect 13 (Facing South)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 13 continued

2018

2019

Transect 14 (Facing South)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 14 continued

2018

2019

Transect 15 (Facing West)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 15 continued

2018

2019

Transect 16 (Facing East)

2005

2006

2007

2008

2010

2011

2012

2013

2014

2015

2016

2017

Transect 16 continued

2018

2019

Supplemental Observations

2019 Maintenance activities in Management Unit 2 North located south of Wetland 5

2019 Maintenance activities in Management Unit 3 North located west of Wetland 17

Supplemental Observations

2019 Maintenance activities in Management Unit 1 South

2019 Maintenance activities in Management Unit 1 South

Supplemental Observations

2019 Maintenance activities in Management Unit 3 North

2019 Maintenance activities in Management Unit 1 North

Supplemental Observations

2019 Maintenance activities in Management Unit 1 South

2019 Maintenance activities in Management Unit 1 South

Supplemental Observations

Typical gopher tortoise burrow North Preserve

Typical gopher tortoise burrow South Preserve

Supplemental Observations

Wild turkey in North Preserve

Native paw paw shrub North Preserve