



# Conservation Management Plan

This management plan form is intended for Board of Trustees leases and subleases of conservation properties that are 160 acres or less. It is intended to address the requirements of Chapter 253.034, 259.032 and rule 18-2.021. Attachments to, or expansion of this form are welcome, if the space provided below is not sufficient. Please answer all of the items below and number all attachments and reference them in the appropriate location below. You are under no obligation to use this form. Any plan format is acceptable, provided it includes all of the appropriate items from the above mentioned statutes and rule. This form is available in electronic format upon request. For additional information pertaining to management plans, please visit the Division of State Lands Stewardship page on the web at <http://www.dep.state.fl.us/lands/stewardship.htm>.

## **A. General Information**

1. Common Name of the Property: Shingle Creek Regional Park - Yates/Koger Connector
2. Lease Number: 4822
3. Acres: 35.14
4. Managing Agency: City of Kissimmee

5. Provide an executive summary/description of this property that includes a brief description of the resources, uses and proposed uses, outstanding features etc.

The City of Kissimmee is proposing to extend the Shingle Creek Regional Trail to connect existing bicycle facilities and eliminate gaps in the current bicycle network. The site comprises seven distinct land use/vegetative cover types: unimproved pastures, mixed hardwoods, streams and waterways, cypress, wetland forested mixed, wetland scrub, and freshwater marshes.

The lease area contains minor physical disturbances (berm and recreational fishing on site), which do not negatively impact wildlife populations or the surroundings. No structures exist within the lease area. Observed water levels are appropriate for all community types.

Canopy species within the forested wetland are thriving, although nuisance and invasive tree species are present. All the community types exhibit natural recruitment of both native and nuisance and invasive species in the shrub and herbaceous strata. Overall, a substantial amount of nuisance and invasive species are present in all strata throughout the site. The lease area provides wetland habitats for all wildlife species anticipated to occur within Osceola County.

6. Attach a map showing the location and boundaries of the property including:
  - a) The location and type of structures or improvements currently on the property.
  - b) The location and type of proposed improvements. Appendix A
7. Attach a map showing the proximity of this managed area to other conservation areas within 10 miles. Appendix B - Figure 8
8. Please attach a legal description of the property. Appendix A - Exhibit "A"
9. Provide a physical description of the land including a quantitative data description of the land which includes an inventory of forest and other natural resource, exotic and invasive plants, hydrologic features, infrastructure including recreational facilities, and other significant land, cultural or historical features.

A site review was performed in November 2021, during which ecologists mapped onsite habitats and performed an assessment of the lease area. A physical description of the lease area is provided in Appendix B - Ecological Report.

10. A brief description of soil types, attaching USDA maps when available.

According to the United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS), three soil units are mapped as occurring within the lease area: Gentry fine sands; Riviera fine sand, 0 to 2 percent slopes; and Riviera fine sand, frequently ponded, 0 to 1 percent slopes.

Further description of the soil map units, areal distribution summary, and soils figure are provided in Appendix B - Ecological Report.

11. Is the property adjacent to an aquatic preserve or designated area of critical state concern? YES \_\_\_ NO X

If YES, please identify:

12. Was the property acquired by a conservation land acquisition program? If YES, please identify.

Yes, property acquired using Florida Forever Funds.

13. Do any agency-specific statute requirements or legislative/executive directives constrain the use of the property? (These restrictions can frequently be found in the lease) YES  NO

If YES, please identify

City of Kissimmee shall manage the property only for the conservation and protection of natural and historical resources and for resource-based public outdoor activities and education which are compatible with the conservation and protection of these public lands as set forth in subsection 259.032(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan.

14. Are there any reservations or encumbrances on the property? YES  NO

If YES, please identify:

**B. Natural and Cultural Resources**

15. Are there any archeological or historical sites on this property? YES  NO   
If YES,

A) How do you plan to locate, protect and preserve these resources?

A Florida Master Site File review of the property revealed that archaeological site 8OS00024 (Bass Mound) was recorded on the western edge of the proposed location adjacent to John Young Parkway. The location has been studied by five previous cultural resources assessment surveys (CRAS), none of which encountered any evidence of the site. Two studies concluded that the site was either mapped incorrectly or destroyed by the construction of John Young Parkway. The entire western half of the proposed property has been previously surveyed. A map depicting archaeological and historic sites on or near the lease area is provided as Appendix C.

B) Please describe the actions the agency plans to take to locate and identify unknown Resources such as surveys of unknown archeological or historical sites.

A CRAS of the un-surveyed eastern half of the property is recommended due to the proximity of Shingle Creek and the known historic and prehistoric resources recorded on the waterway.

16. Are there any buildings on the property that are fifty or more years old?

YES \_\_\_\_\_ NO  \_\_\_\_\_ If YES,

A) Please Identify:

B) Have these buildings been evaluated by a historian or historic architect to determine their historical and/or architectural significance. If YES, please identify both the building(s) and the evaluators(s):

C) Please state whether any such buildings are listed in the Florida Master Site File, National Register of Historic Places or a local register of historic places and identify such buildings.

By law, the managing agency must consult with the Division of Historical Resources with regard to any proposed land clearing or ground disturbing activities or with regard to any proposed rehabilitation, restoration or demolition of structures 50 or more years old. Please contact the Division of Historic Resources if you would like to obtain information on archeological/historical sites.

Division of Historical Resources  
Florida Department of State  
R.A. Gray Building, MS-8  
Tallahassee, Florida 32399  
(850) 245-6312

17. Please identify natural resources on the property that are listed in the Florida Natural Areas Inventory.

The Florida Natural Areas Inventory (FNAI) identifies the snail kite (*Rostrhamus sociabilis*) present on or very near the lease area. The FNAI Standard Data Report for the Shingle Creek Lease (2021) is provided as Appendix D.

No snail kites were observed onsite during the November 2021 field review; however, suitable foraging habitat was observed immediately adjacent the site.

18. Are any imperiled natural communities, unique natural features, or any State and federally listed endangered or threatened plant or animal species, on site?

YES  NO

If YES, please provide a specific description of how you plan to identify, locate, protect and preserve these species.

No state and/or federally listed plant species have been documented on or near the lease area (FNAI 2021). However, the giant airplant (*Tillandsia utriculata*) was observed within the lease area during the November 2021 site visit. The giant airplant is state-listed endangered. A pre-construction survey will be conducted for the species, locations mapped, and individuals conserved in situ within the lease area.

If you would like further information regarding natural resources or endangered species please contact the Florida Natural Areas Inventory (FNAI).

Florida Natural Areas Inventory  
1018 Thomasville Road, Suite 200-C  
Tallahassee, Florida 32303  
(850) 224-8207

19. Please identify the water resources including swamps, marshes or other wetlands, on the property including the water quality classification for each water body and if the water body has been designated “Outstanding Florida Waters”.

The lease area comprises five wetland land use/vegetative cover types. The cover types include streams and waterways, cypress, wetland forested mixed, wetland scrub, and freshwater marshes. These wetlands are hydrologically connected to Shingle Creek (Class III) and Lake Tohopekaliga (Class III), located immediately adjacent the lease area. Shingle Creek and Lake Tohopekaliga are not designated Outstanding Florida Waters.

The onsite wetlands are further described in Appendix B - Ecological Report.

20. Are any known mineral resources, such as oil, gas and phosphates, or any unique natural features, such as coral reefs, beaches, dunes, natural springs, caverns, large sinkholes, virgin timber stands, scenic vistas, and natural rivers and streams, and outstanding native landscapes containing relatively unaltered flora, fauna, and geological features on site? YES  NO

If YES, Please identify and provide locations of these resources on a map.  
Appendix

21. Are there fish or wildlife resources (both game and non-game) on the property?

YES  NO  If YES, please describe:

Direct evidence of wildlife species or signs thereof observed within and immediately adjacent the lease area during the November 2021 field review included: white-tailed deer (*Odocoileus virginianus*), wild hog (*Sus scrofa*), eastern cottontail (*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*), nine-banded armadillo (*Dasypos novemcinctus*), aquatic turtles, Florida sandhill crane (*Grus canadensis pratensis*), little blue heron (*Egretta caerulea*), great egret (*Ardea alba*), red-shouldered hawk (*Buteo lineatus*), gray catbird (*Dumetella carolinensis*), blue jay (*Cyanocitta cristata*), and various passerine birds. The onsite wildlife resources are further described in Appendix B - Ecological Report.

**C. Use of the Property**

22. Please provide a statement of the purpose for which the lands were acquired, the projected use or uses as defined in Chapter 253.034, Florida Statutes, and the statutory authority you have for such uses.

The Shingle Creek Regional Trail is a 35.14-acre parcel that was acquired using Florida Forever Funds to be managed by the City of Kissimmee under new lease (4822). The lease area will be managed for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education, which are compatible with the conservation and protection of the public lands.

23. Please state the desired outcome for this property, and key management activities necessary to achieve the desired outcome, including public access.

The City of Kissimmee is proposing to extend the Shingle Creek Regional Trail to connect existing bicycle facilities and eliminate gaps in the City's current bicycle network. Construction of a section of off-street path is necessary. Public would access from the existing terminus of the Shingle Creek Regional Trail or from John Young Parkway public right-of-way.

24. Please state the single or multiple uses currently made of the property and if the property is single use, please provide an analysis of its potential for multiple-use.

Single  Multiple  use/s is/are:

Lease area managed primarily for the maintenance of essentially natural conditions, the propagation of fish and wildlife, and public recreation. The majority of the lease area is wetland habitat and therefore the property is not conducive to multiple uses.

25. Were multiple uses considered but not adopted? YES  NO

If YES, please describe why:

[Empty box for describing why multiple uses were not adopted]

26. Please provide an analysis of the potential use of private land managers to facilitate the restoration or management of these lands.

The City of Kissimmee will manage the property.

27. Please provide an analysis of the potential of the property to generate revenues to enhance the management of the property.

In accordance with lease (4822), the City of Kissimmee shall manage the property only for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education, which are compatible with the conservation and protection of the public lands.

28. Describe the projected, current and recent past uses of the property, and any unauthorized uses, if known.

The City of Kissimmee is proposing to extend the Shingle Creek Regional Trail by constructing a section of off-street path for public recreation. The current use of the lease area is conservation and recent past uses were agricultural.

29. Do the planned uses impact renewable and non-renewable resources on the property?  
YES \_\_\_\_\_ NO X\_\_\_\_\_

If YES, please describe what specific activities will be taken to protect or enhance and conserve those resources and to compensate/mitigate the damage that is caused by the impacting use.

30. Should any parcels of land within or adjacent to the property be purchased because they are essential to management of the property? YES \_\_\_\_\_ NO X\_\_\_\_\_

If YES, please attach a map of this area. Appendix

31. Are there any portions of this property no longer needed for your use?

YES \_\_\_\_\_ NO X\_\_\_\_\_ If YES, please attach a map of this area.

32. Please describe what public uses and public access that would be consistent with the purpose for which this property was acquired.

The City of Kissimmee is proposing to extend the Shingle Creek Regional Trail to connect existing bicycle facilities and eliminate gaps in the City's current bicycle network. Walking and bicycling are consistent with the lease, which requires the property be managed for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education.

**D. Management Activities**

33. If more than one agency manages this property, describe the management responsibilities of each agency and how such responsibilities will be coordinated.

34. Please discuss management needs and problems on the property including conservation of soil and water resources and control and prevention of soil erosion and water and soil contamination.

Nuisance and exotic treatment is needed. Nuisance and exotic plant species are abundant in all vegetative communities onsite.

35. Identify adjacent land uses that will conflict with the planned use of this property, if any.

None

36. Please describe measures used to prevent/control invasive, non-native plants.

The lease area contains invasive, non-native plant species in varying densities. The Exotic Vegetation Management Plan for the lease area is provided as Appendix E.

37. Was there any public or local government involvement / participation in the development of this plan? YES  NO  If YES, please describe:

The extension of the Shingle Creek Regional Trail is a component of the Kissimmee Bicycle and Pedestrian Master Plan. Public involvement was part of the process during the development of the Master Plan.



38. If an arthropod control plan has been established for this property, please include it as an attachment. (Attachment \_\_\_\_\_) If one does not exist, provide a statement as to what arrangement exists between the local mosquito control district and the managing agency. See Chapter 388.4111 regarding mosquito control on public lands.

Control of mosquitoes is provided by Osceola County, Natural Resources Department. Mosquito Control actively reduces mosquito populations throughout the County which helps to reduce the transmission of diseases.

39. Management Goals – **The following 8 goals may not all be applicable to your site. Write N/A where appropriate. Also, please add as many goals, objectives, and measures as you wish.**

Core Objectives	Measure	Timeframe 2 yrs = Short Term 10 yrs = Long Term	Expenses and Manpower Budget
1	<b><u>Habitat restoration and improvement (Description):</u></b> N/A		
Prescribe burn _____ acres per year	_____ acres burned per year	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
Maintain _____ acres per year within target fire return interval.	_____ acres within fire return interval target	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
Conduct habitat/natural community improvement on _____ acres	_____ acres with restoration underway	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
Conduct habitat/natural community restoration activities on _____ acres.	_____ acres restored	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
Conduct timber harvest for the purposes of habitat restoration on _____ acres	_____ acres harvested	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____

<b>2</b>	<b><u>Public Access and recreational opportunities (Description):</u></b>			
	N/A			
	Maintain public access and recreational opportunities to allow for a recreational carrying capacity of _____ visitors per day	_____ visitor opportunities/day	Within 2 yrs ____ Within 10 yrs ____	Expense \$_____ Personnel \$_____
	Develop additional public access and recreational opportunities to allow for a carrying capacity of _____ visitors/day	_____ visitor opportunities/day	Within 2 yrs ____ Within 10 yrs ____	Expense \$_____ Personnel \$_____
	Continue to provide _____ interpretive/education programs	_____ interpretive/education programs	Within 2 yrs ____ Within 10 yrs ____	Expense \$_____ Personnel \$_____
	Develop _____ new interpretive/education programs	_____ interpretive/education programs	Within 2 yrs ____ Within 10 yrs ____	Expense \$_____ Personnel \$_____
<b>3</b>	<b><u>Hydrological preservation and restoration (Description):</u></b>			
	N/A			
	Conduct or obtain a site assessment/study to identify potential hydrology restoration needs	Assessment conducted? Y__ N__	Within 2 yrs ____ Within 10 yrs ____	Expense \$_____ Personnel \$_____
	Restore natural hydrologic condition and functions to _____ acres on site	_____ acres for which hydrologic restoration is underway (planning, grant writing, earth moving, etc.)	Within 2 yrs ____ Within 10 yrs ____	Expense \$_____ Personnel \$_____

		_____ acres for which natural hydrologic conditions and function are restored	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
4	<b><u>Sustainable forest management (Description):</u></b> N/A			
	Prepare & implement a silviculture management plan including reforestation, harvesting, prescribed burning, restoration, and timber stand improvement activities and goals.	Silviculture management plan complete? Y__ N__ _____ acres treated	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
	Develop and implement a process for conducting stand descriptions and forest inventory including a GIS database containing forest stands, roads & other attributes ( including but not limited to: threatened & endangered species, archeological resources, exotic species locations, historical areas)	Complete GIS database and re-inventory all attributes every 3-5 years or as needed.	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
		_____ acres of forest inventoried annually	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
5	<b><u>Exotic and invasive species maintenance and control (Description):</u></b> The lease area contains nuisance and exotic plant species in varying densities.			

	Annually treat <u>35.14</u> acres of EPPC Category I and Category II invasive exotic plant species.	<u>35.14</u> acres treated	Within 2 yrs <u>X</u> Within 10 yrs ____	Expense \$ <u>18,000</u> Personnel \$ _____
	Implement control measures on ____ exotic and nuisance animal species	____ nuisance and exotic species for which control measures are implemented	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
<b>6</b>	<b><u>Capital facilities and infrastructure</u></b>			
	<b>Description-</b>			
	The City of Kissimmee is proposing to extend the Shingle Creek Regional Trail by constructing a section of off-street path.			
	To maintain ____ facilities, ____ miles of roads, and ____ miles of trails existing on site (as applicable)	____ facilities, ____ miles roads, ____ miles trails maintained	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
	To construct <u>path</u> facilities. <u>0.0</u> miles of roads, and <u>1.1</u> miles of trails (as applicable)	<u>Path</u> facilities, <u>0.0</u> miles roads, <u>1.1</u> miles trails constructed	Within 2 yrs <u>X</u> Within 10 yrs ____	Expense \$ <u>550,000</u> Personnel \$ _____
	To improve or repair ____ facilities. ____ miles of roads, and ____ miles of trails existing on site (as applicable)	____ facilities, ____ miles roads, ____ miles trails improved or repaired	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
<b>7</b>	<b><u>Cultural and historical resources</u></b>			
	<b>Description-</b>			
	N/A			
	Ensure all known sites are recorded in the FL Division of Historical Resources Master Site file	____ of recorded sites	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____
	Monitor ____ recorded sites and send updates to DHR Master Site file as needed	____ of sites monitored	Within 2 yrs ____ Within 10 yrs ____	Expense \$ _____ Personnel \$ _____

	Bring ___ of ___ recorded sites/cultural resources into good condition	_____ of sites in good condition	Within 2 yrs ___ Within 10 yrs ___	Expense \$ _____ Personnel \$ _____
<b>8</b>	<b>Imperiled species habitat maintenance, enhancement, restoration, or population restoration.</b>			
	<b>Description-</b>			
	N/A			
	Develop baseline imperiled species occurrence inventory list	Baseline imperiled species occurrence inventory list complete Y___ N___	Within 2 yrs ___ Within 10 yrs ___	Expense \$ _____ Personnel \$ _____
	Develop monitoring protocols for _____selected imperiled species	_____ imperiled species for which monitoring protocols are developed	Within 2 yrs ___ Within 10 yrs ___	Expense \$ _____ Personnel \$ _____
	Implement monitoring protocols for _____ imperiled species	_____ species for which monitoring is ongoing	Within 2 yrs ___ Within 10 yrs ___	Expense \$ _____ Personnel \$ _____
	[If applicable, provide additional measurable objective(s) for new or ongoing species-specific management activities for each of the priority species such as population augmentation, translocations, nest box projects, etc.]	Examples: Project-specific quantity, _____ of nest boxes, # of individuals introduced or trans-located, etc.	Within 2 yrs ___ Within 10 yrs ___	Expense \$ _____ Personnel \$ _____

40. Costs

Activity	Yearly Estimated Cost		
	Priority Cost	Other Management Cost	Cost Effective Methods
<u>Resource Management</u>			
<u>Administration</u>			
<u>Support</u>			

<u>Capital Improvements</u>			
<u>Recreation Visitor Services</u>			
<u>Law Enforcement Activities</u>			

41. A finding regarding whether each planned use conforms to the appropriate policies and guidelines of the State Lands Management Plan is required. The Plan can be found at <http://www.dep.state.fl.us/lands/oes/slmp.pdf>, by writing to the State of Florida Department of Environmental Protection, Division of State Lands, Office of Environmental Services, 3900 Commonwealth Boulevard, Mail Station 140, Tallahassee, Florida 32399-3000, or by calling (850) 245-2784. Does this plan conform to the State Lands Management Plan?

YES  NO

42. Please provide the following contact information below:

Name:	Steve Lackey
Managing Agency:	City of Kissimmee, Parks Division
Address:	101 Church Street Kissimmee, FL 34741
Phone:	407.518.2501
Email Address:	STEVE.LACKEY@kissimmee.gov

Date Management Plan Prepared: 12/18/2021

Please send this completed form and attachments to:

[james.parker@dep.state.fl.us](mailto:james.parker@dep.state.fl.us), Or  
to: Division of State Lands  
D.E.P. M.S. 140  
3900 Commonwealth Blvd.  
Tallahassee Fl. 32399-3000  
850-245-3045

Appendix A  
Lease Agreement

This Lease was prepared by:  
Derek W. Helms,  
Bureau of Public Land Administration  
Division of State Lands  
Department of Environmental Protection, MS 130  
3900 Commonwealth Boulevard,  
Tallahassee, Florida 32399-3000  
AID# 38476

OAL2  
[35.14 acres (+/-)]

**BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT  
TRUST FUND OF THE STATE OF FLORIDA**

**LEASE AGREEMENT**

Lease Number 4822

THIS LEASE AGREEMENT, made and entered into this 10<sup>th</sup> day of FEBRUARY 2020 by and between the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA** hereinafter referred to as "LESSOR," and the **CITY OF KISSIMMEE**, a Florida municipal corporation, hereinafter referred to as "LESSEE."

LESSOR, for and in consideration of mutual covenants and agreements hereinafter contained, does hereby lease to said LESSEE, the lands described in paragraph 2 below, together with the improvements thereon, and subject to the following terms and conditions:

1. **DELEGATIONS OF AUTHORITY:** LESSOR'S responsibilities and obligations herein shall be exercised by the Division of State Lands, State of Florida Department of Environmental Protection.
2. **DESCRIPTION OF PREMISES:** The property subject to this lease contains 35.14 acres, is situated in the County of Osceola, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".
3. **TERM:** The term of this lease shall be for a period of 50 years commencing on FEBRUARY 10, 2020, and ending on FEBRUARY 9, 2070, unless sooner terminated pursuant to the provisions of this lease.
4. **PURPOSE:** LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation



and protection of these public lands, as set forth in subsection 259.032(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 8 of this lease.

5. **QUIET ENJOYMENT AND RIGHT OF USE:** LESSEE shall have the right of ingress and egress to, from and upon the leased premises for all purposes necessary to the full quiet enjoyment by said LESSEE of the rights conveyed herein.

6. **UNAUTHORIZED USE:** LESSEE shall, through its agents and employees, prevent the unauthorized use of the leased premises or any use thereof not in conformity with this lease.

7. **ASSIGNMENT:** This lease shall not be assigned in whole or in part without the prior written consent of LESSOR, which consent shall not be unreasonably withheld. Any assignment made either in whole or in part without the prior written consent of LESSOR shall be void and without legal effect.

8. **MANAGEMENT PLAN:** LESSEE shall prepare and submit a Management Plan for the leased premises in accordance with Section 253.034, Florida Statutes and subsection 18-2.021(4), Florida Administrative Code. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands, State of Florida Department of Environmental Protection. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. LESSEE shall provide LESSOR with an opportunity to participate in all phases of preparing and developing the Management Plan for the leased premises. The Management Plan shall be submitted to LESSOR in draft form for review and comments within ten months of the effective date of this lease. LESSEE shall give LESSOR reasonable notice of the application for and receipt of any state, federal or local permits as well as any public hearings or meetings relating to the development or use of the leased premises. LESSEE shall not proceed with development of said leased premises including, but not limited to, funding, permit applications, design or building contracts until the Management Plan required herein has been submitted and approved. Any financial commitments made by LESSEE which are not in compliance with the terms of this lease shall be done at LESSEE'S own risk. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR. LESSEE shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies

for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

9. **EASEMENTS:** All easements of any nature including, but not limited to, utility easements are required to be granted by LESSOR. LESSEE is not authorized to grant any easements of any nature and any easement granted by LESSEE shall be void and without legal effect.

10. **SUBLEASES:** This lease is for the purposes specified herein and subleases of any nature are prohibited, without the prior written approval of LESSOR. Any sublease not approved in writing by LESSOR shall be void and without legal effect.

11. **RIGHT OF INSPECTION:** LESSOR or its duly authorized agents, representatives or employees shall have the right to reasonably inspect the leased premises and the works and operations of LESSEE in any matter pertaining to this lease.

12. **PLACEMENT AND REMOVAL OF IMPROVEMENTS:** All buildings, structures and improvements shall be constructed at the expense of LESSEE in accordance with plans prepared by professional designers and shall require the prior written approval of LESSOR as to purpose, location and design. Further, no trees, other than non-native species, shall be removed or major land alterations done by LESSEE without the prior written approval of LESSOR. Removable equipment and removable improvements placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE before or upon termination of this lease.

13. **INSURANCE REQUIREMENTS:** During the term of this lease LESSEE shall procure and maintain policies of fire, extended risk, and liability insurance coverage. The extended risk and fire insurance coverage shall be in an amount equal to the full insurable replacement value of any improvements or fixtures located on the leased premises. The liability insurance coverage shall be in amounts not less than \$200,000 per person and \$300,000 per incident or occurrence for personal injury, death, and property damage on the leased premises. During the term of this lease, if Section 768.28, Florida Statutes, or its successor statute is subsequently amended to increase the amount of the liability coverages specified herein, LESSEE shall immediately obtain liability coverage for the increased amounts. Such policies of insurance shall name LESSOR and the State of Florida as additional insureds. LESSEE shall submit written evidence of having procured all insurance policies required herein prior to the effective date of this lease and shall submit annually thereafter, written evidence of maintaining such insurance policies to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. LESSEE shall purchase all

policies of insurance from a financially-responsible insurer duly authorized to do business in the State of Florida. In lieu of purchasing insurance, LESSEE may elect to self-insure these coverages. Any certificate of self-insurance shall be issued or approved by the Chief Financial Officer, State of Florida. The certificate of self-insurance shall provide for casualty and liability coverage. LESSEE shall immediately notify LESSOR and the insurer of any erection or removal of any building or other improvement on the leased premises and any changes affecting the value of any improvements and shall request the insurer to make adequate changes in the coverage to reflect the changes in value. LESSEE shall be financially responsible for any loss due to failure to obtain adequate insurance coverage and the failure to maintain such policies or certificate in the amounts set forth shall constitute a breach of this lease.

14. **LIABILITY:** LESSEE shall assist in the investigation of injury or damage claims either for or against LESSOR or the State of Florida pertaining to LESSEE'S respective areas of responsibility under this lease or arising out of LESSEE'S respective management programs or activities and shall contact LESSOR regarding the legal action deemed appropriate to remedy such damage or claims. LESSEE is responsible for, and, to the extent allowed by law, shall indemnify, protect, defend, save and hold harmless LESSOR and the State of Florida, its officers, agents and employees from any and all damages, claims, costs, expense, including attorney's fees, demands, lawsuits, causes of action or liability of any kind or nature arising out of all personal injury and property damage attributable to the negligent acts or omissions of LESSEE, and its officers, employees, and agents. Nothing herein shall be construed as a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims. In the event LESSEE subcontracts any part or all of the work performed in the leased premises, the LESSEE shall require each and every subcontractor to identify the LESSOR as an additional insured on all insurance policies required by the LESSEE. Any contract awarded by LESSEE for work in the leased premises shall include a provision whereby the LESSEE'S subcontractor agrees to indemnify, pay on behalf, and hold the LESSOR harmless for all injuries and damages arising in connection with the LESSEE'S subcontract.

15. **PAYMENT OF TAXES AND ASSESSMENTS:** LESSEE shall assume full responsibility for and shall pay all taxes, assessments, liens or other similar liabilities that accrue to the leased premises or to the improvements thereon arising after this lease commences including any and all ad valorem taxes and drainage and special assessments or personal property taxes of every kind and all construction or materialman's liens which may be hereafter lawfully assessed and levied against the leased

premises subsequent to the effective date of this lease. In no event shall the LESSEE be held liable for such liabilities which arose prior to the effective date of this lease.

16. **NO WAIVER OF BREACH**: The failure of LESSOR to insist in any one or more instances upon strict performance of any one or more of the covenants, terms and conditions of this lease shall not be construed as a waiver of such covenants, terms or conditions, but the same shall continue in full force and effect, and no waiver of LESSOR of any of the provisions hereof shall in any event be deemed to have been made unless the waiver is set forth in writing, signed by LESSOR.

17. **TIME**: Time is expressly declared to be of the essence of this lease.

18. **NON-DISCRIMINATION**: LESSEE shall not discriminate against any individual because of that individual's race, color, religion, sex, national origin, age, handicap, or marital status with respect to any activity occurring within the leased premises or upon lands adjacent to and used as an adjunct of the leased premises.

19. **UTILITY FEES**: LESSEE shall be responsible for the payment of all charges for the furnishing of gas, electricity, water and other public utilities to the leased premises and for having the utilities turned off when the leased premises are surrendered.

20. **MINERAL RIGHTS**: This lease does not cover petroleum or petroleum products or minerals and does not give the right to LESSEE to drill for or develop the same.

21. **RIGHT OF AUDIT**: LESSEE shall make available to LESSOR all financial and other records relating to this lease, and LESSOR shall have the right to audit such records at any reasonable time during the term of this lease. This right shall be continuous until this lease expires or is terminated. This lease may be terminated by LESSOR should LESSEE fail to allow public access to all documents, papers, letters or other materials made or received in conjunction with this lease, pursuant to the provisions of Chapter 119, Florida Statutes.

22. **CONDITION OF PREMISES**: LESSOR assumes no liability or obligation to LESSEE with reference to the condition of the leased premises. The leased premises herein are leased by LESSOR to LESSEE in an "as is" condition, with LESSOR assuming no responsibility for the care, repair, maintenance or improvement of the leased premises for the benefit of LESSEE.

23. **COMPLIANCE WITH LAWS**: LESSEE agrees that this lease is contingent upon and subject to LESSEE obtaining all applicable permits and complying with all applicable permits, regulations, ordinances, rules, and laws of the State of Florida or the United States or of any political subdivision or agency of either.

24. **NOTICE:** All notices given under this lease shall be in writing and shall be served by certified mail including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing. LESSOR and LESSEE hereby designate their address as follows:

LESSOR: State of Florida Department of Environmental Protection  
Division of State Lands  
Bureau of Public Land Administration, MS 130  
3800 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

LESSEE: City of Kissimmee  
101 Church Street  
Kissimmee, Florida, 34741

25. **BREACH OF COVENANTS, TERMS, OR CONDITIONS:** Should LESSEE breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to LESSEE to remedy such breach within sixty days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within sixty days of receipt of written notice, LESSOR may either terminate this lease and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises or maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

26. **DAMAGE TO THE PREMISES:** (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants, or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the

rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE's failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE's such failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or expiration of this lease. This paragraph shall not be construed as a limitation upon LESSEE'S obligations as set forth in paragraph 14 of this lease, nor upon any other obligations or responsibilities of LESSEE as set forth herein. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies. This paragraph shall not be deemed to apply to any conditions existing prior to the effective date of this lease.

27. **ENVIRONMENTAL AUDIT:** At LESSOR'S discretion, LESSEE shall provide LESSOR with a current Phase I environmental site assessment conducted in accordance with the State of Florida Department of Environmental Protection, Division of State Lands' standards prior to termination of this lease, and if necessary a Phase II environmental site assessment.

28. **SURRENDER OF PREMISES:** Upon termination or expiration of this lease, LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, LESSEE shall give written notification to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection ("Division"), Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of any or all of the leased premises. Notification shall include a legal description, this lease number, and an explanation of the release. The release shall only be valid if approved by LESSOR through the execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon termination

or expiration of this lease, all improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain any improvements upon termination or expiration of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises a representative of the Division shall perform an on-site inspection and the keys to any building on the leased premises shall be turned over to the Division.

29. **BEST MANAGEMENT PRACTICES:** LESSEE shall implement applicable Best Management Practices for all activities conducted under this lease in compliance with paragraph 18-2.018(2)(h), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, LESSEE or other land managing agencies for the protection and enhancement of the leased premises.

30. **PUBLIC LANDS ARTHROPOD CONTROL PLAN:** LESSEE shall identify and subsequently designate to the respective arthropod control district or districts within one year of the effective date of this lease all of the environmentally sensitive and biologically highly productive lands contained within the leased premises, in accordance with Section 388.4111, Florida Statutes and Chapter 5E-13, Florida Administrative Code, for the purpose of obtaining a public lands arthropod control plan for such lands.

31. **PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES:** Fee title to the leased premises is held by LESSOR. LESSEE shall not do or permit anything to be done which purports to create a lien or encumbrance of any nature against the real property contained in the leased premises including, but not limited to, mortgages or construction liens against the leased premises or against any interest of LESSOR therein.

32. **PARTIAL INVALIDITY:** If any term, covenant, condition or provision of this lease shall be ruled by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

33. **ARCHAEOLOGICAL AND HISTORIC SITES:** Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Chapter 18-2 Florida Administrative Code,

shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

34. **SOVEREIGNTY SUBMERGED LANDS:** This lease does not authorize the use of any lands located waterward of the mean or ordinary high water line of any lake, river, stream, creek, bay, estuary, or other water body or the waters or the air space thereabove.

35. **ENTIRE UNDERSTANDING:** This lease sets forth the entire understanding between the parties and shall only be amended with the prior written approval of LESSOR.

36. **MAINTENANCE OF IMPROVEMENTS:** LESSEE shall maintain the real property contained within the leased premises and the improvements located thereon, in a state of good condition, working order and repair including, but not limited to, removing all trash or litter, maintaining all planned improvements as set forth in the approved Management Plan, and meeting all building and safety codes. LESSEE shall maintain any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease.

37. **GOVERNING LAW:** This lease shall be governed by and interpreted according to the laws of the State of Florida.

38. **SIGNS:** LESSEE shall ensure that the area is identified as being publicly owned and operated as a public facility in all signs, literature and advertising. If federal grants or funds are used by LESSEE for any project on the leased premises LESSEE shall erect signs identifying the leased premises as a federally assisted project.

39. **SECTION CAPTIONS:** Articles, subsections and other captions contained in this lease are for reference purposes only and are in no way intended to describe, interpret, define or limit the scope, extent or intent of this lease or any provisions thereof.

40. **ADMINISTRATIVE FEE:** LESSEE shall pay LESSOR an annual administrative fee of \$300 pursuant to subsection 18-2.021(8), Florida Administrative Code. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June

30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

41. **RIGHT OF TERMINATION:** Anything contained in this lease to the contrary notwithstanding, LESSOR shall have the right and option to terminate this lease, at will, for any reason whatsoever, by giving the LESSEE written notice of such



election to terminate at least six (6) months prior to the effective date of such termination. LESSEE shall continue to honor its obligations under the lease until the effective date of the termination, including LESSEE's obligations concerning surrender of the leased premises.

42. **SPECIAL LEASE CONDITIONS:** The following special lease conditions shall apply to this lease: None.

*[Remainder of page intentionally left blank; Signature page follows]*

IN WITNESS WHEREOF, the parties have caused this lease to be executed on the day and year first above written.

WITNESSES:

David Lee Fewell  
Original Signature

DAVE FEWELL  
Print/Type Name of Witness

TERRI D. GROSS  
Original Signature

TERRI D. GROSS  
Print/Type Name of Witness

**BOARD OF TRUSTEES OF THE INTERNAL  
IMPROVEMENT TRUST FUND OF THE STATE  
OF FLORIDA**

BY: Brad Richardson (SEAL)  
Brad Richardson, Chief, Bureau of Public Land Administration,  
Division of State Lands, State of Florida Department of  
Environmental Protection, as agent for and on behalf of the  
Board of Trustees of the Internal Improvement Trust Fund of the  
State of Florida

"LESSOR"

**STATE OF FLORIDA  
COUNTY OF LEON**

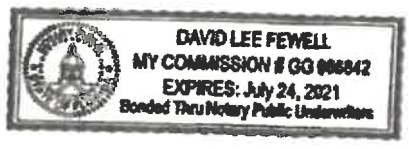
The foregoing instrument was acknowledged before me by means of  physical presence or  online notarization,  
this 10 day of FEBRUARY, 2020, by Brad Richardson, Chief, Bureau of Public Land Administration, Division  
of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees  
of the Internal Improvement Trust Fund of the State of Florida. He is personally known to me.

APPROVED SUBJECT TO PROPER EXECUTION:

David Lee Fewell  
DEP Attorney 02-03-2018  
Date

David Lee Fewell  
Notary Public, State of Florida

Printed, Typed or Stamped Name \_\_\_\_\_  
Commission/Serial No. \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



WITNESSES:

Jazzmen Kingston  
Original Signature

Jazzmen Kingston  
Typed/Printed Name of Witness

[Signature]  
Original Signature

Alicia Smith  
Typed/Printed Name of Witness

CITY OF KISSIMMEE,  
a Florida municipal corporation

BY: [Signature] (SEAL)  
Jose Alvarez, Mayor-Commissioner

"LESSEE"

STATE OF FLORIDA  
COUNTY OF OSCEOLA

*Jose Alvarez* The foregoing instrument was acknowledged before me this 21st day of January, 2020, by Mike Steigerwald, as City Manager, for and on behalf of the City of Kissimmee. He is personally known to me or has produced as identification. Mayor



Maria Damas  
Notary Public, State of Florida  
MARIA DAMAS  
Printed, Typed or Stamped Name  
Commission/Serial No. 99 319045  
My Commission Expires: May 1, 2023

Approved as to form and legality  
[Signature] 1.23.20  
City Attorney Date

EXHIBIT "A"

A parcel of land lying in Sections 32 and 33, Township 25 South, Range 29 East, Osceola County, Florida and being more particularly described as follows:

COMMENCING at a 4" x 4" concrete monument, LB 6393 marking the Southeasterly corner of ESTANCIA, according to the Plat thereof, as recorded in Plat Book 15, at Pages 184 and 185 of the Public Records of Osceola County, Florida, also marking the most southerly corner of Lot 46 of said plat; thence run S62°58'20"E, along the southerly line of the parcel of land described in Official Records Book 5236, at Page 2318 of the Public Records of Osceola County, Florida, a distance of 582.00 feet to the waters of Lake Tohopekaliga and Shingle Creek, for the POINT OF BEGINNING; thence along said waters the following courses and distances; thence run S21°33'52"W, a distance of 64.70 feet; thence run S11°26'23"E, a distance of 24.56 feet; thence run S08°09'10"W, a distance of 16.34 feet; thence run S61°11'36"W, a distance of 45.78 feet; thence run S31°54'25"W, a distance of 203.03 feet; thence run S24°43'15"W, a distance of 185.15 feet; thence run S19°18'31"W, a distance of 175.08 feet; thence run S54°02'02"W, a distance of 28.81 feet; thence run S27°52'03"W, a distance of 14.64 feet; thence run S02°37'18"W, a distance of 22.91 feet; thence run S21°44'20"W, a distance of 199.60 feet; thence run S22°35'51"W, a distance of 202.20 feet; thence run S18°48'37"W, a distance of 200.46 feet; thence run S20°10'58"W, a distance of 219.40 feet; thence run S21°05'04"E, a distance of 20.56 feet; thence run N83°39'46"W, a distance of 22.98 feet; thence run S23°02'31"W, a distance of 163.70 feet; thence run S40°09'21"E, a distance of 22.71 feet; thence run N56°40'23"E, a distance of 14.71 feet; thence run N22°49'19"E, a distance of 143.43 feet; thence run S72°20'49"E, a distance of 18.63 feet; thence run N79°44'27"E, a distance of 24.38 feet; thence run N28°46'53"E, a distance of 59.66 feet; thence run N16°48'01"E, a distance of 65.44 feet; thence run N24°41'13"E, a distance of 93.78 feet; thence run N86°42'40"E, a distance of 27.05 feet; thence run S19°48'46"E, a distance of 42.11 feet; thence run S03°50'06"W, a distance of 46.27 feet; thence run S06°48'03"E, a distance of 144.93 feet; thence run S83°30'19"E, a distance of 119.66 feet; thence run N78°46'30"E, a distance of 107.56 feet; thence run S84°36'09"E, a distance of 86.32 feet; thence run S30°53'42"E, a distance of 102.75 feet; thence run S15°01'35"W, a distance of 145.46 feet; thence run S35°37'04"W, a distance of 185.94 feet; thence run S39°43'40"W, a distance of 113.12 feet; thence run S04°50'56"W, a distance of 39.04 feet; thence run S60°52'29"E, a distance of 55.06 feet; thence run S22°48'25"E, a distance of 73.01 feet; thence run S46°10'59"E, a distance of 95.90 feet; thence run S75°19'10"E, a distance of 64.71 feet; thence run S34°20'27"E, a distance of 43.96 feet; thence run N74°58'26"E, a distance of 35.10 feet; thence run S50°38'11"E, a distance of 82.56 feet; thence run N46°48'39"E, a distance of 42.52 feet; thence run N89°51'37"E, a distance of 41.00 feet; thence run S54°56'51"E, a distance of 46.66 feet; thence run S52°25'53"W, a distance of 50.84 feet; thence run S67°14'37"E, a distance of 32.32 feet; thence run N77°49'31"W, a distance of 64.96 feet; thence run N76°42'01"W, a distance of 99.98 feet; thence run N64°45'02"W, a distance of 81.82 feet; thence run N53°26'51"W, a distance of 108.30 feet; thence run N46°20'00"W, a distance of 161.05 feet; thence run N42°49'13"W, a distance of 122.70 feet; thence run N47°18'41"W, a distance of 140.26 feet; thence run N61°34'50"W, a distance of 143.72 feet; thence run N88°11'24"W, a distance of 88.64 feet; thence run S81°23'49"W, a distance of 121.67 feet; thence run S72°00'42"W, a distance of 154.13 feet; thence run S83°56'19"W, a distance of 131.64 feet; thence run S80°23'52"W, a distance of 60.55 feet; thence run S61°30'42"W, a distance of 59.96 feet; thence run S85°33'00"W, a distance of 119.86 feet; thence run N79°57'57"W, a distance of 88.96 feet; thence run S79°33'40"W, a distance of 110.94 feet; thence run N54°51'37"W, a distance of 63.59 feet; thence run N44°30'48"W, a distance of 66.61 feet; thence run N32°34'14"W, a distance of 75.23 feet; thence run N28°08'05"W, a distance of 93.41 feet; thence run N05°58'29"W, a distance of 166.20 feet; thence run N11°00'53"E, a distance of 83.74 feet; thence run N51°11'52"W, a distance of 106.76 feet; thence run S76°03'47"W, a

Shingle Creek  
Yates, Koger Trust  
Osceola County

ESM  
BY SK  
Date: 3.15.2018

distance of 112.10 feet; thence run S50°12'06"W, a distance of 102.95 feet; thence run S82°06'23"W, a distance of 92.48 feet; thence run N43°27'31"W, a distance of 131.43 feet; thence run N39°51'28"W, a distance of 98.61 feet; thence run S84°56'57"W, a distance of 39.75 feet; thence run N60°08'03"W, a distance of 82.33 feet; thence run N82°52'30"W, a distance of 124.16 feet; thence run S82°30'19"W, a distance of 121.13 feet; thence run S76°02'06"W, a distance of 116.85 feet; thence run N87°46'20"W, a distance of 149.21 feet; thence run N80°23'18"W, a distance of 132.36 feet; thence run N76°09'16"W, a distance of 101.96 feet; thence run N81°41'38"W, a distance of 70.65 feet; thence run N29°39'42"W, a distance of 136.60 feet; thence run N41°48'13"W, a distance of 123.02 feet; thence run N87°37'58"W, a distance of 101.69 feet; thence run N83°40'32"W, a distance of 119.83 feet; thence run S55°11'51"W, a distance of 37.14 feet; thence run S66°10'02"W, a distance of 161.36 feet; thence run S73°58'06"W, a distance of 82.20 feet; thence run S64°52'30"W, a distance of 128.12 feet; thence run S55°12'50"W, a distance of 63.80 feet; thence run S64°46'46"W, a distance of 62.90 feet; thence run S43°44'55"W, a distance of 58.28 feet; thence run S07°39'35"W, a distance of 198.07 feet; thence run S38°23'27"W, a distance of 39.93 feet; thence run S73°45'28"W, a distance of 127.28 feet; thence run N87°26'15"W, a distance of 201.30 feet; thence run N86°00'22"W, a distance of 137.83 feet; thence run N89°28'59"W, a distance of 51.36 feet; thence run N58°18'47"W, a distance of 99.19 feet; thence run N41°17'46"W, a distance of 176.23 feet; thence run N33°50'10"W, a distance of 54.42 feet; thence run N79°16'06"W, a distance of 81.63 feet; thence run S76°47'10"W, a distance of 36.58 feet to the East Right of Way Line of State Road 600 according to the State of Florida Department of Transportation Right of Way Map Section 92010-2507; thence departing said waters, run N42°20'18"E, along said Right of Way a distance of 194.91 feet; thence departing said Right of Way Line, run S17°32'14"E, a distance of 73.92 feet; thence run S77°25'27"E, a distance of 384.02 feet to the point of curvature of a curve with a radius of 200.00 feet, concave to the north; thence run easterly along the arc of said curve to the left through a central angle of 24°09'14", a distance of 84.31 feet to a point on the West line of the Northwest 1/4 of said Section 33 (said point lying S00°20'58"W, 2361.09 feet from the Northwest corner of said Section 33); thence continue easterly along the arc of said curve to the left through a central angle of 29°19'28", a distance of 102.36 feet to a point of tangency; thence run N49°05'50"E, a distance of 346.76 feet to the point of curvature of a curve with a radius of 600.00 feet, concave to the south; thence run northeasterly along the arc of said curve to the right through a central angle of 64°56'49", a distance of 680.12 feet to a point of tangency; thence run S65°57'23"E, a distance of 338.81 feet to the point of curvature of a curve with a radius of 600.00 feet, concave to the north; thence run southeasterly along the arc of said curve to the left through a central angle of 17°19'03", a distance of 181.35 feet to a point of tangency; thence run S83°16'25"E, a distance of 420.45 feet; thence run S79°24'12"E, a distance of 351.11 feet; thence run S79°24'12"E, a distance of 351.11 feet; thence run S67°19'51"E, a distance of 392.88 feet; thence run S67°19'51"E, a distance of 392.88 feet to the point of curvature of a curve with a radius of 200.00 feet, concave to the northwest; thence run southeasterly along the arc of said curve to the left through a central angle of 90°59'29", a distance of 317.62 feet to a point of tangency; thence run N21°40'42"E, a distance of 476.31 feet; thence run N21°40'42"E, a distance of 485.23 feet; thence run N21°40'42"E, a distance of 408.72 feet; thence run N30°24'10"E, a distance of 344.29 feet to said southerly line; thence run S62°56'12"E, along said southerly line a distance of 104.92 feet to the POINT OF BEGINNING.

Shingle Creek  
Yates, Koger Trust  
Osceola County

ESM  
BY SK  
Date: 3.15.2018



# DELEGATION OF AUTHORITY ACTION

**DOA Number:** DSL - 24 **Lease No.** 4822  
**Action ID:** 38476 **Instrument No.** N/A  
**Type of Action:**  New  Lease  Road Right-of-Way Reservation  
 Amendment  Easement  Canal Reservation  
 Release  Sublease  Oil and Mineral Reservation  
 Partial Release  Use Agreement

**Project Name:** Shingle Creek Regional Trail  
**Title Worksheet ID:** 111738 **LITS Surplus ID:** N/A

**Applicant:** The City of Kissimmee

**County/Location:** Osceola

**S/T/R:** 32 & 33 / 25S / 29E

**Acreage:** 35.14 (+/-)

**Consideration:** \_\_\_\_\_

**Receiv**

**Date:** \_\_\_\_\_

**Conservation Lands**  Yes  No

**Name of Facility/Park/Trail:** \_\_\_\_\_

ARC/Mini

**NPB/Addition:** \_\_\_\_\_

Satisfied p \_\_\_\_\_

Not Applicable

**STAFF REMARKS**

The Shingle Creek Regional Trail is a 35.14 (+/-) acre parcel that was acquired using Florida Forever Funds to be managed by the City of Kissimmee under this new Lease (4822).


Parcel ID #'s: R322529-00U000400000, R332529-00U000110000, and R332529-00U000120000.

LUS # 691645  
LITS # 41763

RECEIVED

FEB 11 2020

TITLE & LAND RECORDS  
SURVEYING & MAPPING

  
 Digitally signed by Derek W. Helms  
 Date: 2018.07.09 09:48:39 -04'00'  
7/9/2018

Originator

Date

Gary L.  
 Ballard

Digitally signed by Gary L. Ballard  
 Date: 2018.08.03 11:57:11 -04'00'

DEP Attorney

Date

OMCM

Date

  
 Executing Authority

Digitally signed by Brad Richardson  
 Date: 2020.02.10 15:17:11 -05'00'

Date

Appendix B  
Ecological Report



# Ecological Report

## Shingle Creek Lease Conservation Management Plan Osceola County, Florida

**Submitted to:**

City of Kissimmee, Parks Division  
101 Church Street  
Kissimmee, FL 34741

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AECOM Project No.: 60668310

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## 1.0 Introduction

### 1.1 Lease Area Location

The 35.14-acre Shingle Creek Lease (Lease Number 4822) property is located east of South John Young Parkway (US-17), west of Lake Tohopekaliga and north of Shingle Creek in Sections 32 and 33, Township 25 South, Range 29 East, City of Kissimmee, Osceola County, Florida. The lease area includes the following parcels: R322529-00U000400000, R332529-00U000110000, and R332529-00U000120000. Approximate central coordinates are Latitude 28.26801°, Longitude -81.41425°. A location map is provided as **Figure 1**.

### 1.2 Proposed Lease Area Use

The City of Kissimmee (City) is proposing to extend the Shingle Creek Regional Trail to connect existing bicycle facilities and eliminate gaps in the City's current bicycle network. The lease area to be managed by the City for the trail is presented in **Figure 2**.

### 1.3 Field Review

Ecologists from AECOM performed a site review on November 22, 2021. During the site review, the ecologists mapped onsite habitats and performed an assessment of the lease area for forest and other natural resources, protected plant and animal species, exotic and invasive plants, hydrologic features, infrastructure including recreational facilities, and other significant land, cultural or historical features.

## 2.0 Environmental Setting

### 2.1 Soils

According to the United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS), three soil units are mapped as occurring within the lease area (**Figure 3**). The areal distribution of the three soil map units is summarized below in **Table 1**.

**Table 1: USDA-NRCS Soils Summary**

Symbol	Soil Name, Description	Hydric / Not Hydric*	Acreage
13	Gentry fine sands	Hydric	8.33
38	Riviera fine sand, 0 to 2 percent slopes	Hydric	22.38
39	Riviera fine sand, frequently ponded, 0 to 1 percent slopes	Hydric	4.43
<b>Total</b>			<b>35.14</b>

\* Hurt, G. W. and Florida Association of Environmental Soil Scientists, 2007. *Hydric Soils of Florida Handbook*. Fourth Edition. Gainesville, FL: Florida Association of Environmental Soil Scientists.

The three onsite soil map units appear on hydric soil lists. The presence of hydric soils, along with hydrophytic vegetation and hydrologic indicators, are used to determine the presence and extent of wetlands in Florida.

## 2.2 Land Use and Land Cover

The lease area comprises seven land use/vegetative cover types, which were characterized using Florida Land Use, Cover and Forms Classification System (FLUCFCS) designations (FDOT 1999). These land use types were field verified during the field assessment and are summarized below in **Table 1** and presented in **Figure 4**.

**Table 2: Land Cover Classifications**

Classification Code	Land Cover Description	Acres
212	Unimproved Pastures	1.09
438	Mixed Hardwoods	0.20
510	Streams and Waterways	2.31
621	Cypress	7.12
630	Wetland Forested Mixed	21.04
631	Wetland Scrub	1.70
641	Freshwater Marshes	1.69
<b>Total</b>		<b>35.14</b>

A photographic log containing representative site photographs of predominant land use/vegetative cover types mapped within the lease area is provided in **Attachment 1**. Land use/vegetative cover types are described below.

#### Unimproved Pastures (FLUCFCS Code: 212)

Unimproved pastures within the lease area includes a narrow strip of herbaceous species located between the onsite ditch, running east-west, and the adjacent property to the north. The shrub stratum includes sparse Brazilian pepper (*Schinus terebinthifolia*), while the herbaceous stratum includes dogfennel (*Eupatorium capillifolium*), beggarticks (*Bidens alba*), caesarweed (*Urena lobata*), and bahiagrass (*Paspalum notatum*).

#### Mixed Hardwoods (FLUCFCS Code: 438)

A small area of mixed hardwoods is located along the northern project boundary. The onsite portion contains mature trees, a relatively open shrub stratum, and ruderal herbaceous species. Canopy species include live oak (*Quercus virginiana*), camphortree (*Cinnamomum camphora*), and red maple (*Acer rubrum*). The shrub stratum includes Brazilian pepper. Dominant vegetative species within the herbaceous stratum include dogfennel, beggarticks, and caesarweed.

#### Streams and Waterways (FLUCFCS Code: 510)

Two prominent ditches are present within the lease area. One ditch runs east-west along the northern lease area boundary and the other ditch runs north-south along the western boundary. The ditches vary in width and are each approximately 12-15 feet wide. Bank slopes are steep and water depth is greater than 1 foot. Ditch banks contained live oak, camphortree, Chinese tallowtree (*Triadica sebifera*), and bald cypress (*Taxodium distichum*) in the canopy and rattlebox (*Sesbania punicea*), Brazilian pepper, wax myrtle (*Morella cerifera*), Carolina willow (*Salix caroliniana*), Peruvian primerosewillow (*Ludwigia peruviana*), and scratchthroat (*Ardisia crenata*) in the shrub stratum. Groundcover species on the banks include caesarweed, common dayflower (*Commelina diffusa*), woodsgrass (*Oplismenus setarius*), small-leaf climbing fern (*Lygodium microphyllum*), creeping oxeye (*Sphagneticola trilobata*), and soda apple (*Solanum capsicoides*). The ditch systems contain open water with water spangles (*Salvinia minima*), common water-hyacinth (*Eichhornia crassipes*), wild taro (*Colocasia esculenta*), and soft rush (*Juncus effusus*).

Shingle Creek is immediately adjacent the lease area to the south and Lake Tohopekaliga is adjacent to the east. A north-south ditch runs between the northeastern lease boundary and Lake Tohopekaliga. The shared boundary of the lease area and the named surface waters is at or above the ordinary high-water line based on an elevation of 55.0 feet National Geodetic Vertical Datum of 1929.

#### Cypress (FLUCFCS Code: 621)

Cypress wetlands are in the eastern portion of the lease area, especially adjacent to Lake Tohopekaliga and Shingle Creek. Canopy species are predominately bald cypress with some

pond cypress (*T. ascendens*) and Chinese tallowtree. The relatively open shrub stratum includes Brazilian pepper and cabbage palm (*Sabal palmetto*). Standing water was observed within the central portions of these wetlands at the time of field review. An upland berm bifurcates the cypress system and comprises laurel oak (*Q. laurifolia*), mimosa (*Albizia julibrissin*), and camphortree in the canopy stratum and beggarticks, paspalum (*Paspalum* sp.), air-potato (*Dioscorea bulbifera*), and balsampear (*Momordica charantia*) in the groundcover stratum.

#### Wetland Forested Mixed (FLUCFCS Code: 630)

The majority of the lease area is mixed forested wetland. A raised berm, extending from the existing terminus of Shingle Creek Regional Trail to the north and John Young Parkway to the west, bifurcates much of this forested wetland. The southern and eastern portions of the wetland system, waterward of the berm, are forested floodplains associated with Shingle Creek and Lake Tohopekaliga. Rafted debris and alluvial soils were observed in these areas. Canopy species include red maple, bald cypress with some pond cypress, American elm (*Ulmus americana*), hackberry (*Celtis laevigata*), and cabbage palm. Brazilian pepper, mimosa, Chinese privet (*Ligustrum sinense*), and young cabbage palm occupy the shrub stratum. The sparse herbaceous stratum includes caesarweed, creeping oxeye, air-potato, and small-leaf climbing fern.

The elevated position of the onsite berm provides for a slightly different assemblage of plant species. Canopy species include live oak, bald cypress, red maple, and camphortree. The shrub stratum comprises Brazilian pepper, young Chinese tallow, young cabbage palm, scratchthroat and American beautyberry (*Callicarpa americana*), and the herbaceous stratum includes caesareweed, beggarticks, and paspalum. A giant airplant (*Tillandsia utriculata*) was observed on top of the berm.

Landward of the berm, near the northern and western portions of the lease boundary, the forested wetland lies between the raised berm and onsite ditch to the north or adjacent offsite freshwater marshes to the northwest. Predominant species observed include live oak, camphortree, and bald cypress in the canopy, with Brazilian pepper and scratchthroat in the shrub stratum. The herbaceous stratum includes caesarweed, creeping oxeye, woodgrass, small-leaf climbing fern, and Carolina ponysfoot (*Dichondra carolinensis*).

#### Wetland Scrub (FLUCFCS Code: 631)

The lease area contains one wetland scrub system in the north-central portion of the boundary. The system is adjacent to cypress, mixed forested wetland, and ditch. Predominate shrub species include groundsel tree (*Baccharis halimifolia*), Peruvian primrosewillow, and young Chinese tallowtree. Wax myrtle and Brazilian pepper are present within the wetland's fringe. The

herbaceous stratum contains bushy bluestem (*Andropogon glomeratus*), dogfennel, caesarweed, and wild taro. Water depth was approximately 0.5 foot.

#### Freshwater Marshes (FLUCFCS Code: 641)

The lease area contains two freshwater marshes. One freshwater marsh is surrounded by cypress and mixed forested wetlands and contains predominately bushy bluestem and dogfennel in the herbaceous stratum. The other freshwater marsh is adjacent to cypress and mixed forested wetlands within the lease area and unimproved pasture to the northwest of the lease area. Predominate herbaceous species within this marsh include soft rush, Peruvian primerosewillow, common water-hyacinth, and bulltongue arrowhead (*Sagittaria lancifolia*). Standing water was observed within both freshwater marshes.

### 2.3 Listed Species Potentially in the Lease Area

The project area was evaluated for potential occurrences of federally- and state-listed plant and animal species. Federally-listed species are those plant and animal species protected by the federal government pursuant to the Endangered Species Act (ESA) of 1973, as amended. Federally-listed species are classified as endangered or threatened. State-listed species are those plant and animal species managed by the State of Florida pursuant to Chapter 5B-40 FAC and Chapter 68A-27 FAC, respectively. State-listed species are classified as endangered, threatened, species of special concern (animals), or commercially exploited (plants). The evaluation included literature reviews, database searches, and field assessments of the project area to assess the potential occurrence of listed and protected species and/or presence of federally-designated Critical Habitat.

The following data sources were reviewed as part of this evaluation:

- Audubon Florida EagleWatch Nest Map, 2020-2021 nesting season (<https://cbop.audubon.org/conservation/about-eaglewatch-program>), accessed December 2021;
- Florida Department of Agriculture & Consumer Services (FDACS), Division of Plant Industry, 2010. *Notes on Florida's Endangered and Threatened Plants: Botany Contribution No. 38, 5th edition.*
- Florida Department of State, Chapter 68A-27.003 FAC: Florida's Endangered and Threatened Species List (Effective Date: 5/27/2021);
- Florida Natural Areas Inventory (FNAI), Standard Data Report for Shingle Creek Lease in Osceola County, November 19, 2021;

- U.S. Fish and Wildlife Service (FWS), Threatened and Endangered Species' Critical Habitat Online Mapping Application (<http://crithab.fws.gov/>);
- FWS, Endangered Species Database (<http://www.fws.gov/endangered/>);
- FWS, 2020 Geographic Information System (GIS) wood stork data for active colonies; and
- FWS, Information for Planning and Consultation Environmental Conservation Online System (<https://ecos.fws.gov/ipac/>), accessed December 2021.

For a listed species to be considered potentially occurring within the lease area, appropriate habitat for reproduction, nesting, foraging, or resting must be present in the project area and the potential area must be located within the species' geographical range. Based on the evaluation of collected data, the federal and state-listed species discussed below were identified as having the potential to occur within or adjacent to the proposed project site. During the field review on November 22, 2021, the lease area was further assessed for the presence of, or potential use by, federally- and state-listed plant and animal species.

### 2.3.1 Fauna Species

Federally- and/or state-listed animal species with the potential to occur within the Shingle Creek lease area are described below.

#### **American Alligator**

##### **Federally-Listed Threatened**

The American alligator (*Alligator mississippiensis*) is federally-listed as threatened due to the similarity of appearance to the American crocodile (*Crocodylus acutus*), which is listed as threatened by FWS. The American alligator does not have a consultation area or designated critical habitat but is protected from illegal harvest to protect the American crocodile. Suitable habitat within the lease area includes all ditches, freshwater marshes, wetland scrub, cypress, and mixed forested wetlands with open water. No American alligators were observed on site during the November 2021 field review.

#### **Eastern Indigo Snake**

##### **Federally-Listed Threatened**

The eastern indigo (*Drymarchon corais couperi*) snake is found in a variety of habitats including mesic flatwoods, upland pine forests, swamps, wet prairies, xeric pinelands, scrub, and swamps. It may use gopher tortoise (*Gopherus polyphemus*) burrows for shelter to escape hot or cold ambient temperatures within its range. While no eastern indigo snakes or gopher



tortoise burrows were observed during the November 2021 field review, suitable habitat exists throughout the site. Therefore, there is potential for the eastern indigo snake to occur within the lease area.

**Everglade Snail Kite**  
**Federally-Listed Endangered**

The Everglade snail kite (*Rostrhamus sociabilis plumbeus*) habitat consists of large open freshwater marshes and lakes with shallow water. The snail kite feeds exclusively on apple snails (*Pomacea* spp.) found in shallow ponds, swamps, ditches and canals. No snail kites nor evidence of native Florida apple snails were observed during the November 2021 field review; however, exotic apple snail eggs (exhibiting characteristic pink color) were observed along Shingle Creek at approximately 2 feet above water level. While no snail kites were observed on site during the November 2021 field review, suitable foraging habitat was observed immediately adjacent the site. Additionally, the FNAI report (2021) states the snail kite is present on or very near this site. Therefore, there is potential for the Everglade snail kite to occur within the lease area.

**Wood Stork**  
**Federally-Listed Threatened**

The wood stork (*Mycteria americana*) typically nests in woody vegetation found within a variety of inundated forested wetlands, including cypress stands and domes, mixed hardwood swamps, sloughs, and mangroves. The species is also increasingly found in artificial habitats such as impoundments and dredged areas with native or exotic vegetation. Wood stork generally forages in shallow water in habitats such as freshwater marshes, lagoons, swamps, ponds, tidal creeks, and flooded pastures and ditches. Wood stork tends to seek out areas with reduced water levels where their prey (mostly fish) is concentrated.

The FWS has defined the core foraging area (CFA) for the wood stork in Osceola County as an 18.6-mile radius from nesting colonies. Based on information provided by the FWS, Florida Fish and Wildlife Conservation Commission (FWC), and FNAI, the project area is located within the 18.6-mile radius CFA of four recorded wood stork nesting colonies: Gatorland (last active 2019), Eagle Nest Park (last active 2019), Lake Russell (last active 2019), and Lake Mary Jane (last active 2019). Suitable habitat within the lease area includes all ditches, freshwater marshes, wetland scrub, cypress, and mixed forested wetlands with open water. No wood storks were observed foraging within the project area during the field review in November 2021; however, there is potential for the wood stork to occur within the lease area.

## **Bald Eagle**

### **Federally Protected**

Though the bald eagle has been removed from federal and state listings, it is still protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and riverbanks. The nests are generally located near water bodies that provide a dependable food source.

The Audubon EagleWatch website indicates five nest sites are documented within 1 mile of the lease area: OS082 (nest status unknown for 2021 season), OS099 (nest status unknown for 2021 season), OS179 (nest status unknown for 2021 season), OS197 (nest status unknown for 2021 season), and OS207 (nest status unknown for 2021 season). While no bald eagles or bald eagle nests were observed on site during the November 2021 field review, suitable habitat is located on site. Therefore, there is potential for the bald eagle to occur within the lease area. According to available Audubon GIS data, the closest recorded bald eagle nest (OS082) is approximately 0.3 mile to the northeast of the lease boundary.

## **Florida Sandhill Crane**

### **State-Listed Threatened**

The Florida sandhill crane (*Grus canadensis pratensis*) is a non-migratory species that nests in freshwater ponds and marshes. The sandhill crane is associated with shallow freshwater areas, pasture, and open woods habitats. Habitats such as wet and dry prairies, marshes, and marshy lake margins are preferred. The primary concern for impacts to the Florida sandhill crane is the loss of nesting habitat (i.e., shallow water wetlands). Sandhill crane vocalizations were heard during the November 2021 field review and suitable habitat exists on site within the freshwater marshes. Therefore, there is potential for the sandhill crane to occur within the lease area.

## **Little Blue Heron and Tricolored Heron**

### **State-Listed Threatened**

Wading birds, such as the little blue heron (*Egretta caerulea*) and tricolored heron (*E. tricolor*), are state-listed as threatened by the FWC. While each species is distinct, these wading birds are discussed collectively since they occupy similar habitats and have similar feeding patterns. The populations of these species have been impacted primarily by the destruction of wetlands for development and by the drainage of wetlands for flood control and agriculture. The primary concern for impacts to these wading birds is the loss of foraging habitat (i.e., wetlands). Their preferred habitat consists of a variety of natural and man-made wetlands such as ditches, canals, freshwater marshes, shallow ponds, coastal mangroves, and forested wetlands. One little blue heron was observed on the edge of Shingle Creek during the November 2021 field review; no tricolored herons were observed. Suitable habitat exists throughout the site in all

wetlands and other surface waters. Therefore, there is potential for the little blue heron and tricolored heron to occur within the lease area.

### **Non-Listed Species**

Many non-listed species are anticipated to utilize the habitat within the lease area. Direct evidence of non-listed species or signs thereof observed within and immediately adjacent the lease area during the November 2021 field review included: white-tailed deer (*Odocoileus virginianus*), wild hog (*Sus scrofa*), eastern cottontail (*Sylvilagus floridanus*), eastern gray squirrel (*Sciurus carolinensis*), nine-banded armadillo (*Dasypus novemcinctus*), aquatic turtles, great egret (*Ardea alba*), red-shouldered hawk (*Buteo lineatus*), gray catbird (*Dumetella carolinensis*), blue jay (*Cyanocitta cristata*), and various passerine birds.

### **2.3.2 Flora Species**

No federally- and/or state-listed plant species have been documented on or near the lease area (FNAI 2021). However, the giant airplant was observed within the lease area during the November 2021 site visit. The giant airplant is state-listed endangered (listed as a result of Mexican bromeliad weevil attack). No other listed plant species were observed.

### **2.3.3 Critical Habitat and Conservation Areas**

The Shingle Creek lease area was evaluated for the occurrence of listed species Critical Habitat designated by Congress in 50 Code of Federal Regulations Part 424. According to the FWS online mapper, no critical habitat is located within the lease area.

The lease area is located more than 10 miles from any designated Area of Critical State Concern (**Figure 5**) and Aquatic Preserves (**Figure 6**). Other conservation lands near the lease area include Shingle Creek Regional Park, located on the west side of John Young Parkway, and Makinson Island, Paradise Island and Candella Island, located within Lake Tohopekaliga to the west (**Figure 7**). There are 22 conservation lands within 10 miles of the lease area. **Figure 8** identifies these conservation lands and depicts the locations in relation to the lease area.

### **2.3.4 Systems Health**

Physical disturbance, hydrology, and vegetative assemblage were assessed to determine the health of habitats within the lease area. The site contains minor physical disturbance, which includes a raised berm extending from the existing terminus of Shingle Creek Regional Trail to John Young Parkway. The berm is naturally vegetated and occasionally dips to surrounding ground elevation. The low elevation “breaks” in the berm allow for water flow between the ditches on the landward side of berm and the floodplain of Lake Tohopekaliga and Shingle

Creek. No structures were observed on site. Recreational fishing within the adjacent Shingle Creek does not appear to negatively impact wildlife populations or the surroundings. Water levels observed on site were appropriate for all community types and wetlands appeared to exhibit normal hydroperiods. Rafted debris and trash (e.g., bottles, cans, plastic bags, and polystyrene) were observed within the floodplain of Shingle Creek. No degradation of water quality was observed within the lease area.

Canopy species are thriving in the forested wetlands; however, undesirable trees (i.e., nuisance and invasive species) are present throughout. The entire lease area exhibits natural recruitment of undesirable species in the shrub and herbaceous strata. All plant species, both desirable and undesirable, appear healthy and exhibit no stress or damage. The quality of upland and wetland habitat provided within the lease area is moderate for all wildlife species anticipated to occur within Osceola County.

### 2.3.5 Invasive, Exotic, and Nuisance Vegetation

A significant amount of nuisance and invasive species, both in terms of species quantity and density, was observed within the lease area. For the purposes of this evaluation, invasive exotic species are defined by the Florida Exotic Pest Plant Council's (FLEPPC) 2019 List of Invasive Plant Species (FLEPPC 2019). FLEPPC defines Category I as Invasive exotics that are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. FLEPPC defines Category II as invasive exotics that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species.

Undesirable trees observed on site include camphortree, Chinese tallowtree, and mimosa. These species are categorized as invasive Category I on the FLEPPC's 2019 List of Invasive Plant Species and were dispersed throughout the lease area's canopy. A moderate amount of camphortree was observed along ditch banks, within cypress wetlands, and within mixed forested wetlands (FLUCFCS Codes: 510, 621, and 630). A moderate amount of Chinese tallowtree was observed within cypress wetlands and scrub wetland (FLUCFCS Code: 621 and 631). A minimal amount of mimosa was observed within cypress wetlands and mixed forested wetlands (FLUCFCS Code: 621 and 630).

Undesirable shrubs observed on site include Brazilian pepper, scratchthroat, and Chinese privet. These species are categorized as invasive Category I on the FLEPPC's 2019 List of Invasive Plant Species. A moderate amount of Brazilian pepper was observed across the entire site. A relatively minor amount of scratchthroat and Chinese privet was observed on the berm, within the mixed forested wetlands (FLUCFCS Code: 630). Although minor site-wide, observed occurrences are localized and dense.

Undesirable herbs and vines observed on site include caesarweed, creeping oxeye, rattlebox, air-potato, small-leaf climbing fern, and balsampear. A significant amount of Caesarweed is dispersed throughout the lease area's groundcover. A minor amount of creeping oxeye, air-potato, and small-leaf climbing fern was observed along the ditch banks and on the berm within the mixed forested wetlands (FLUCFCS Code: 510 and 630). Although minor site-wide, observed occurrences are localized and dense. These species are categorized as invasive Category I on the FLEPPC's 2019 List of Invasive Plant Species. A minor amount of balsampear was observed in localized patches within the cypress wetlands (FLUCFCS Code: 621) and rattlebox along the ditch banks and on the berm within the mixed forested wetlands (FLUCFCS Code: 510 and 630). These species are categorized as invasive Category II on the FLEPPC's 2019 List of Invasive Plant Species.

A significant amount of water spangles, water hyacinth, and wild taro was observed in the ditches (FLUCFCS Code: 510) on site. A moderate amount of Peruvian primrosewillow was also observed in the ditches and within the scrub wetland (FLUCFCS Code: 510 and 631). These species are categorized as invasive Category I on the FLEPPC's 2019 List of Invasive Plant Species.

### 3.0 Summary

The City is proposing to extend the Shingle Creek Regional Trail to connect existing bicycle facilities and eliminate gaps in the current bicycle network. Forest and other natural resources, protected plant and animal species, exotic and invasive plants, hydrologic features, infrastructure including recreational facilities, and other significant land, cultural or historical features were assessed in each land use category to determine the existing condition of habitats within the lease area. The site comprises seven distinct land use/vegetative cover types: unimproved pastures, mixed hardwoods, streams and waterways, cypress, wetland forested mixed, wetland scrub, and freshwater marshes.

The lease area contains minor physical disturbances (berm and recreational fishing on site), which do not negatively impact wildlife populations or the surroundings. No structures exist within the lease area. Observed water levels are appropriate for all community types.

Canopy species within the forested wetland are thriving, although nuisance and invasive tree species are present. All the community types exhibit natural recruitment of both native and nuisance and invasive species in the shrub and herbaceous strata. Overall, a substantial amount of nuisance and invasive species are present in all strata throughout the site. The lease area provides wetland habitats for all wildlife species anticipated to occur within Osceola County.

## 4.0 References

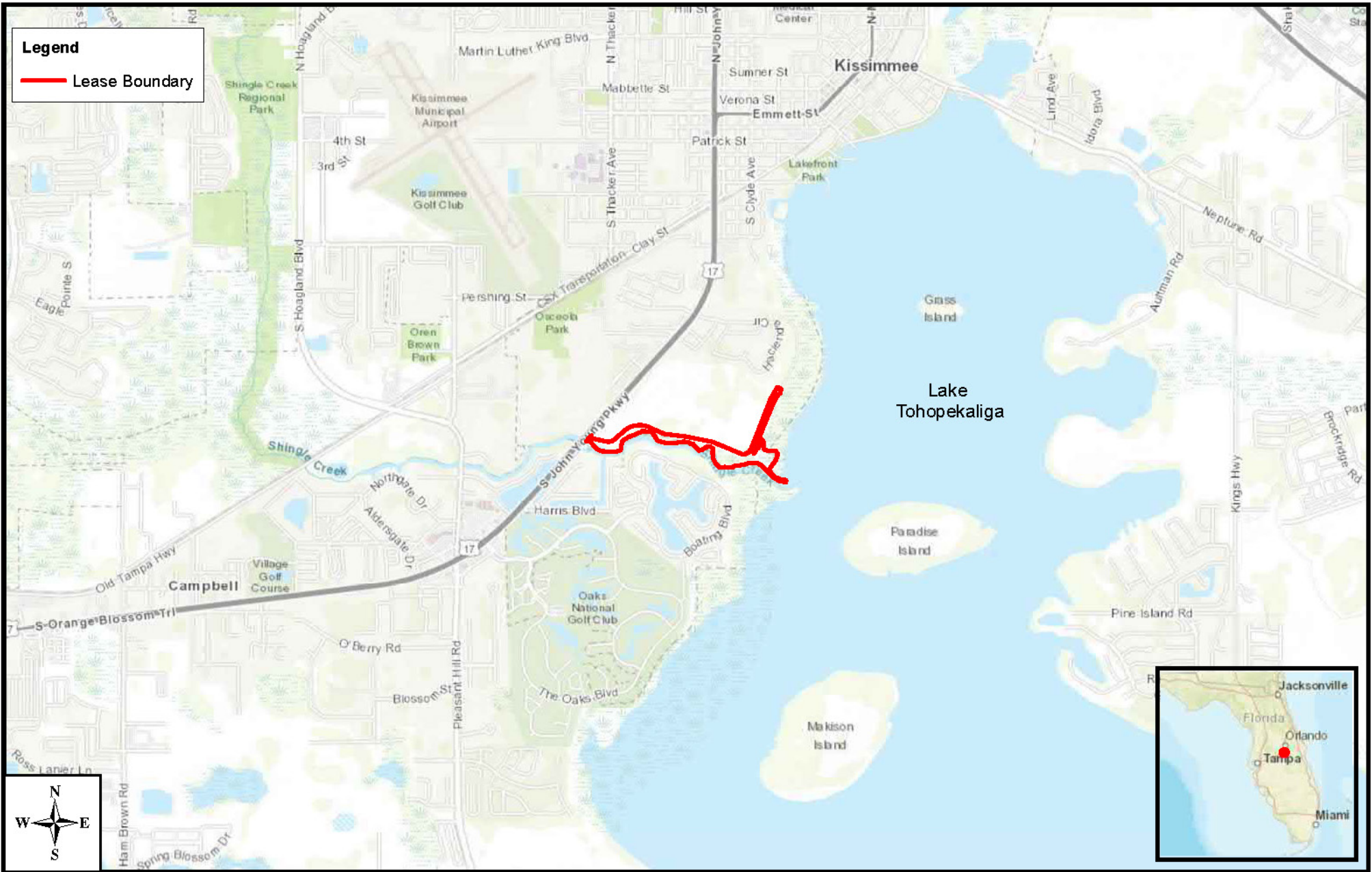
Florida Department of Transportation (FDOT), 1999. *Florida Land use, Cover and Forms Classification System*. Surveying and Mapping Office, Geographic Mapping Section. Third Edition. January 1999.

Florida Exotic Pest Plant Council (FEPPC), 2019. 2019 FLEPPC List of Invasive Plant Species.

Florida Natural Areas Inventory (FNAI), Standard Data Report for Shingle Creek Lease in Osceola County. November 19, 2021.

Hurt, G. W. and Florida Association of Environmental Soil Scientists, 2007. *Hydric Soils of Florida Handbook*. Fourth Edition. Gainesville, FL: Florida Association of Environmental Soil Scientists. March 2007.

# Figures



**Legend**  
— Lease Boundary



**AECOM** 0 1,500 3,000 Feet

Project Number: 60668310

Date: 12/10/2021

Sources: ESRI, USGS

**Figure 1: Location Map**

Shingle Creek Lease Conservation Management Plan

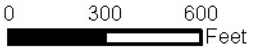
City of Kissimmee



**Legend**  
— Lease Boundary



**AECOM**



Project Number: 60668310  
Date: 12/10/2021  
Sources: ESRI 2020

**Figure 2: Lease Area**

Shingle Creek Lease Conservation Management Plan

City of Kissimmee

MUSYM	Soil Name	Acres
13	GENTRY FINE SAND	8.33
38	RIVIERA FINE SAND, 0 TO 2 PERCENT SLOPES	22.38
39	RIVIERA FINE SAND, FREQUENTLY PONDED, 0 TO 1 PERCENT SLOPE	4.43
	Total	35.14



**AECOM**


0 250 500  
Feet

Project Number: 60668310

Date: 12/10/2021

Sources: ESRI 2020, NRCS 2021

**Legend**

 Lease Boundary

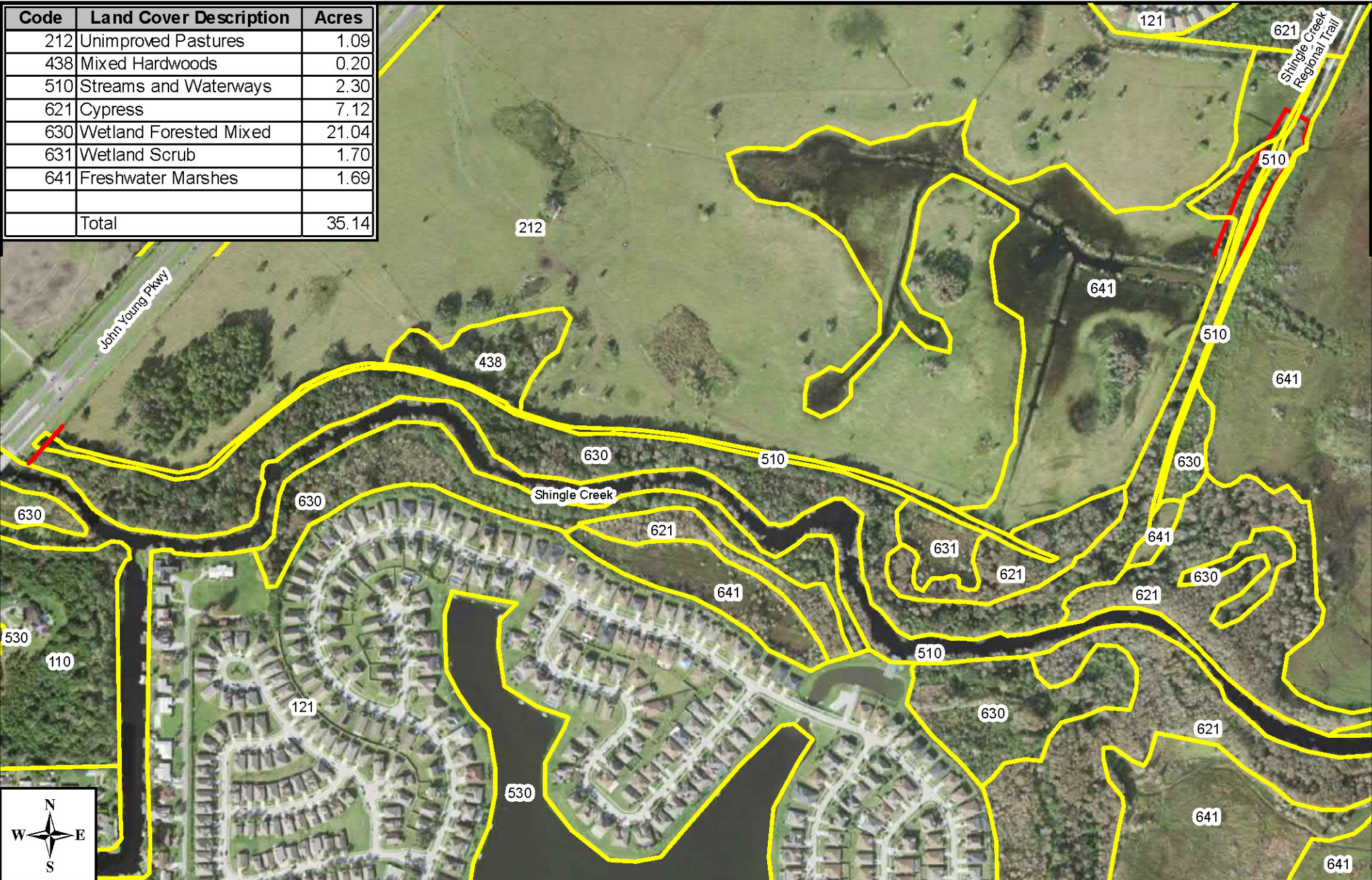
 NRCS Soils

Figure 3: Soils

Shingle Creek Lease Conservation Management Plan

City of Kissimmee

Code	Land Cover Description	Acres
212	Unimproved Pastures	1.09
438	Mixed Hardwoods	0.20
510	Streams and Waterways	2.30
621	Cypress	7.12
630	Wetland Forested Mixed	21.04
631	Wetland Scrub	1.70
641	Freshwater Marshes	1.69
	Total	35.14



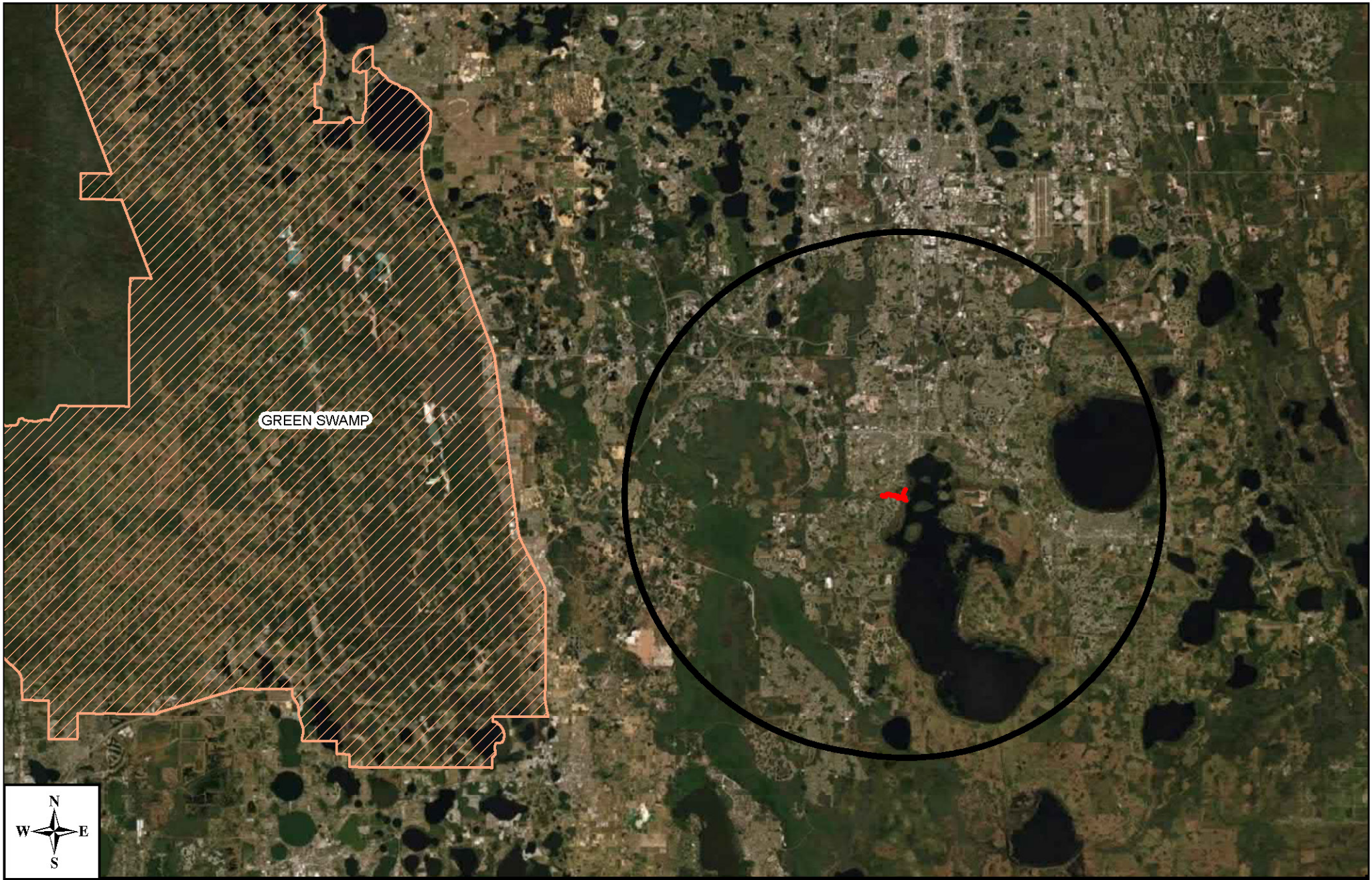
**AECOM**



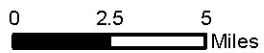
Legend	
	Lease Boundary
	Land Use / Land Cover

Project Number: 60668310  
 Date: 12/13/2021  
 Sources: ESRI, SFWMD 2020 / AECOM 2021

Figure 4: Land Use/Land Cover  
 Shingle Creek Lease Conservation Management Plan  
 City of Kissimmee



**AECOM**



Project Number: 60668310

Date: 12/10/2021

Sources: ESRI 2019-2021, FDEP 2021

**Legend**




-  Lease Boundary
-  Areas of Critical State Concern
-  10 mile Buffer Around Lease

Figure 5: Areas of Critical State Concern  
Shingle Creek Lease Conservation Management Plan

City of Kissimmee



**AECOM**

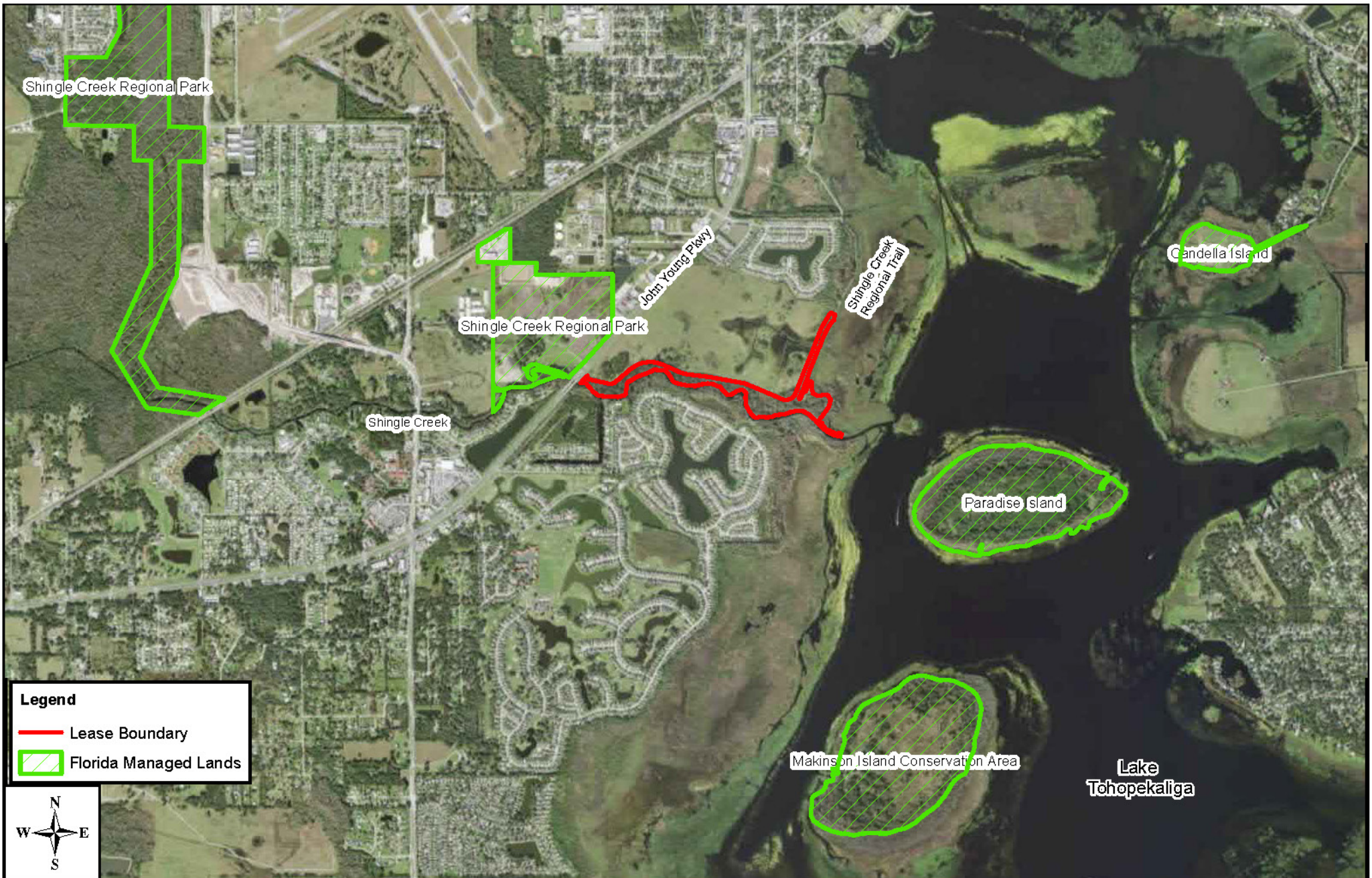
0 50,000 100,000  
Feet

**Legend**

- Lease Boundary
- Aquatic Preserves
- 10 mile Buffer Around Lease

Project Number: 60668310  
 Date: 12/10/2021  
 Sources: ESRI 2019-2021, FDEP 2021

**Figure 6: Aquatic Preserves**  
 Shingle Creek Lease Conservation Management Plan  
 City of Kissimmee



**Legend**

- Lease Boundary
- ▨ Florida Managed Lands



**AECOM**

0 1,500 3,000 Feet

Project Number: 60668310

Date: 12/10/2021

Sources: ESRI 2020, FNAI - FLMA 2021

**Figure 7: Conservation Lands Near Lease**  
 Shingle Creek Lease Conservation Management Plan

City of Kissimmee

ID	NAME
1	Boggy Creek Swamp Conservation Easement
2	Candella Island
3	Cherokee Point Conservation Area
4	Disney Wilderness Preserve
5	Eagle Lake Preserve
6	Florida Mitigation Bank
7	Hamilton Reserve
8	Hunters Creek Conservation Area
9	Kissimmee Utility Authority Conservation Easement
10	Lake Runnymede Conservation Area
11	Makinson Island Conservation Area
12	Mud Lake Conservation Easement
13	Oak Street Extension Preserve
14	Paradise Island
15	Poinciana Scrub Conservation Area
16	Reedy Creek Mitigation Bank
17	Shingle Creek
18	Shingle Creek Regional Park
19	Southport Ranch Mitigation Bank
20	Southport Regional Park
21	Twin Oaks Conservation Area
22	Upper Lakes Basin Watershed

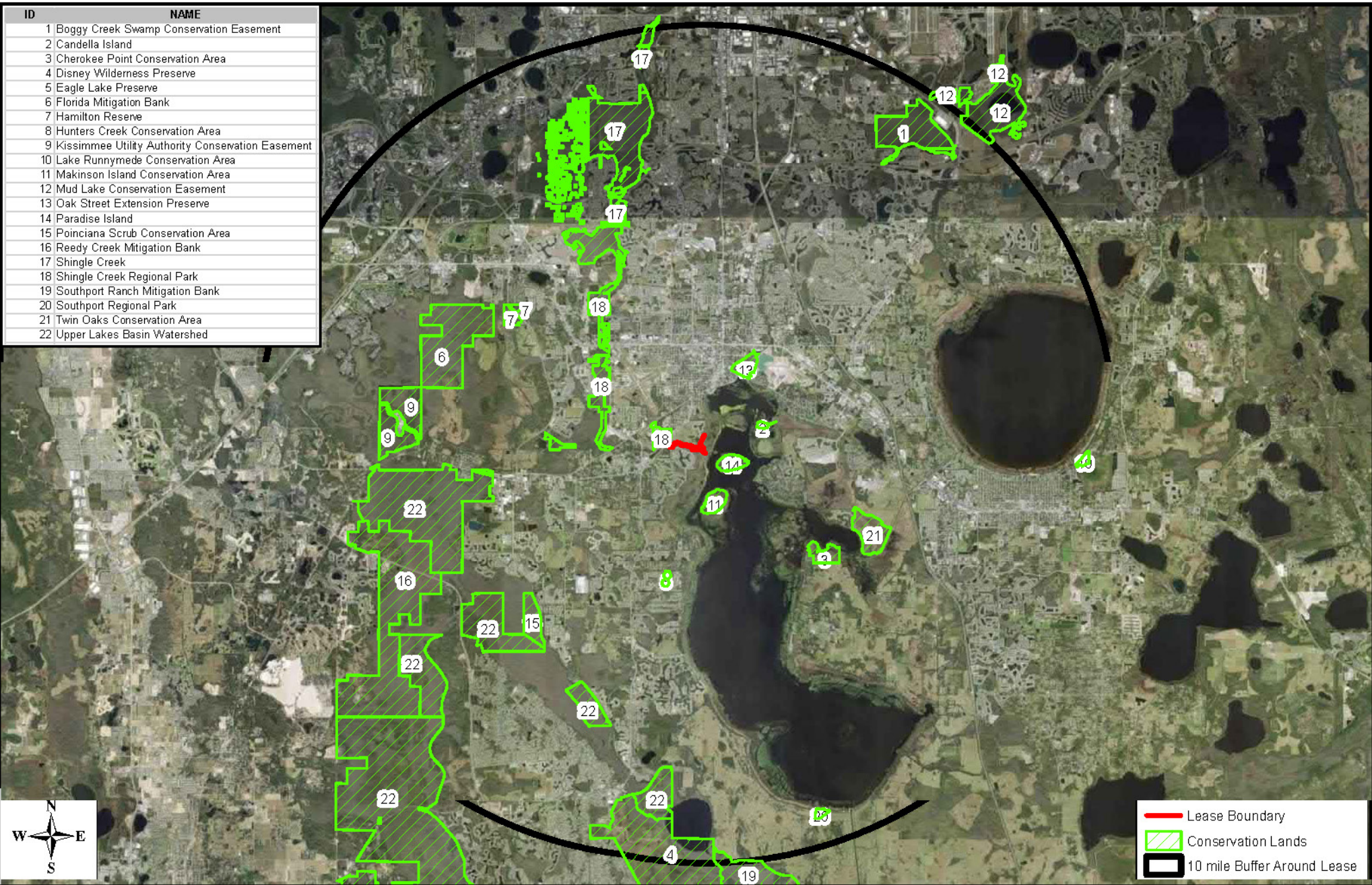


Figure 8: Conservation Lands within 10 Miles of Lease

Shingle Creek Lease Conservation Management Plan

City of Kissimmee



Project Number: 60668310  
 Date: 12/10/2021  
 Sources: ESRI 2020, FNAI - FMLA 2021

# Attachment 1 – Photographic Log





North



East



West



South

**AECOM**

AECOM Project #60668310  
December 2021

**Streams and Waterways (FLUCFCS Code: 510)**

Photo Location: 28°16'7"N, 81°25'29"W

Shingle Creek Lease  
Conservation Management Plan

City of Kissimmee, Parks Division



North



East



West



South



AECOM Project #60668310  
December 2021

**Cypress (FLUCFCS Code: 621)**  
Photo Location: 28°16'4"N, 81°24'52"W

Shingle Creek Lease  
Conservation Management Plan

City of Kissimmee, Parks Division



North



East



West



South

**AECOM**

AECOM Project #60668310  
December 2021

**Wetland Forested Mixed (FLUCFCS Code: 630)**

Photo Location: 28°16'9"N, 81°25'23"W

Shingle Creek Lease  
Conservation Management Plan

City of Kissimmee, Parks Division



North



East



West



South



AECOM Project #60668310  
December 2021

**Wetland Scrub (FLUCFCS Code: 631)**

Photo Location: 28°16'5"N, 81°24'55"W

Shingle Creek Lease  
Conservation Management Plan

City of Kissimmee, Parks Division



North



East



West



South

**AECOM**

AECOM Project #60668310  
December 2021

**Freshwater Marshes (FLUCFCS Code: 641)**

Photo Location: 28°16'13"N, 81°24'43"W

Shingle Creek Lease  
Conservation Management Plan

City of Kissimmee, Parks Division

## Appendix C

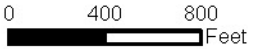
# Archaeological and Historic Sites

**Legend**

- Lease Boundary
- Site OS02618
- Site OS00024 Prehistoric Mounds
- Historic Surveys near Lease with Survey Number



**AECOM**



Project Number: 60668310  
 Date: 12/10/2021  
 Sources: ESRI 2020, SHPO 2021

**Archaeological and Historic Sites**  
 Shingle Creek Lease Conservation Management Plan  
 City of Kissimmee

Appendix D  
FNAI Standard Data Report





1018 Thomasville Road  
Suite 200-C  
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850-224-8207  
fax 850-681-9364  
www.fnai.org

Jay C Burrell  
AECOM  
150 North Orange Avenue, Suite 200  
Orlando, FL 32801

November 30, 2021

Dear Mr. Burrell,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). At your request we have produced the following report for your project area.

The purpose of this Standard Data Report is to provide objective scientific information on natural resources located in the vicinity of a site of interest, in order to inform those involved in project planning and evaluation. This Report makes no determination of the suitability of a proposed project for this location, or the potential impacts of the project on natural resources in the area.

**Project:** Shingle Creek Lease  
**Date Received:** 11/19/2021  
**Location:** Osceola County

### Element Occurrences

A search of our maps and database indicates that we currently have several element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

### Federally Listed Species

Our data indicate federally listed species are present on or very near this site, specifically Snail Kite (*Rostrhamus sociabilis*) (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

*The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.*

### Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.



Florida Resources  
and Environmental  
Analysis Center

Institute of Science  
and Public Affairs

The Florida State University

*Tracking Florida's Biodiversity*

*FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.*

*FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.*

*The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.*

### CLIP

The enclosed map shows natural resource conservation priorities based on the Critical Lands and Waters Identification Project. CLIP is based on many of the same natural resource data developed for the Florida Forever Conservation Needs Assessment, but provides an overall picture of conservation priorities across different resource categories, including biodiversity, landscapes, surface waters, and aggregated CLIP priorities (that combine the individual resource categories). CLIP is also based primarily on remote sensed data and is not intended to be the definitive authority on natural resources on a site.

For more information on CLIP, visit <https://www.fnai.org/services/clip>.

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit [www.fnai.org/species-communities/tracking-main](http://www.fnai.org/species-communities/tracking-main) for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. **The maps contain sensitive environmental information, please do not distribute or publish without prior consent from FNAI.** FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please contact me at (850) 224-8207 or at [kbrinegar@fnai.fsu.edu](mailto:kbrinegar@fnai.fsu.edu).

Sincerely,

*Kerri Brinegar*

Kerri Brinegar  
GIS / Data Services

Encl

# Shingle Creek Lease

Site boundaries are approximate.

# Osceola County





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### Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive

 Point Indicates General Vicinity of Element

 U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96

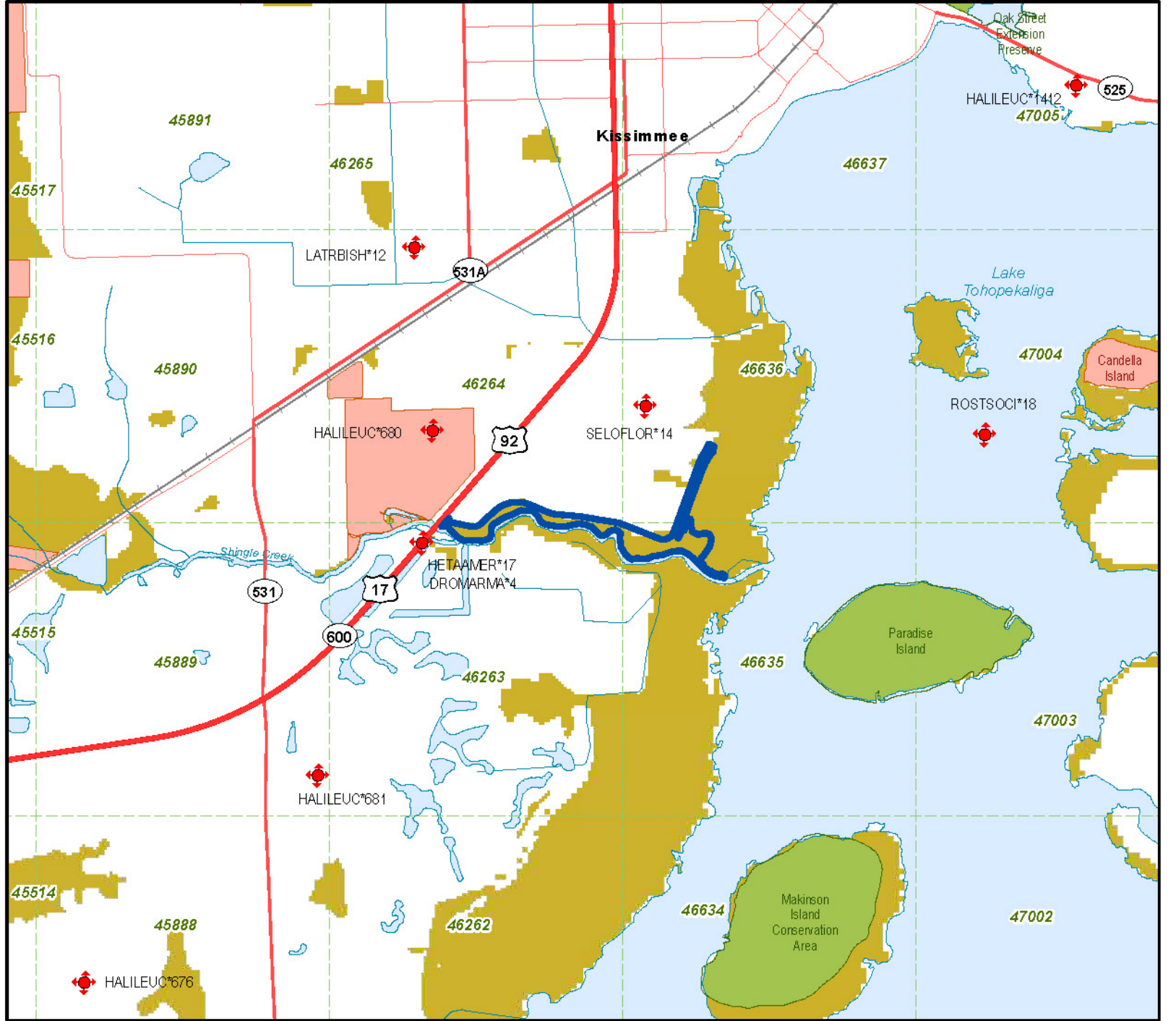
### Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

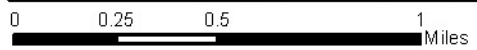


### Land Acquisition Projects

- Florida Forever Board of Trustees Projects
- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units
- County Boundary
- Roads
- Water



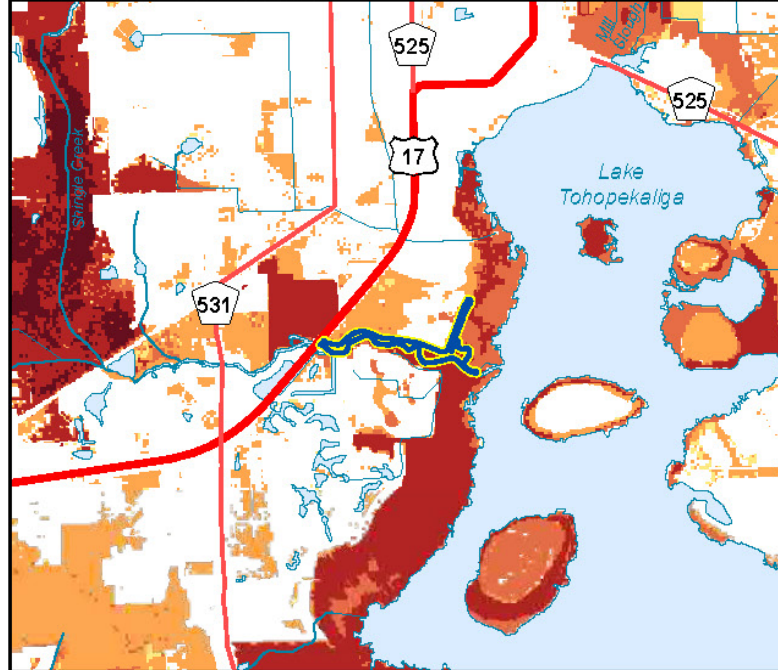
**NOTE**  
This map contains environmentally sensitive information. Please do not distribute or publish without prior consent from FNAI. Map should not be interpreted without accompanying documents.



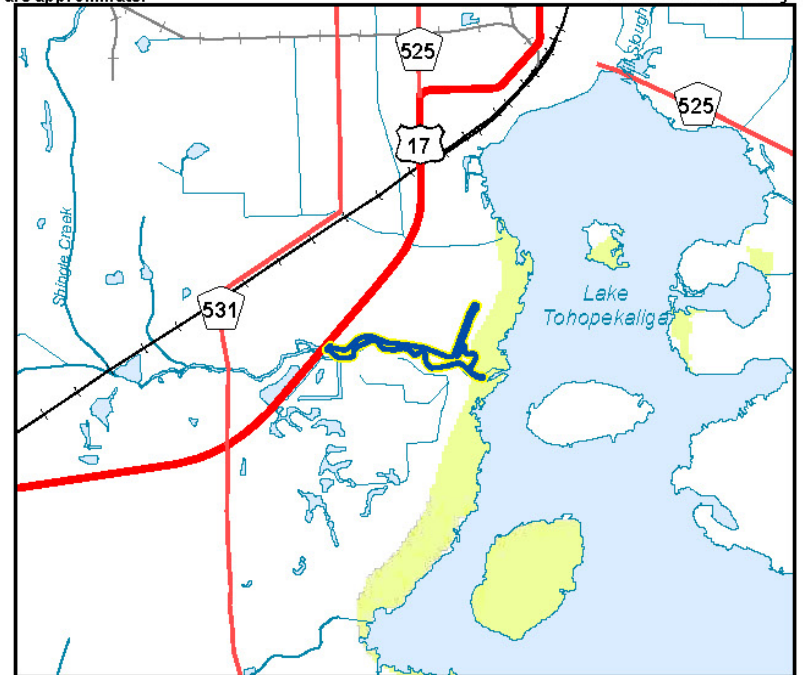
# Shingle Creek Lease

Site boundaries are approximate.

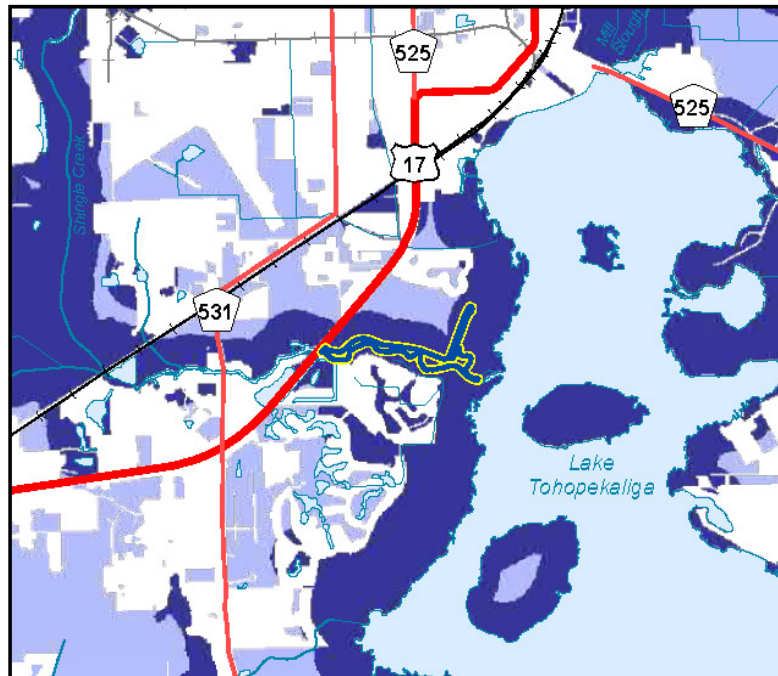
Osceola County



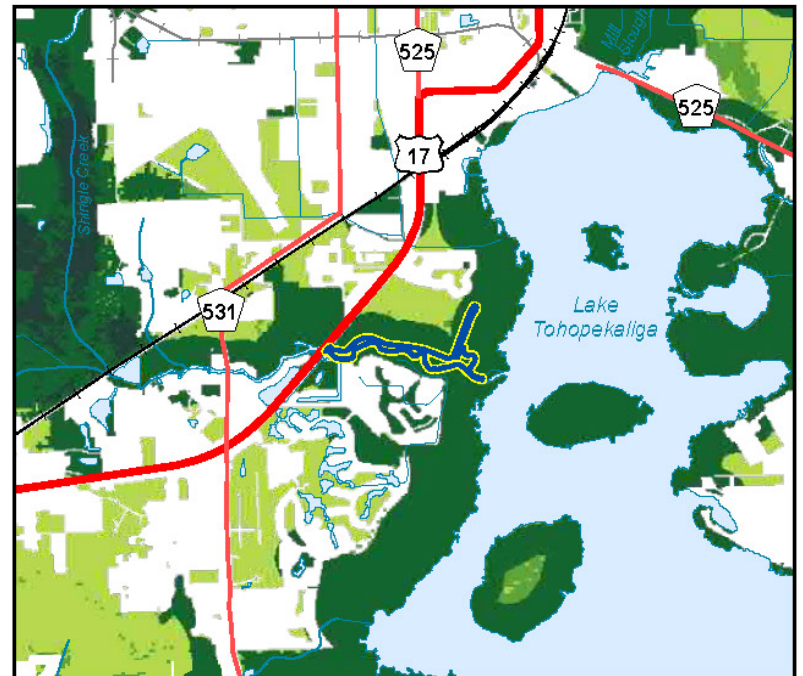
CLIP Biodiversity Resource Priorities



CLIP Landscape Resource Priorities



CLIP Surface Water Resource Priorities



CLIP Aggregated Resource Priorities

0 2.5 Miles

5 Miles



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## CLIP v4.0 Resource Priorities

### Biodiversity Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

### Landscape Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

### Surface Water Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

### Aggregated CLIP Priorities

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Site Boundary

Map should not be interpreted without accompanying documents.

Critical Lands and Waters Identification Project (CLIP) is a cooperative effort between the FSU Florida Natural Areas Inventory, UF Center for Landscape Conservation Planning, and FL Fish & Wildlife Conservation Commission, with additional funding from FL Dept of Environmental Protection and US Fish & Wildlife Service.

## FNAI ELEMENT OCCURRENCE REPORT on or near Shingle Creek Lease



<b>Map Label</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Federal Status</b>	<b>State Listing</b>	<b>Observation Date</b>	<b>Description</b>	<b>EO Comments</b>
DROMARMA*4	<i>Dromogomphus armatus</i>	Southeastern Spinyleg	G4	S3	N	N	1979-05-09	1979-05-09: No description given (U09DEP01FLUS).	1979-05-09: Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS).
HALILEUC*680	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	No general description given	Nest status 1999-2003: Active - 2003, 2001, 2000, 1999; Inactive - 2002; Status 1995-98: Active - 1997, 1996, 1995; Inactive - 1998; (U03FWC01FLUS). Previous data (note different format) NEST; 1995: PRODUCED 1 YOUNG; 1994: ACTIVE, PRODUCED 0 YOUNG; 1993: ACTIVE, PRODUCED 0 YOUNG; 1992: PRODUCED 1 YOUNG; 1991: ACTIVE BUT PRODUCED 0 YOUNG; 1990: ACTIVE BUT PRODUCED 0 YOUNG; 1989: PRODUCED 2 YOUNG.
HALILEUC*681	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	No general description given	Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) NEST; 1995: PRODUCED 2 YOUNG; 1994: PRODUCED 1 YOUNG; 1993: ACTIVE, PRODUCED 0 YOUNG; 1992: PRODUCED 1 YOUNG; 1991: PRODUCED 1 YOUNG; 1990: ACTIVE BUT PRODUCED 0 YOUNG.
HETAAMER*17	<i>Hetaerina americana</i>	American Rubyspot	G5	S2	N	N	1976-02-02	1976-02-02: No description given (U09DEP01FLUS).	1976-02-02: Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS).
LATRBISH*12	<i>Latrodectus bishopi</i>	Red Widow Spider	G2G3	S2S3	N	N	1965-04-02	1965-04-02: sand pine dune (U08ALM01FLUS).	1965-04-02: Four specimens were collected from palmetto in sand pine dune by M.H. Muma and H.L. Greene (U08ALM01FLUS).



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## FNAI ELEMENT OCCURRENCE REPORT on or near Shingle Creek Lease

Map Label	Scientific Name	Common Name	Global State Federal State Observation				Date	Description	EO Comments
			Rank	Rank	Status	Listing			
ROSTSOCI*18	<i>Rostrhamus sociabilis</i>	Snail Kite	G4G5	S2	E	FE	2006	Freshwater lake with a relatively narrow littoral zone.	2006: polygons classified as priority kite management area by U. S. Fish and Wildlife Service based on years of nesting data (U06FWS01FLUS). 1981-1992: Foraging and nesting site. Kites began nesting (recolonizing former nesting range) at Lake Tohopekaliga during the 1980s in response to droughts and low water levels in south Florida (Everglades and Lake Okeechobee). Considered a drought-related area (versus primary or secondary areas) by A89TAK01FLUS. Numbers of kites recorded in mid-winter surveys (November-December) from 1981 to 1992 range from 0-19 birds; mean number of kites from 1982-1991 = 18. EO not truly independent. Individuals may move among subjectively drawn EO boundaries.
SELOFLOR*14	<i>Selonodon floridensis</i>	Florida Cebrioid Beetle	G2G4	S2S4	N	N	1936-05-05	1936-05-05: No description given (B99GAL01FLUS).	1936-05-05: Two specimens were collected on this date and in April of 1887. There are undated records for 6 other specimens. (B99GAL01FLUS).



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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<b>Matrix Unit ID: 46263</b>					
<b>Likely</b>					
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	T	FT
<i>Rostrhamus sociabilis</i>	Snail Kite	G4G5	S2	E	FE
<b>Potential</b>					
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	ST
<i>Calamintha ashei</i>	Ashe's savory	G3	S3	N	T
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Centrosema arenicola</i>	sand butterfly pea	G2Q	S2	N	E
<i>Chionanthus pygmaeus</i>	pygmy fringe tree	G2	S2S3	E	E
<i>Coleataenia abscissa</i>	cutthroatgrass	G3	S3	N	E
<i>Deeringothamnus pulchellus</i>	beautiful pawpaw	G1	S1	E	E
<i>Dromogomphus armatus</i>	Southeastern Spinyleg	G4	S3	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eriogonum longifolium var. gnaphalifolium</i>	scrub buckwheat	G4T3	S3	T	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Hetaerina americana</i>	American Rubyspot	G5	S2	N	N
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Latrodectus bishopi</i>	Red Widow Spider	G2G3	S2S3	N	N
<i>Lechea cernua</i>	nodding pinweed	G3	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Lupinus aridorum</i>	scrub lupine	G3T1	S1	E	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3?	S3?	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Paronychia chartacea var. chartacea</i>	paper-like nailwort	G3T3	S3	T	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Plestiodon egregius lividus</i>	Blue-tailed Mole Skink	G5T2	S2	T	FT
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Polygala lewtonii</i>	Lewton's polygala	G2	S2	E	E
<i>Polygonella myriophylla</i>	Small's jointweed	G3	S3	E	E
<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2	N	T
<i>Puma concolor coryi</i>	Florida Panther	G5T1	S1	E	FE
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N
<i>Selonodon floridensis</i>	Florida Cebrionid Beetle	G2G4	S2S4	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
<i>Warea carteri</i>	Carter's warea	G1	S1	E	E

**Matrix Unit ID: 46264**

#### Documented

**Definitions:** Documented - Rare species and natural communities documented on or near this site.  
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.  
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.  
 Potential - This site lies within the known or predicted range of the species listed.



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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N
<b>Likely</b>					
<i>Mycteria americana</i>	Wood Stork	G4	S2	T	FT
<i>Rostrhamus sociabilis</i>	Snail Kite	G4G5	S2	E	FE
<b>Potential</b>					
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	ST
<i>Bonamia grandiflora</i>	Florida bonamia	G3	S3	T	E
<i>Calamintha ashei</i>	Ashe's savory	G3	S3	N	T
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Centrosema arenicola</i>	sand butterfly pea	G2Q	S2	N	E
<i>Chionanthus pygmaeus</i>	pygmy fringe tree	G2	S2S3	E	E
<i>Clitoria fragrans</i>	scrub pigeon-wing	G2G3	S2	T	E
<i>Coleataenia abscissa</i>	cutthroatgrass	G3	S3	N	E
<i>Deeringothamnus pulchellus</i>	beautiful pawpaw	G1	S1	E	E
<i>Dromogomphus armatus</i>	Southeastern Spinyleg	G4	S3	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eriogonum longifolium var. gnaphalifolium</i>	scrub buckwheat	G4T3	S3	T	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Hetaerina americana</i>	American Rubyspot	G5	S2	N	N
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Latrodectus bishopi</i>	Red Widow Spider	G2G3	S2S3	N	N
<i>Lechea cernua</i>	nodding pinweed	G3	S3	N	T
<i>Liatris ohlingerae</i>	Florida blazing star	G2	S2	E	E
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Lupinus aridorum</i>	scrub lupine	G3T1	S1	E	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3?	S3?	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Nolina brittoniana</i>	Britton's beargrass	G3	S3	E	E
<i>Paronychia chartacea var. chartacea</i>	paper-like nailwort	G3T3	S3	T	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Plestiodon egregius lividus</i>	Blue-tailed Mole Skink	G5T2	S2	T	FT
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Polygala lewtonii</i>	Lewton's polygala	G2	S2	E	E
<i>Polygonella myriophylla</i>	Small's jointweed	G3	S3	E	E
<i>Prunus geniculata</i>	scrub plum	G3	S3	E	E
<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2	N	T
<i>Puma concolor coryi</i>	Florida Panther	G5T1	S1	E	FE
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N

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 Potential - This site lies within the known or predicted range of the species listed.





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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Selonodon floridensis</i>	Florida Cebrionid Beetle	G2G4	S2S4	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
<i>Warea carteri</i>	Carter's warea	G1	S1	E	E

Matrix Unit ID: 46635

#### Likely

<i>Mycteria americana</i>	Wood Stork	G4	S2	T	FT
<i>Rostrhamus sociabilis</i>	Snail Kite	G4G5	S2	E	FE

#### Potential

<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	ST
<i>Calamintha ashei</i>	Ashe's savory	G3	S3	N	T
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Centrosema arenicola</i>	sand butterfly pea	G2Q	S2	N	E
<i>Chionanthus pygmaeus</i>	pygmy fringe tree	G2	S2S3	E	E
<i>Coleataenia abscessa</i>	cutthroatgrass	G3	S3	N	E
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eriogonum longifolium var. gnaphalifolium</i>	scrub buckwheat	G4T3	S3	T	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Latrodectus bishopi</i>	Red Widow Spider	G2G3	S2S3	N	N
<i>Lechea cernua</i>	nodding pinweed	G3	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Lupinus aridorum</i>	scrub lupine	G3T1	S1	E	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3?	S3?	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nolina brittoniana</i>	Britton's beargrass	G3	S3	E	E
<i>Paronychia chartacea var. chartacea</i>	paper-like nailwort	G3T3	S3	T	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Plestiodon egregius lividus</i>	Blue-tailed Mole Skink	G5T2	S2	T	FT
<i>Polygonella myriophylla</i>	Small's jointweed	G3	S3	E	E
<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2	N	T
<i>Puma concolor coryi</i>	Florida Panther	G5T1	S1	E	FE
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Selonodon floridensis</i>	Florida Cebrionid Beetle	G2G4	S2S4	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
<i>Warea carteri</i>	Carter's warea	G1	S1	E	E

Matrix Unit ID: 46636

#### Likely

<i>Mycteria americana</i>	Wood Stork	G4	S2	T	FT
<i>Rostrhamus sociabilis</i>	Snail Kite	G4G5	S2	E	FE

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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<b>Potential</b>					
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Athene cucularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	ST
<i>Bonamia grandiflora</i>	Florida bonamia	G3	S3	T	E
<i>Calamintha ashei</i>	Ashe's savory	G3	S3	N	T
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Centrosema arenicola</i>	sand butterfly pea	G2Q	S2	N	E
<i>Chionanthus pygmaeus</i>	pygmy fringe tree	G2	S2S3	E	E
<i>Coleataenia abscissa</i>	cutthroatgrass	G3	S3	N	E
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	scrub buckwheat	G4T3	S3	T	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Latrodectus bishopi</i>	Red Widow Spider	G2G3	S2S3	N	N
<i>Lechea cernua</i>	nodding pinweed	G3	S3	N	T
<i>Liatris ohlingerae</i>	Florida blazing star	G2	S2	E	E
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Lupinus aridorum</i>	scrub lupine	G3T1	S1	E	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3?	S3?	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Nolina brittoniana</i>	Britton's beargrass	G3	S3	E	E
<i>Paronychia chartacea</i> var. <i>chartacea</i>	paper-like nailwort	G3T3	S3	T	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Plestiodon egregius lividus</i>	Blue-tailed Mole Skink	G5T2	S2	T	FT
<i>Polygala lewtonii</i>	Lewton's polygala	G2	S2	E	E
<i>Polygonella myriophylla</i>	Small's jointweed	G3	S3	E	E
<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2	N	T
<i>Puma concolor coryi</i>	Florida Panther	G5T1	S1	E	FE
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Selonodon floridensis</i>	Florida Cebrionid Beetle	G2G4	S2S4	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
<i>Warea carteri</i>	Carter's warea	G1	S1	E	E

**Definitions:** Documented - Rare species and natural communities documented on or near this site.  
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.  
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.  
 Potential - This site lies within the known or predicted range of the species listed.

## Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

## Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

### **FNAI GLOBAL ELEMENT RANK**

- G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** = Apparently secure globally (may be rare in parts of range).
- G5** = Demonstrably secure globally.
- GH** = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX** = Believed to be extinct throughout range.
- GXC** = Extirpated from the wild but still known from captivity or cultivation.
- G#?** = Tentative rank (e.g., G2?).
- G#G#** = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T#** = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q** = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q** = Same as above, but validity as subspecies or variety is questioned.
- GU** = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA** = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR** = Element not yet ranked (temporary).
- GNRTNR** = Neither the element nor the taxonomic subgroup has yet been ranked.

### **FNAI STATE ELEMENT RANK**

- S1** = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2** = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3** = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4** = Apparently secure in Florida (may be rare in parts of range).
- S5** = Demonstrably secure in Florida.
- SH** = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX** = Believed to be extirpated throughout Florida.
- SU** = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA** = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR** = Element not yet ranked (temporary).

## **FEDERAL LEGAL STATUS**

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

**C** = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

**E** = Endangered: species in danger of extinction throughout all or a significant portion of its range.

**E, T** = Species currently listed endangered in a portion of its range but only listed as threatened in other areas

**E, PDL** = Species currently listed endangered but has been proposed for delisting.

**E, PT** = Species currently listed endangered but has been proposed for listing as threatened.

**E, XN** = Species currently listed endangered but tracked population is a non-essential experimental population.

**T** = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

**PE** = Species proposed for listing as endangered

**PS** = Partial status: some but not all of the species' infraspecific taxa have federal

**PT** = Species proposed for listing as threatened

**SAT** = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

**SC** = Not currently listed, but considered a "species of concern" to USFWS.

## **STATE LEGAL STATUS**

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

**Animals:** Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

**C** = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service

**FE** = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

**FT** = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

**FXN** = Federal listed as an experimental population in Florida

**FT(S/A)** = Federal Threatened due to similarity of appearance

**ST** = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

**SSC** = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC\* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)

**N** = Not currently listed, nor currently being considered for listing.

**Plants:** Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

**E** = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

**T** = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

**N** = Not currently listed, nor currently being considered for listing.

## Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

- A** = Excellent estimated viability
- A?** = Possibly excellent estimated viability
- AB** = Excellent or good estimated viability
- AC** = Excellent, good, or fair estimated viability
- B** = Good estimated viability
- B?** = Possibly good estimated viability
- BC** = Good or fair estimated viability
- BD** = Good, fair, or poor estimated viability
- C** = Fair estimated viability
- C?** = Possibly fair estimated viability
- CD** = Fair or poor estimated viability
- D** = Poor estimated viability
- D?** = Possibly poor estimated viability
- E** = Verified extant (viability not assessed)
- F** = Failed to find
- H** = Historical
- NR** = Not ranked, a placeholder when an EO is not (yet) ranked.
- U** = Unrankable
- X** = Extirpated

\*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

- H?** = Possibly historical
- F?** = Possibly failed to find
- X?** = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

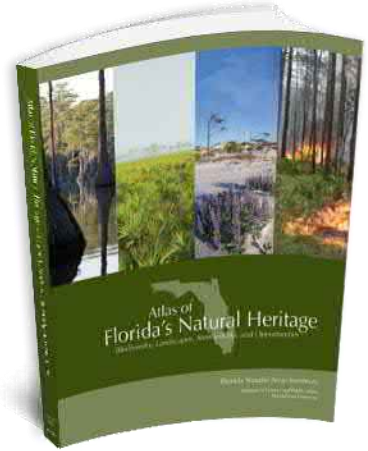
The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).



# Atlas of Florida's Natural Heritage

*Biodiversity, Landscapes, Stewardship, and Opportunities*

The Florida Natural Areas Inventory is pleased to announce the publication of the ***Atlas of Florida's Natural Heritage: Biodiversity, Landscapes, Stewardship, and Opportunities***. This high-quality, full-color *Atlas* is sure to become a standard reference for anyone involved in the conservation, management, study, or enjoyment of Florida's rich natural resources. We hope the *Atlas* will inspire, educate, and raise awareness of and interest in biodiversity and conservation issues.



Learn more about the Atlas, view sample pages and order your copy today at:  
<https://www.fnai.org/publications/atlas-natural-heritage>

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<http://fnai.blogspot.com/>

and



## Appendix E

# Exotic Vegetation Management Plan

# Exotic Vegetation Management Plan

## Shingle Creek Lease

### Conservation Management Plan

#### Osceola County, Florida

**Submitted to:**

City of Kissimmee, Parks Division  
101 Church Street  
Kissimmee, FL 34741

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AECOM Project No.: 60668310

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Figure 1: Location Map

Figure 2: Lease Area

Figure 3: Land Use/Land Cover

### List of Attachments

Attachment 1: Verification of Exemption Request Form

## 1.0 Introduction

### 1.1 Lease Area Location

The 35.14-acre Shingle Creek Lease (Lease Number 4822) property is located east of South John Young Parkway (US-17), west of Lake Tohopekaliga and north of Shingle Creek in Sections 32 and 33, Township 25 South, Range 29 East, City of Kissimmee, Osceola County, Florida. The lease area includes the following parcels: R322529-00U000400000, R332529-00U000110000, and R332529-00U000120000. Approximate central coordinates are Latitude 28.26801°, Longitude -81.41425°. A location map is provided as **Figure 1**.

### 1.2 Proposed Lease Area Use

The City of Kissimmee (City) is proposing to extend the Shingle Creek Regional Trail to connect existing bicycle facilities and eliminate gaps in the City's current bicycle network. The lease area to be managed by the City for the trail is presented in **Figure 2**.

### 1.3 Existing Conditions

The lease area contains nuisance and exotic plant species in varying densities. Nuisance and exotic plant species are abundant in all vegetative communities at an estimated vegetative cover of greater than 20 percent. Nuisance and exotic vegetation observed in the canopy stratum includes camphortree (*Cinnamomum camphora*), Chinese tallowtree (*Triadica sebifera*), and mimosa (*Albizia julibrissin*). Nuisance and exotic species observed in the shrub and groundcover/aquatic strata include Brazilian pepper (*Schinus terebinthifolia*), scratchthroat (*Ardisia crenata*), Chinese privet (*Ligustrum sinense*), caesarweed (*Urena lobata*), rattlebox (*Sesbania punicea*), creeping oxeye (*Sphagneticola trilobata*), air-potato (*Dioscorea bulbifera*), small-leaf climbing fern (*Lygodium microphyllum*), balsampear (*Momordica charantia*), water spangles (*Salvinia minima*), common water-hyacinth (*Eichhornia crassipes*), and wild taro (*Colocasia esculenta*).

The eradication of nuisance and exotic vegetation from wetlands and surface waters is generally exempt from state environmental permitting requirements. The methodology associated with eradication needs to be examined further to determine if an exemption verification is needed. The application/injection of herbicide would be considered exempt because that activity does not require removal of the vegetation. If hand and/or machine removal of vegetation in wetlands or other surface waters is required, it is recommended that the City submit a request for exemption verification. Under 373.406(6) Florida Statutes, the Florida Department of Environmental Protection (FDEP) can exempt activities that the department determines will have only minimal or insignificant individual or cumulative adverse

impacts on the water resources of the district. An exemption verification form should be submitted to the FDEP to obtain approval. This form is included as **Attachment 1**.

A state permit is not required for exotic removal in uplands. Vegetation removal is exempt from federal permitting.

## 2.0 Nuisance and Exotic Treatment Plan

The nuisance and exotic treatment plan is discussed below.

### 2.1 Mechanical Removal

Exotic trees could be treated using a forestry mulcher. A skidsteer, with a mulching head, could be used to mulch the exotic trees that are easily accessible. The trees would be mulched to the ground surface. Much of the exotics are within the dense, forested wetlands of the site; therefore, the forestry mulcher would have limited use beyond the existing upland berm.

Wetland habitats occur on site as depicted in **Figure 3**. Typically, exotic vegetation must be physically removed from wetland habitat. The state may consider mulched or vegetative debris left within wetlands as fill. Therefore, vegetative debris should be removed from wetlands. Trees mulched within uplands can be left in place.

Alternatively, the City could use a trackhoe, with a thumb attachment, to remove the exotic trees from both upland and wetland habitats. Using a cut stump method, the exotic trees would be cut within 6 inches of the ground surface. Herbicide, approved for use in or near aquatic sites, for woody vegetation (i.e., triclopyr 4) would be applied to the remaining stump. The application of herbicide should be made and/or overseen by a state approved herbicide applicator.

During the dry season, a trackhoe may be used in the wetland habitat to remove exotic vegetation. Mechanical operation should be avoided during the wet season to avoid rutting and disturbance of the ground surface. Equipment can be staged in the upland buffer of wetlands and a cabling method can be used to remove exotic vegetation from wetland habitat. Vegetative debris could be gathered in upland habitat and mulched in place or removed from the site.

It is recommended that an additional herbicide application occur 6 months after the initial treatment and then annually thereafter to maintain the site free of exotic vegetation.

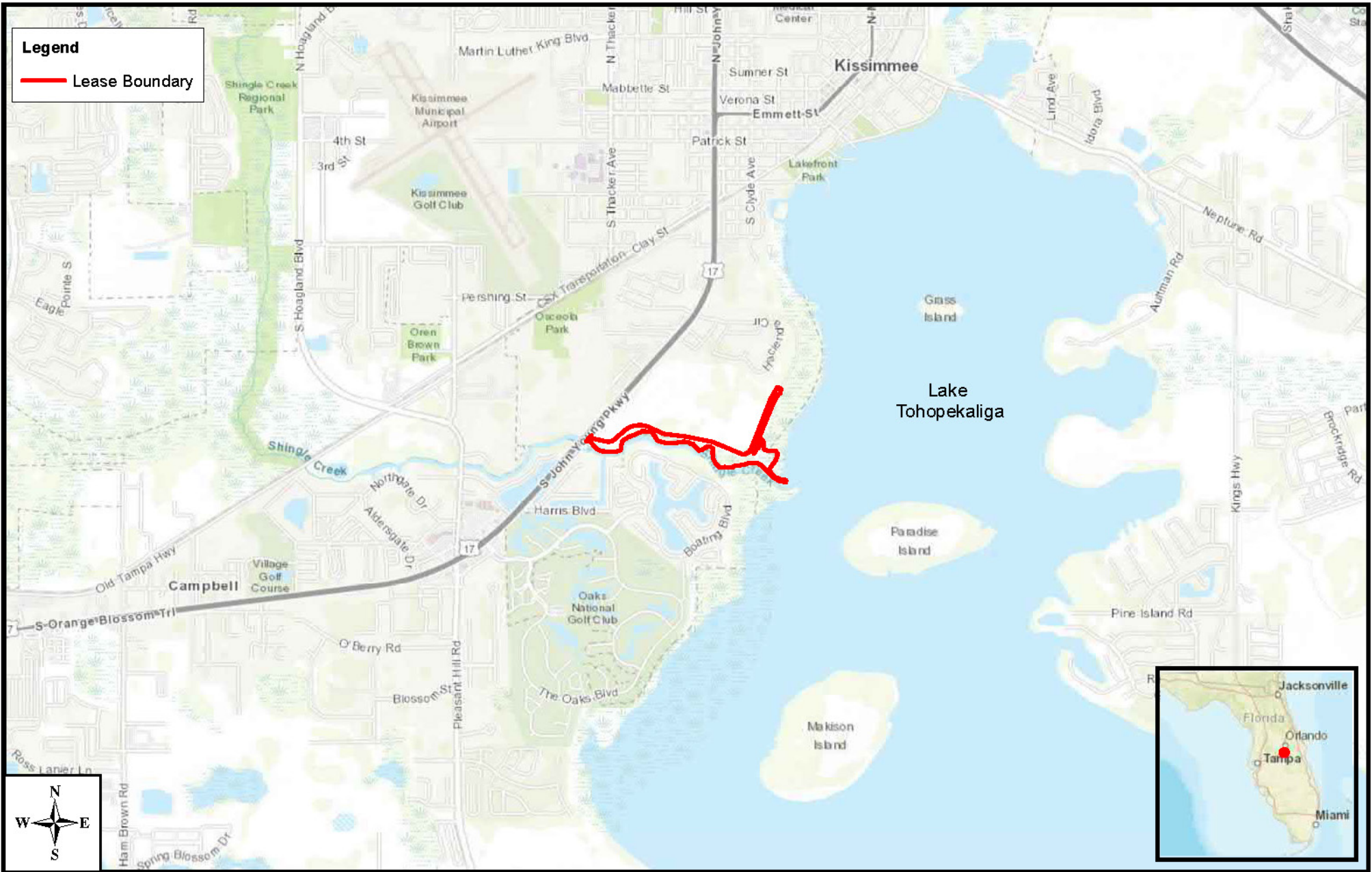
## 2.2 Kill in Place Treatment

The exotic tree species can be treated through kill in place treatment in uplands by the application of an approved herbicide. Herbicide can be applied using a frill or girdle treatment or basal bark treatment. Frill and girdle require cuts to be made in the tree to expose the cambium layer. The cuts are made around the entire circumference of the tree. Herbicide is then applied to the exposed cambium layer. Basal bark treatment should be used on trees with a diameter of 6 inches or less. With basal bark treatment, herbicide is directly applied to the bark of the tree. Using both methods, the tree would remain on site and the debris would decay over time. These two herbicide application methods are more labor intensive than mechanical removal but would limit impacts to surrounding native vegetation.

Kill in place treatment would generate vegetative debris that would be considered fill in wetlands. Therefore, the kill in place treatment should not be used to treat dense stands of exotics in wetland habitat.

Shrubs and herbaceous species can be treated through several foliar applications of a glyphosate-based herbicide. Glyphosate has been an effective herbicide used to control invasive plants within wetlands and aquatic systems. These herbicides are systemic (move throughout plant tissue) so care must be exercised to minimize damage to adjacent native vegetation. Multiple applications may be required for complete control.

# Figures



**Legend**  
— Lease Boundary



**AECOM** 0 1,500 3,000 Feet

Project Number: 60668310

Date: 12/10/2021

Sources: ESRI, USGS

**Figure 1: Location Map**

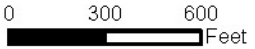
Shingle Creek Lease Conservation Management Plan

City of Kissimmee

**Legend**  
— Lease Boundary



**AECOM**



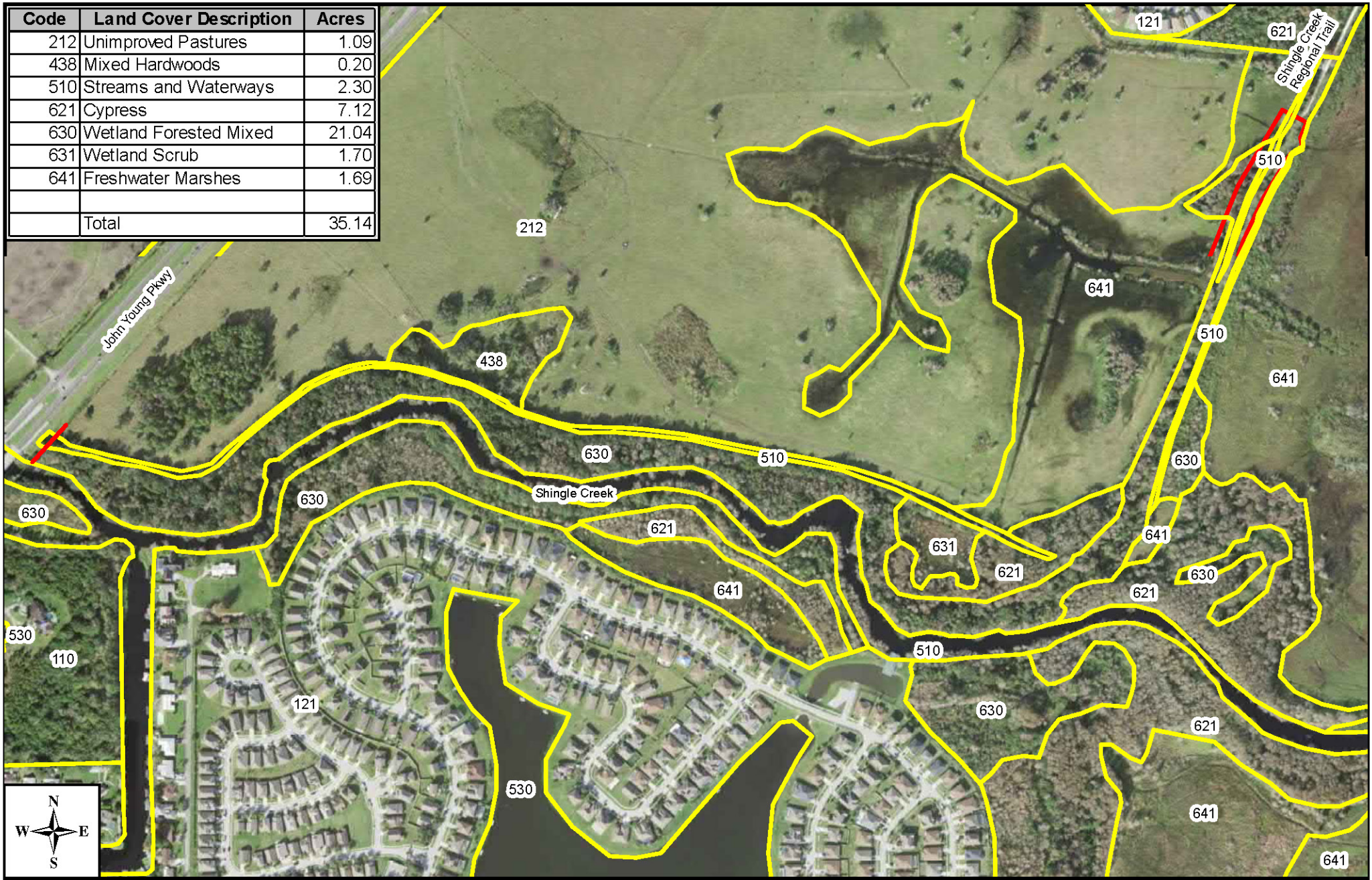
Project Number: 60668310  
Date: 12/10/2021  
Sources: ESRI 2020

**Figure 2: Lease Area**

Shingle Creek Lease Conservation Management Plan

City of Kissimmee

Code	Land Cover Description	Acres
212	Unimproved Pastures	1.09
438	Mixed Hardwoods	0.20
510	Streams and Waterways	2.30
621	Cypress	7.12
630	Wetland Forested Mixed	21.04
631	Wetland Scrub	1.70
641	Freshwater Marshes	1.69
	Total	35.14



**AECOM**



Legend	
	Lease Boundary
	Land Use / Land Cover

Project Number: 60668310  
 Date: 12/13/2021  
 Sources: ESRI, SFWMD 2020 / AECOM 2021

Figure 3: Land Use/Land Cover  
 Shingle Creek Lease Conservation Management Plan  
 City of Kissimmee



## Attachment 1

### Verification of Exemption Request Form

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# Request for Verification of an Exemption

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**Instructions:** This form is used to request verification whether an activity qualifies for an exemption from the Environmental Resource Permit (ERP) requirements of Sections 373.406 or 403.813(1) of the Florida Statutes (F.S.) and Rule 62-330.051 of the Florida Administrative Code (F.A.C.). Alternatively, you can use the on-line self-certification site of the applicable Agency for activities that qualify for a self-certification (see below).

Notice is **not required** to conduct most exempt activities. However, verification of such qualification is helpful for the following reasons:

- Certain projects may qualify for the State Programmatic General Permit (SPGP). If the project qualifies for and receives SPGP authorization, you do not need to apply separately to the Corps; and
- To provide assurance to persons who are unsure whether the requested work qualifies for an exemption. If it does not, the information provided will expedite the process of applying for the applicable ERP permit.

Prior notice to the Agency **is required** before conducting one or more of the following:

- Activities having minimal impact under Section 373.406(6), F.S., often referred to as a “*de minimis*” exemption.
- Maintenance dredging under Section 403.813(1)(f), F.S., and paragraph 62-330.050(7)(a), F.A.C., when the dredging is within previously dredged portions of natural water bodies within drainage rights-of-way or drainage easements which have been recorded in the public records of the county.
- The repair, stabilization, or paving of existing county-maintained roads and the repair or replacement of bridges that are part of the roadway under Section 403.813(1)(t), F.S., and paragraph 62-330.050(4)(e), F.A.C.
- Removal by an individual, residential property owner of organic detrital material from freshwater rivers or lakes that have a natural sand or rocky substrate and that are not located in an Aquatic Preserve under Section 403.813(1)(u), F.S., and paragraph 62-330.050(3)(b), F.A.C.
- Maintenance dredging at seaports under Section 403.813(3), F.S., and paragraph 62-330.050(7)(g), F.A.C.
- Minor silvicultural surface water management systems under Rule 62-330.0511, F.A.C. (Note—do not use THIS form for that notice; instead use the procedures in Rule 62-330.0511, F.A.C.)
- Dry borrow pits of less than five acres located entirely in uplands in accordance with subsection 62-330.051(16), F.A.C.

Exempt activities on state-owned submerged lands (SSL), other than those excepted in paragraph 18-21.0051(1)(a), F.A.C., must also be authorized by the Board of Trustees of the Internal Improvement Trust Fund (BOT). Authorization to use SSL is not linked with regulatory exemptions; therefore, it is possible to qualify for a regulatory exemption, yet not be authorized to conduct the activity until the separate SSL authorization is granted. If an activity may be located in, on, or over SSL, we recommend completing Section F of the Environmental Resource Permit Application form.

Requests to “self-certify” a private, single-family dock or a boat lift associated with such a dock must be submitted to the Department’s Internet site at: <http://www.fldeportal.com/go/> and CANNOT be made using this form. However, requests to verify construction of a dock or boat lift that does not qualify for self-certification may be made using this form.

Any submittal requesting verification of an exemption must also include:

- Location map(s) of sufficient detail to allow someone who is unfamiliar with the site to travel to and locate the specific site of the activity.
- One set of plans and drawings, calculations, environmental information, and other supporting documents that clearly and legibly depict and describe the proposed activities in sufficient detail to demonstrate that the work qualifies for the exemption.
- The required fee.



**We recommend contacting your local Corps district office if your project does not qualify for the State Programmatic General Permit (SPGP) and you are not sure whether the project requires separate Corps authorization. If Corps authorization is required, you will need to submit the appropriate federal application form separately to the Corps. Corps contact information may be found online in the Jacksonville District Regulatory Division website.**

**Please identify the exemption you are requesting to use:**

- Subsection/Paragraph 62-330. ( ), F.A.C.
- Section 373.406(6), F.S. (known as the "*de minimis*" exemption — see section 3.2.7(c) of Applicant's Handbook Volume I for additional information)
- Section 373.406( ), F.S.
- Section 373.4145(6) ( ), F.S. (for certain "grandfathered" activities in the Panhandle of Florida)
- Section 403.813(1)( ), F.S. (generally, "dredge and fill" exemptions)
- I do not know the exemption number

Please provide numbers for additional or other exemptions if you are requesting to use more than one:

**Part 1: General Information**

**A. Contact**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ Middle: \_\_\_\_\_

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

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

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

Home Telephone: \_\_\_\_\_ Work Telephone: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

**Correspondence will be sent via email, unless you check here to receive it via US Mail:**

**B. Land Owner(s) (if different or in addition to contact identified above)**

Last Name: First Name: Middle:

Title: Company:

Address:

City: State: Zip:

Home Telephone: Work Telephone:

Cell Phone:

E-mail Address:

**Correspondence will be sent via email**, unless you check here to receive it via US Mail:

**C. Consultant/Agent (if different or in addition to contact identified above)**

Last Name: First Name: Middle:

Title: Company:

Address:

City: State: Zip:

Home Telephone: Work Telephone:

Cell Phone:

E-mail Address:

**Correspondence will be sent via email**, unless you check here to receive it via US Mail:

**D. Location of Proposed Activities**

Tax Parcel Identification Number:

Address:

City: County: Zip:

Latitude (DMS) ° ' " Longitude (DMS) ° ' "

**E. Name of Project** (if there is one):

**F. Date Activity is Proposed:** To Commence: To be Completed:

**G. Proposed Activities** (be specific; use additional sheets as necessary)

Describe in general terms the proposed project, system, or activity (including materials to be used and construction methods), and means of accessing the property (for construction, maintenance, and inspections, including any need for an access easement):

**H. Is any work proposed in wetlands or other surface waters?**  Yes  No. If yes, please specifically describe, with specific references as to how the limits of the proposed work will comply with the terms and conditions of the above exemption:

**I.** Please provide a description of all **sediment and erosion controls** to be used during the completion of this activity (such as use of turbidity screens and silt fences):

## **Part 2: Acknowledgement**

I understand this form is being provided solely to seek verification of qualification to use one or more Environmental Resource Permit (ERP) exemption(s), and that I am NOT requesting the Agency to process this form as an application for a permit.

I understand that the Agency will make a reasonable effort to determine, within 30 days of receipt of this form, whether the proposed activities qualify for an exemption. If they do not, the Agency will provide its determination that the requested activity does not meet the terms and conditions of an ERP exemption, at which time I may provide a new form with additional or modified information, or I may submit an application for an ERP. In either case, denial of qualification to use an exemption will be made without prejudice, pending submittal of clarification of any errors or omissions contained in this form or other information that demonstrates compliance with the terms and conditions of the exemption.

Typed/Printed Name:

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

Date:

### **Certification of Sufficient Real Property Interest and Authorization for Staff to Access to the Property:**

**I certify that:**

I, or the person I represent, hereby certify that I, or that person, possess sufficient real property interest in or control, as defined in **Section 4.2.3(d) of Applicant's Handbook Volume I**, over the land upon which the activities described in this form are proposed, and that I have, or that landowner has given me, legal authority to grant permission for staff of the Agency to access, inspect, and sample the lands and waters of the property as necessary for the review of the proposed activities specified in this form. If such sufficient real property interest is based on an entity having *the power of eminent domain and condemnation authority*, I/we shall make appropriate arrangements to enable staff of the Agency to access, inspect, and sample the property as described above.

Typed/Printed Name:

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

Date:

(Corporate Title if applicable):

## **Part 3: Submittal and Fees**

This form and the appropriate fee should be submitted to the agency having regulatory authority for the activity. Operating Agreements between the Department and the water management districts spell out which agency will process any given application. For more information go to <https://floridadep.gov/water/submerged-lands-environmental-resources-coordination/content/submitting-erp>.

This form may be submitted online; to do so, follow the online submittal requirements of the agency:

- **Florida Department of Environmental Protection:**  
<http://www.fldepportal.com/go/>
- **Northwest Florida Water Management District:**  
<https://permitting.sjrwmd.com/nwepermitting/jsp/start.jsp>
- **Suwannee River Water Management District:**  
<https://permitting.sjrwmd.com/srepermitting/jsp/start.jsp>
- **St. Johns River Water Management District:**  
<https://permitting.sjrwmd.com/epermitting/jsp/AccountOverview.do?command=init>
- **Southwest Florida Water Management District:**  
<http://www.swfwmd.state.fl.us/permits/epermitting/>
- **South Florida Water Management District:**  
<http://my.swfwmd.gov/ePermitting/MainPage.do>

If submitting a paper version of this form, please see (Appendix A) of the Environmental Resource Permit Applicant's Handbook Volume I for submittal locations.