

ITEM 5:

Consider a 10-year update to the Weeki Wachee Springs State Park Management Plan (Lease No. 4817).

LOCATION:

Pinellas County

APPLICANT:

Division of Recreation and Parks (DRP)

STAFF REMARKS:

Background

Weeki Wachee Springs State Park (WWSSP) is in Hernando County, accessible by U.S. 19 and consists of approximately 927 acres. Approximately 509 acres are owned by the Southwest Florida Water Management District and leased to DRP. The remaining 418 acres are owned by the Board of Trustees of the Internal Improvement Trust Fund and leased to DRP through submerged land lease #270345153 and upland lease #4817. Weeki Wachee Springs State Park was established in 2008.

WWSSP is a cultural icon that represents the early days of the tourism economy in Florida. The world-famous roadside attraction had its official grand opening in 1947 after a group of investors fulfilled the dream of creating a place where tourists could marvel at real-life mermaids performing underwater acrobatics in the crystal-clear waters of Weeki Wachee Springs. This vision was accomplished through the underwater skills and innovations of Newton Perry and the architectural brilliance of Robert E. Collins. Today, the Underwater Theater at Weeki Wachee Springs remains one of the state's most remarkable feats of engineering, architecture, and entertainment.

Management Plan Overview

The Florida Natural Areas Inventory has identified fourteen distinct natural community types and three altered landcover types at WWSSP. The predominant natural community is scrub followed by hydric hammock. Eight species of imperiled plants and fourteen species of imperiled animals have been identified at WWSSP.

The Division of Historical Resources maintains a Master Site File that documents many of Florida's archaeological and historical features. Two resource groups, fifteen archaeological site, and thirty-one historic structures have been identified at WWSSP.

The hundreds of thousands of visitors that visit WWSSP every year are attracted to the park by three main recreational features: the underwater mermaid shows at the Mermaid Theater, waterpark activities at Buccaneer Bay, and paddling trips on the Weeki Wachee River. Interpretation and shows are the main recreational uses at the attraction area, the area of the park in which the Mermaid Theater is located. The underwater mermaid show is the main attraction in this area, but there are also other interpretive opportunities such as the wildlife shows at the wildlife theater and interpretive boat tours that transport visitors along a segment of the Weeki Wachee River. A gift shop, small concession, and full-service restaurant supplement the day use recreational activities taking place at the attraction area. Buccaneer Bay was developed in 1982

prior to the establishment as Weeki Wachee Springs State Park and provides typical waterpark amenities. The waterpark contains three waterslides, springhead swimming area, splash pool area, food and beverage concession, tiki bar, inflatable tube rental, beach lounging area, and two shaded pavilion structures. The third major attraction for the park is paddling the Weeki Wachee River. This recreational opportunity allows visitors to launch their own paddling vessel or offers concession-managed rental vessels.

The Florida Legislature requires that all land management plans include long and short-term goals. These goals must be measurable objectives, and short-term goals must be achievable within a two-year planning period. Pursuant to section 253.034, Florida Statutes, the Division of State Lands began compiling the short-term goals from each land management plan approved since July 1, 2016. The Division has included short-term goals from this management plan as part of this item.

While the 10-year management plan serves as the basic statement of policy and future direction for each park, several annual work plans provide more specific guidance for DRP staff to accomplish many of the resource management goals and objectives of the park. Where such detailed planning is appropriate to the character and scale of the park’s natural resources, annual work plans are developed for prescribed fire management, exotic plant management and imperiled species management. Annual or longer-term work plans are developed for natural community restoration and hydrological restoration.

Public Involvement

DRP solicited public input by conducting a public workshop and advisory group meeting on October 22, 2019. In November and December of 2019, an online survey was shared to further gather public input and recommendations. The survey received 1,868 responses. An additional open-house public meeting and advisory group was held on December 9, 2021. The purpose of the workshop was to present the management plan to the public. The purpose of the advisory group meeting was to provide the Advisory Group members the opportunity to review and discuss the management plan. The majority of discussions from the advisory group and interested residents was the overall management of the river.

Surplus Lands

The evaluation by the DRP determined that no portion of the WWSSP is recommended for a potential surplus designation.

State Land Management Review Team

This State Park has not been subject to a review by an inter-agency land management review team. Prior to 2018, the park did not contain any upland Board of Trustees lands.

STAFF RECOMMENDATION:

Approve the management plan.

ARC RECOMMENDATION:

- APPROVE**
- APPROVE WITH MODIFICATIONS:** _____
- DEFER**
- WITHDRAW**

NOT APPROVE

OTHER: _____

Weeki Wachee Springs State Park

Land Management Plan Short Term Goals

Goal (ST)	Details of Goal	Objective	Details of Objective	Action	Details of Action	Measures
IV	Restore and maintain the natural communities/habitats of the park.	A	Develop and implement a point bar restoration plan for the spring-run stream.	n/a	n/a	Restoration plan developed
VI	Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.	B	Develop a comprehensive invasive management plan for the park.	n/a	n/a	EPM plan developed
VI	Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.	C	Maintain and publish the landscaping manual for the park.	n/a	n/a	Landscaping manual published
X	Prevent resource degradation from user impacts and maintain a high-quality visitor experience.	A	Develop and implement visitor use management monitoring protocol.	n/a	n/a	Monitoring protocol developed
X	Prevent resource degradation from user impacts and maintain a high-quality visitor experience.	B	Improve education and interpretation.	n/a	n/a	# of new interpretation
X	Prevent resource degradation from user impacts and maintain a high-quality visitor experience.	C	Maintain paddle launch capacities at 280 vessels per day.	n/a	n/a	# of vessels launched per day

Source: Florida DEP, Office of Environmental Services

Executive Summary

Weeki Wachee Springs State Park is a cultural icon that represents the early days of the tourism economy in Florida. The world-famous roadside attraction had its official grand opening in 1947 after a group of investors fulfilled the dream of creating a place where tourists could marvel at real-life mermaids performing underwater acrobatics in the crystal-clear waters of Weeki Wachee Springs. This vision was accomplished through the underwater skills and innovations of Newton Perry and the architectural brilliance of Robert E. Collins. Today, the Underwater Theater at Weeki Wachee Springs remains one of the state's most remarkable feats of engineering, architecture, and entertainment.

Newton Perry was an accomplished swimmer and underwater performer who had previously worked at both Silver Springs and Wakulla Springs. Perry was well-known in the film industry as a consultant for underwater scenes and was highly involved with movies being shot at all three locations. It was Perry who devised the underwater airlock (ca. 1956) and air hoses that allowed the performers to remain underwater for long periods of time without needing to surface for air.

The iconic Underwater Theater was the creation of architect Robert E. Collins. The original theater was completed in 1947 and early iterations of the underwater shows entertained audiences for 12 years until the American Broadcasting Company (ABC) purchased the themed attraction and began a complete renovation of the theater in 1959 to accommodate larger audiences. This is when Collins added the iconic clamshell roof, tile fish mosaics, auditorium seating, and 6-foot glass windows.

The visible groundwater features of the park consist primarily of the Weeki Wachee headspring and the smaller magnitude Twin Dees Spring. These two springs, together with several smaller springs outside the park make up the Weeki Wachee Springs Complex. The combined flow of these springs and the tributaries they feed make up the Weeki Wachee River. Weeki Wachee Spring is one of 33 first magnitude springs in Florida. To be classified as a first magnitude spring, median discharge of water must be at least 100 cubic feet/second (cfs). Discharge data from the 1931-2015 period of record indicate an average discharge of 171 cfs from the main spring.

Circa 1949 – Credit: Florida Memory



VISIT THIS OUTSTANDING FLORIDA GULF COAST ATTRACTION! NO ONE HAS BEEN DISAPPOINTED!

Weeki Wachee Springs State Park

Central Park Theme

The enchanting waters of Weeki Wachee Springs were transformed into a magical entertainment experience, which now depend on the health and maintenance of the spring and its vulnerable watershed.

Primary Interpretive Themes

Mermaid Shows

The roadside attraction's early innovations with underwater apparatuses led the mermaid shows of Weeki Wachee Springs to become a global cultural icon.

Uplands

Maintaining the scrub habitats surrounding the spring protects its remaining recharge area from development and contributes to maintenance of water quality.

Spring Run

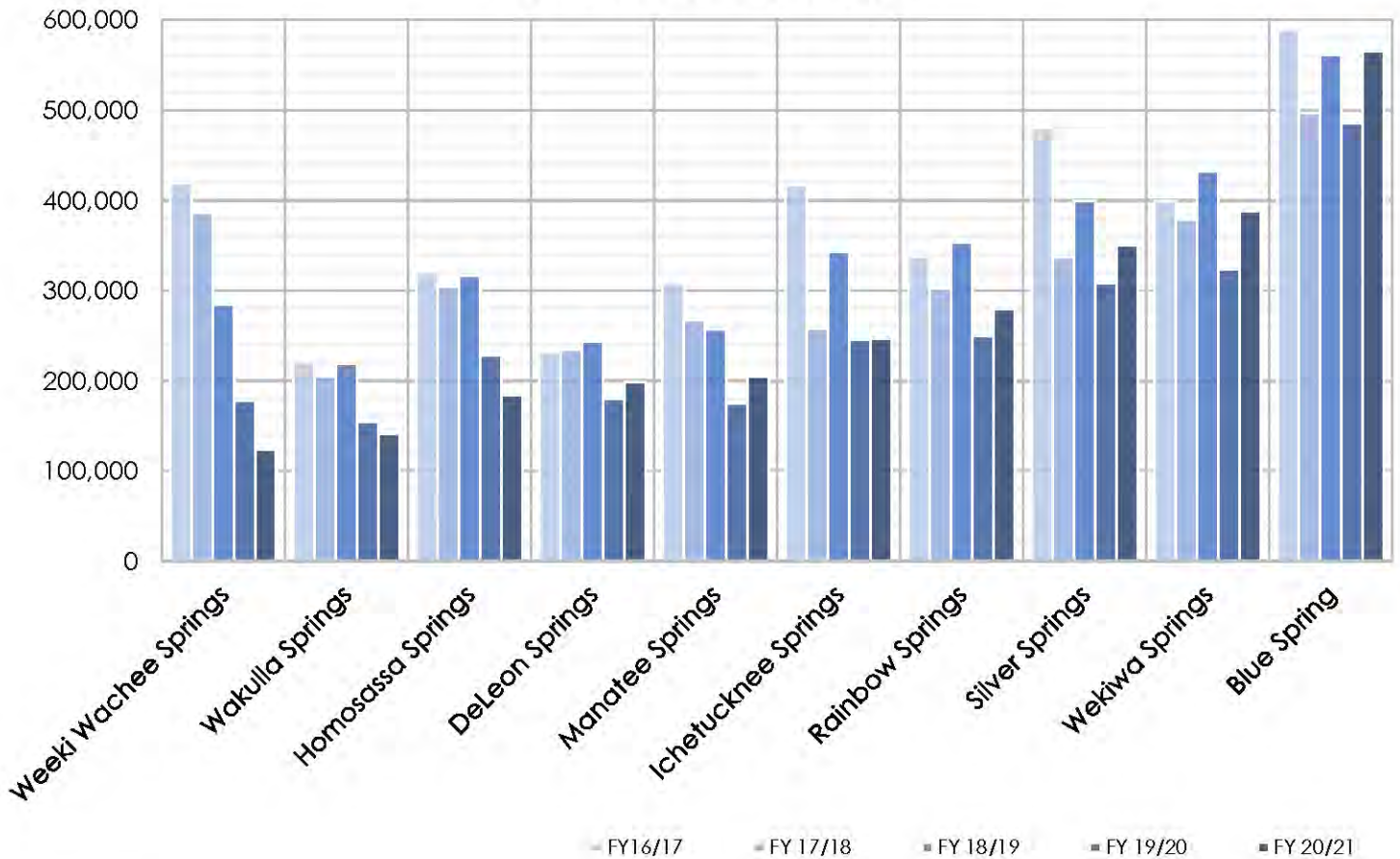
Responsible recreation on the Weeki Wachee River is a safeguard for the water clarity and delicate vegetation of this ecological treasure.

Water Quality and Quantity

The health of the Weeki Wachee River relies on collaborative regional management efforts that prioritize nitrogen reduction and water conservation.

Natural Communities and Altered Landcover Types		
Natural Communities	Acreage	Percentage
Scrub	560	60.4%
Hydric Hammock	150	16.2%
Baygall	48	5.2%
Basin Marsh	31	3.3%
Mesic Flatwoods	27	2.9%
Spring-Run Stream	27	2.9%
Sandhill	14	1.5%
Mesic Hammock	11	1.2%
Scrubby Flatwoods	8.9	0.9%
Depression Marsh	4.6	0.5%
Xeric Hammock	3.8	0.4%
Wet Flatwoods	1.3	0.1%
Dome Swamp	0.5	0.05%
Sinkhole	0.1	0.01%
Altered Landcovers	Acreage	Percentage
Developed	36	3.8%
Clearing/Regeneration	3.1	0.3%
Borrow Area	1.2	0.1%
Total Acreage	927	100%

Annual Attendance
Fiscal Year (FY) 2016-2021



Ten-Year Resource Management Goals and Objectives

Goal: Protect soil resources in the park.

Objective A	Control erosion by monitoring, stabilization, and unauthorized trail closures.
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Goal: Protect water quality/quantity and restore hydrology in the park.

Objective A	Conduct an assessment of the park's hydrological restoration needs.
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Goal: Restore and maintain natural communities/habitat of the park.

Objective A	Develop and implement a point bar restoration plan for the spring-run.
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Objective B	Continue to monitor submerged aquatic vegetation in the spring-run.
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Objective C	Improve 575 acres of scrub, scrubby flatwoods, and sandhill.
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Objective D	Maintain 615 acres of the park within the optimum fire return interval.
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Objective E	Complete a comprehensive flora and fauna survey.
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Goal: Maintain, improve, or restore imperiled species populations and habitats in the park.

Objective A	Continue to update baseline imperiled species occurrence inventory lists.
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Objective B	Monitor and document 1 selected imperiled animal species.
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Goal: Remove invasive species from the park and maintain as necessary.

Objective A	Annually treat at least 18 infested acres of invasive plant species.
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Objective B	Develop a comprehensive invasive plant management plan.
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Objective C	Maintain and publish the landscaping manual for the park.
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Objective D	Implement decontamination protocols for the park.
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Objective E	Manage Lyngbya and other aquatic species.
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Objective F	Implement control measures on 1 invasive animal species in the park.
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Goal: Protect, preserve, and maintain the cultural resources of the park.

Objective A	Continue to compile reliable documentation for all cultural resources.
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Objective B	Assess and evaluate all recorded cultural resources in the park.
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Objective C	Maintain all NR-eligible or listed resources in good condition.
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Objective D	Complete DHR's Archaeological Resource Management (ARM) training.
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Objective E	Complete historic preservation projects.
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Point Bar Monitoring

The Carrying Capacity Study (Wood 2020) identified a total of 34 impacted point bars along the river within the study area. Thirty of the 34 points bars are within or adjacent to the park boundary, which is an important distinction that has management jurisdiction implications. The Carrying Capacity Study also conducted a point bar aerial assessment that involved interpreting historical aerial imagery from 2008 to 2017 and calculating an estimated loss of vegetation over the past decade. The calculations are shown in the table below. Six point bars with the clearest aerial imagery were selected, one of which is now the site associated with the new kayak takeout point. Point Bar 1 is shown in the images to the right, and Point Bar 24 is on the opposite side of the river from the new kayak takeout point. Establishing an increased staff and management presence at the new kayak takeout point should work to discourage docking and in-water activities at this point bar. For the purposes of visitor use management, the data shown below represents the baseline conditions of the point bars. All of these point bars will be monitored over the course of this planning period to help managers determine the effectiveness of management actions.



The six point bars that will be selected for long-term monitoring are intended to be representative samples that demonstrate the effectiveness of management actions on the river as a whole. Improving conditions at these six point bars will not only represent overall resource improvement on the river, but it will also suggest that user behavior has improved and indicate that docking and in-water activities have been reduced, if not eliminated altogether. Declining conditions would represent further resource degradation and signal to managers that user behavior has not been adequately addressed.

Point Bar Aerial Assessment – Vegetation Loss in Square Feet

Point Bar	PB 1	PB 6	PB 21	PB 22	PB 24	PB 30
2008 Aerial	7,031 ft ²	11,661 ft ²	7,493 ft ²	8,508 ft ²	7,012 ft ²	3,213 ft ²
2017 Aerial	5,337 ft ²	10,603 ft ²	6,063 ft ²	7,008 ft ²	6,201 ft ²	2,237 ft ²
Net Loss	1,694 ft²	1,058 ft²	1,430 ft²	1,500 ft²	811 ft²	976 ft²
Percent Loss	-24%	-9%	-19%	-18%	-11%	-30%

Visitor Use Management

The DRP manages visitor use to sustain the quality of park resources and the visitor experience in a manner that is consistent with the purposes of the park. The dynamic nature of visitor use requires a deliberate and adaptive approach to managing resource impacts from recreational activity. To manage visitor use, the DRP will rely on a variety of management tools and strategies. The DRP will be guided by the “precautionary principle” that states if there is a threat of irreversible harm to park resources, a lack of full scientific certainty will not delay management action (Kriebel et al., 2001).

Several management actions are planned to be implemented irrespective of any further observation of user impact to the river point bars. It is expected that these management actions will help enforce existing park rules, mitigate resource impacts, and improve user behavior. Objectives that will be implemented over the long term will be discussed in the VUM Objectives section. The management actions that will be implemented in the immediate term can be classified according to three categories: user education, rule enforcement, and resource protection.

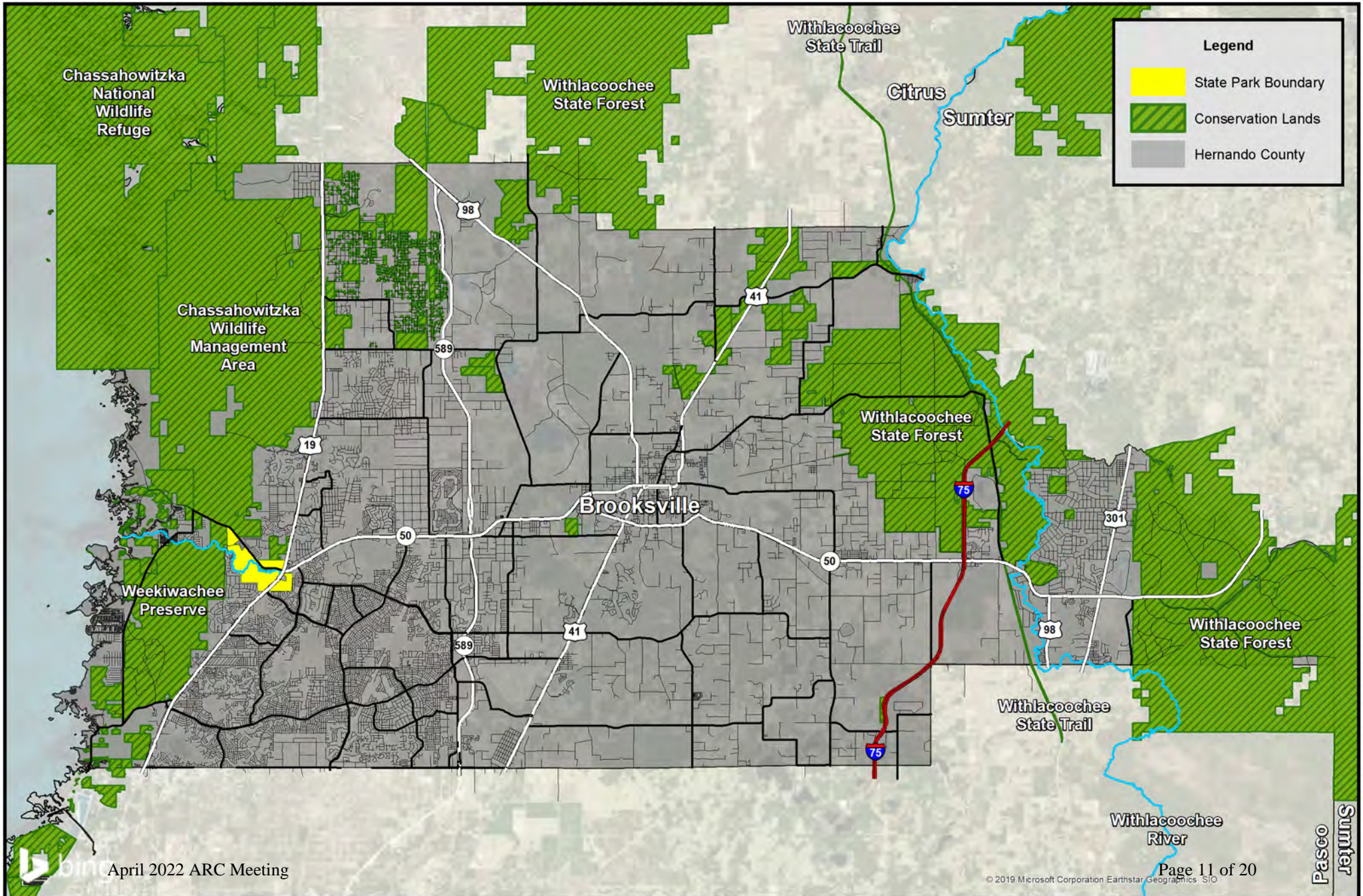
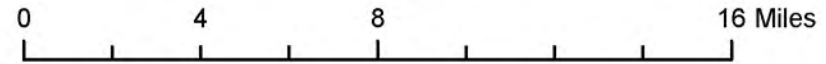
Over the next two years, DRP staff will be working toward the short-term objective of developing and implementing the point bar monitoring protocol discussed in this management plan update. During these two years, it will be necessary to collect data to track resource conditions and identify the most effective adaptive management techniques. In addition to monitoring efforts, the paddle launch capacities will remain capped at 280 vessels per day. This capacity will be subject to adaptive management by park management, and any changes will be informed and supported by the data that will be collected over the long-term. The data will be documented and stored systematically in order to produce condition reports.

Management Actions	
User Education	
<ul style="list-style-type: none"> ○ Update kayak rental information to include emphasis on existing park rules and resource protection ○ Improve concession area to highlight resource importance and interpret user responsibilities ○ Conduct community outreach to provide information on river protection 	
Rule Enforcement	
<ul style="list-style-type: none"> ○ Develop park signage to demarcate the new park boundary and inform users of the rules on the river within the park boundary ○ Continue to work with local law enforcement and FWC to monitor river activity ○ Consider establishing game cameras at known problem areas 	
Resource Protection	
<ul style="list-style-type: none"> ○ Seek approval to deploy protective barriers to block access to point bars ○ Develop signage at impacted point bars to inform river users on the resource impact of docking/wading ○ Explore replanting native vegetation to encourage regrowth and discourage user access 	



Weeki Wachee Springs State Park Hernando County Vicinity Map

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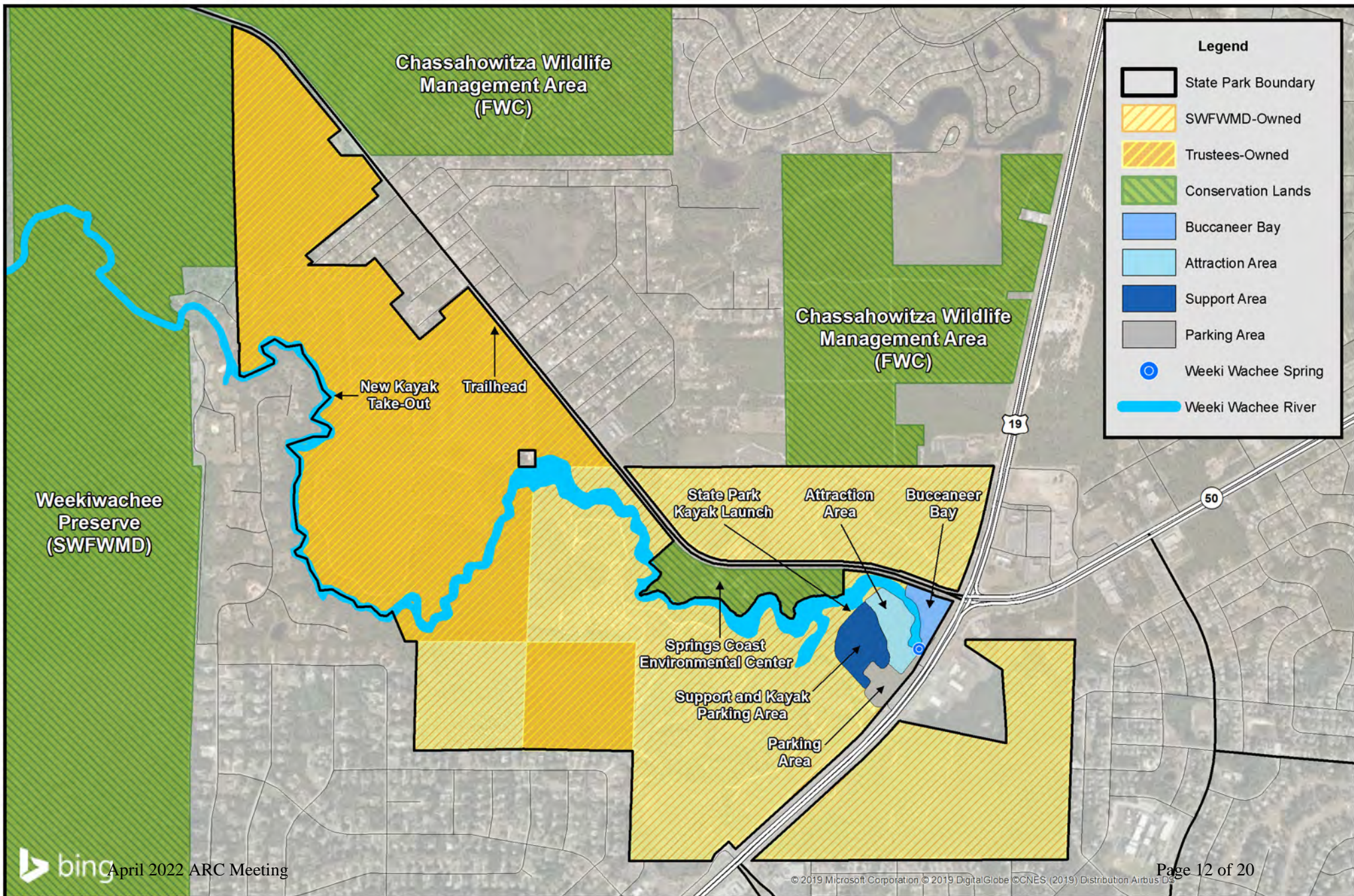
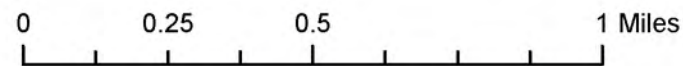


Legend

- State Park Boundary
- Conservation Lands
- Hernando County



Weeki Wachee Springs State Park Reference Map



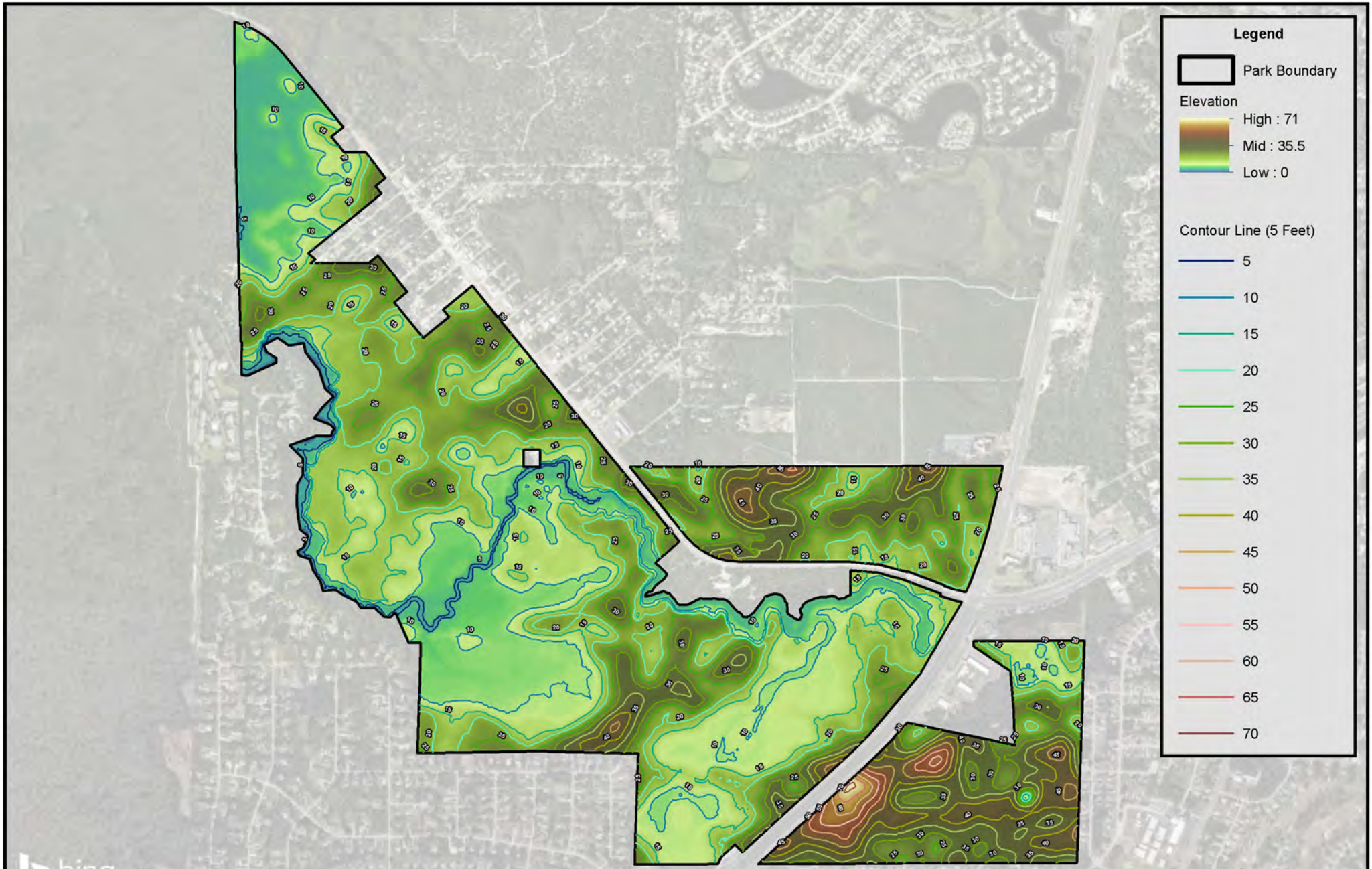
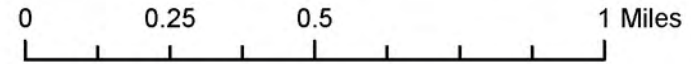
Legend

- State Park Boundary
- SWFWMD-Owned
- Trustees-Owned
- Conservation Lands
- Buccaneer Bay
- Attraction Area
- Support Area
- Parking Area
- Weeki Wachee Spring
- Weeki Wachee River



Weeki Wachee Springs State Park Topography Map

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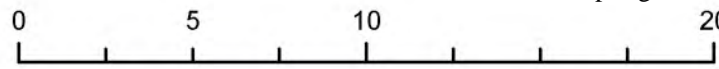
Legend

- Park Boundary
- Elevation**
 - High : 71
 - Mid : 35.5
 - Low : 0
- Contour Line (5 Feet)**
 - 5
 - 10
 - 15
 - 20
 - 25
 - 30
 - 35
 - 40
 - 45
 - 50
 - 55
 - 60
 - 65
 - 70



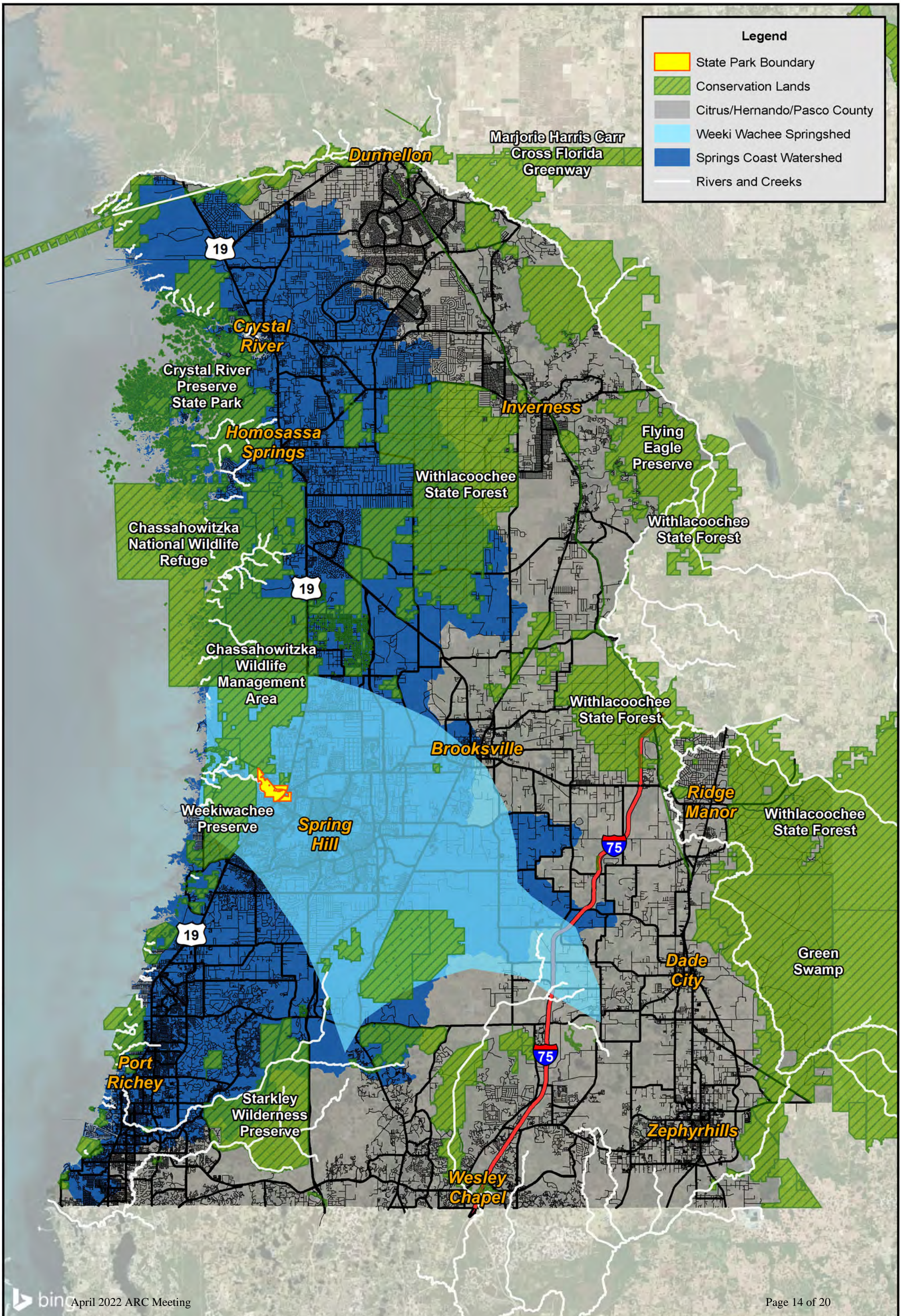
Weeki Wachee Springs State Park Regional Hydrology Map

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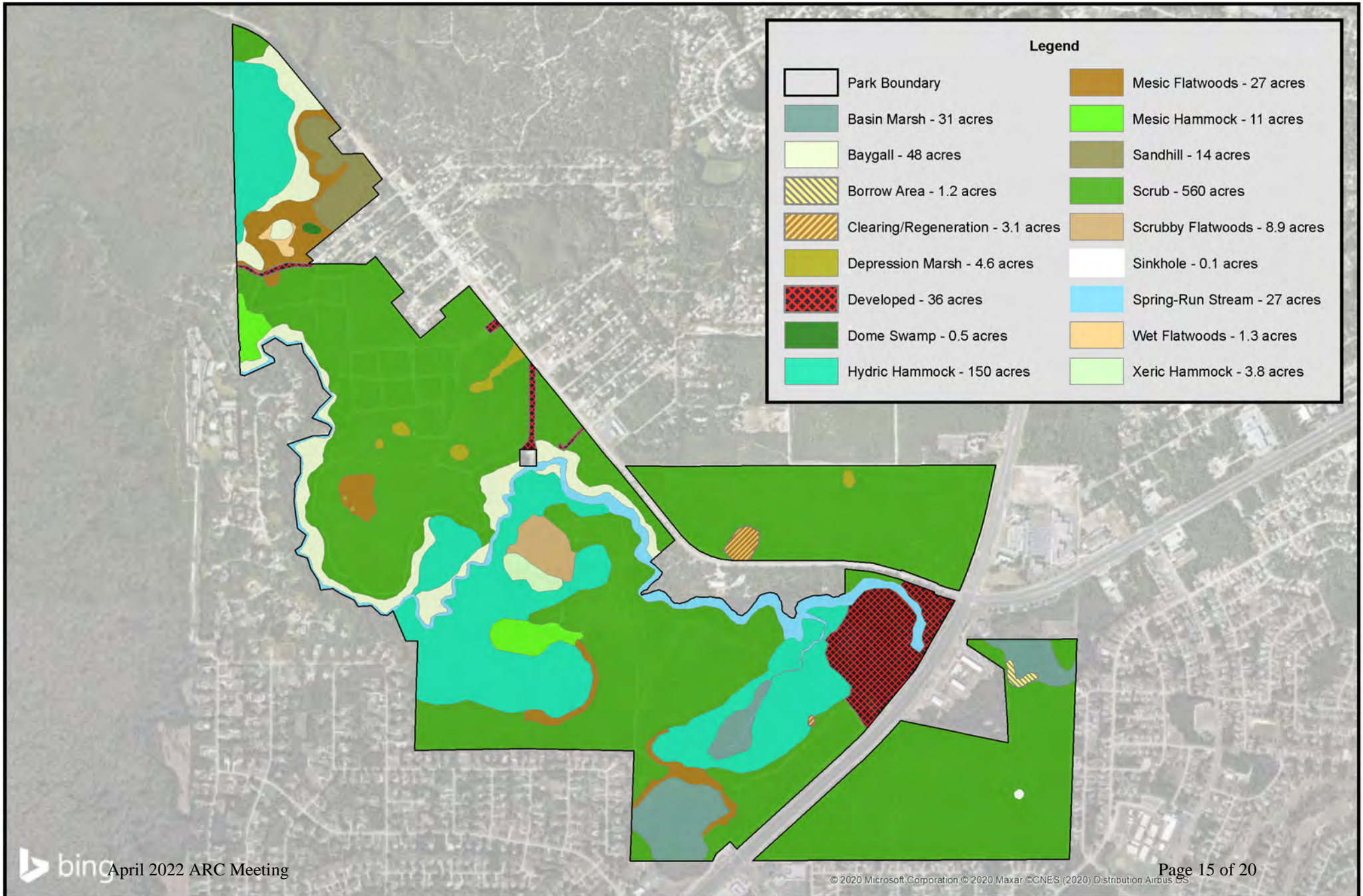
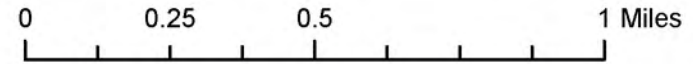
- State Park Boundary
- Conservation Lands
- Citrus/Hernando/Pasco County
- Weeki Wachee Springshed
- Springs Coast Watershed
- Rivers and Creeks





Weeki Wachee Springs State Park Natural Community Map

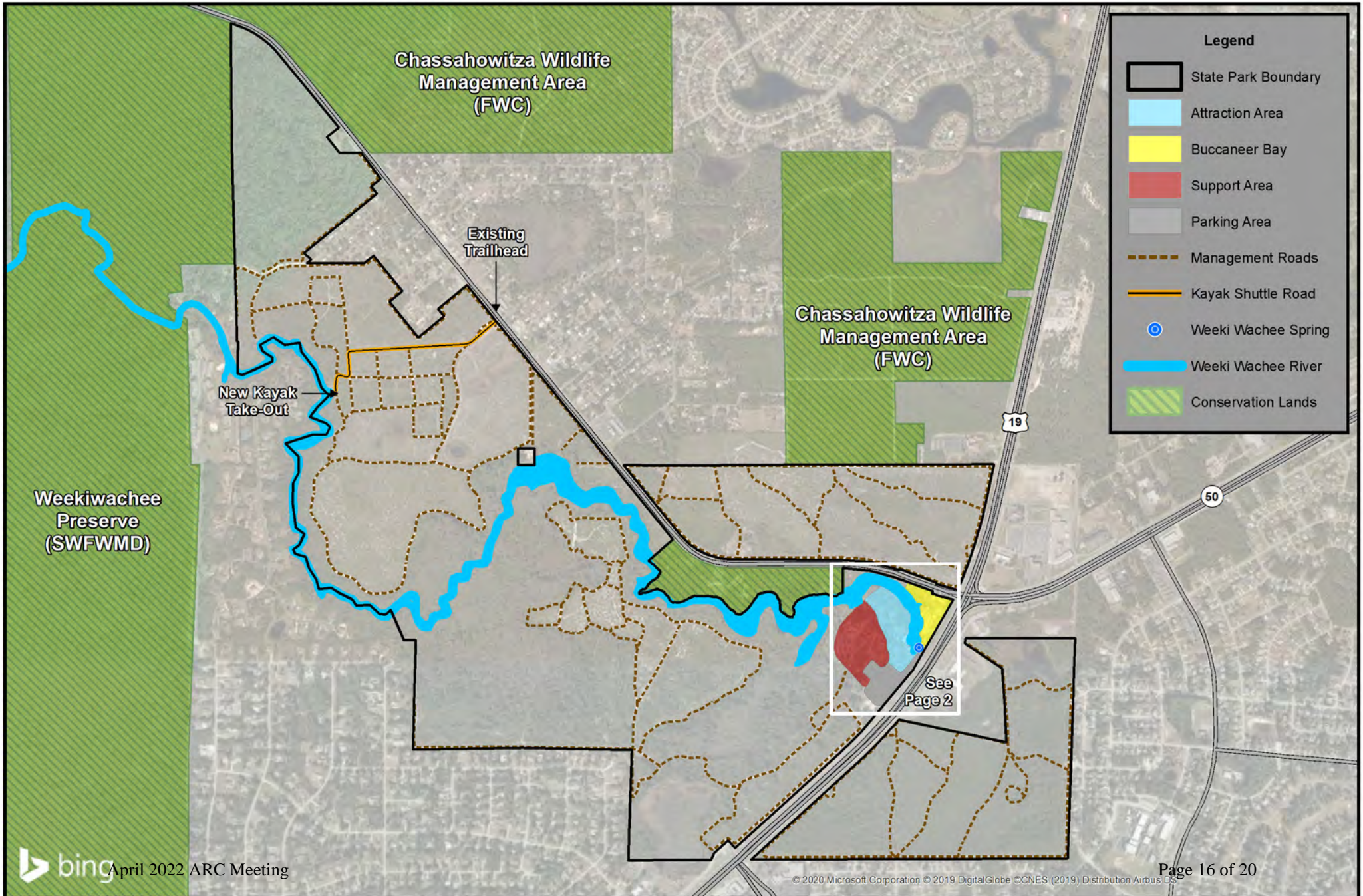
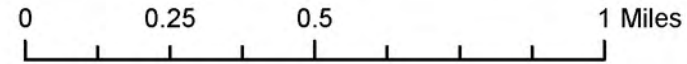
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Weeki Wachee Springs State Park Base Map - Existing Facilities

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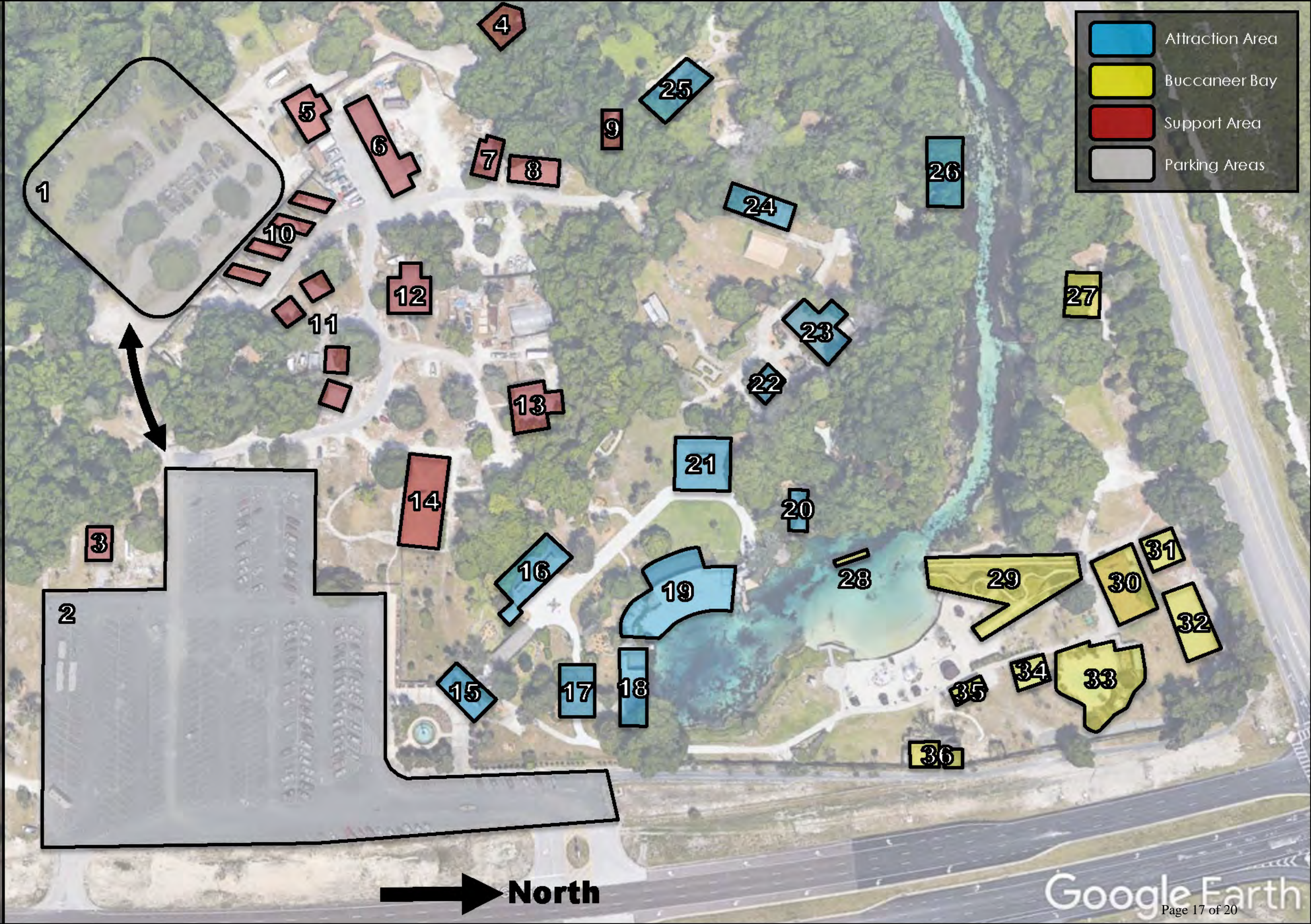




Weeki Wachee Springs State Park
Base Map — Existing Facilities Page 2

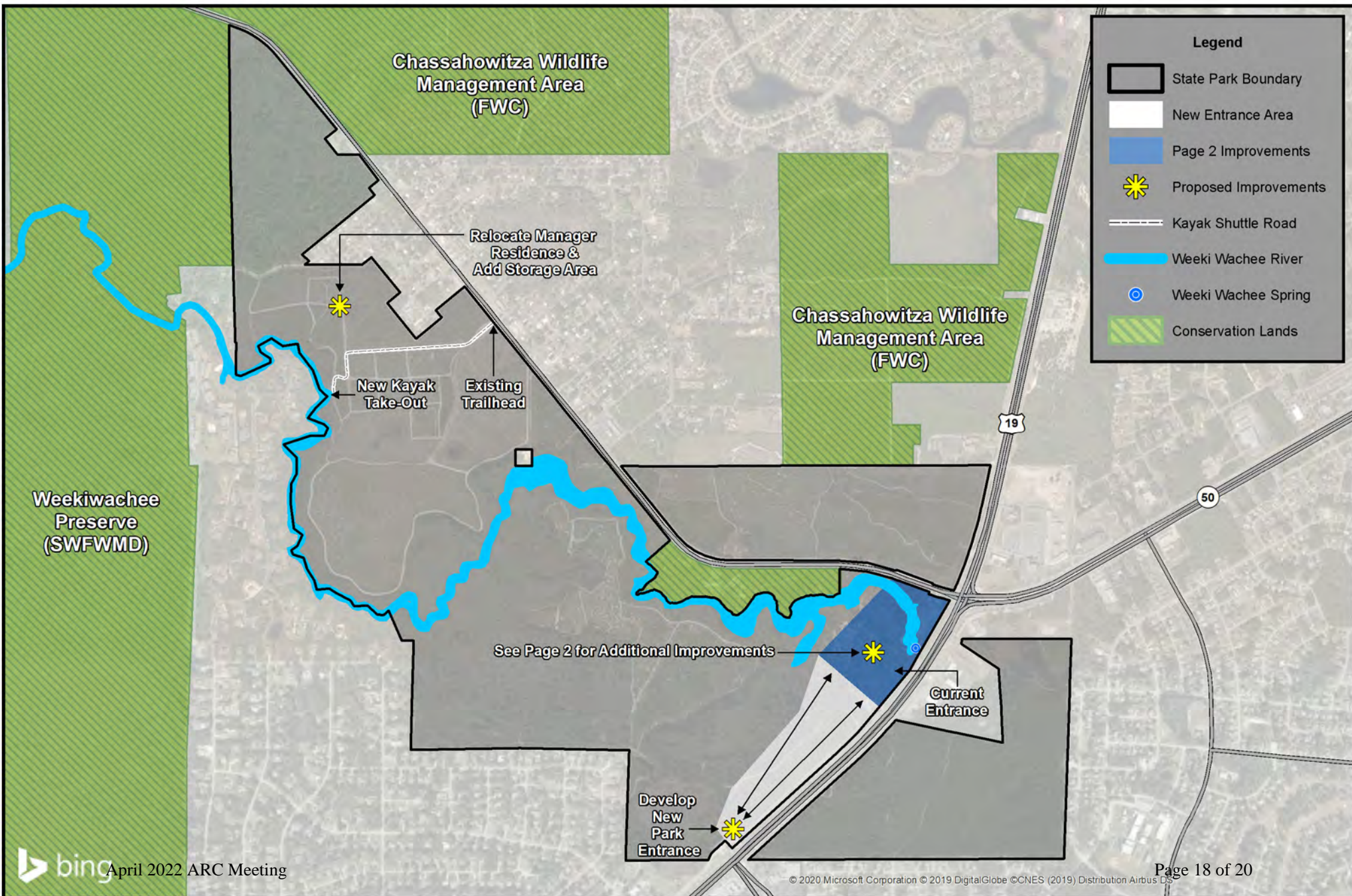
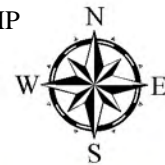
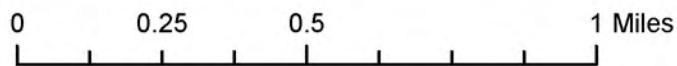
Main Recreational Use and Staff Support Areas
Attraction Area — Buccaneer Bay — Support Area — Parking

- 1 — Kayak Parking Area (~85 spaces)
- 2 — Main Parking Area (~300 spaces)
- 3 — Storage Building
- 4 — Kayak Storage & Launch Area
- 5 — Kayak Concession Building
- 6 — Maintenance Shop Building
- 7 — Shop & Storage Building
- 8 — Employee Office & Breakroom
- 9 — Wildlife Office
- 10 — Volunteer RV Campsites (4)
- 11 — Historic Cottages (4)
- 12 — Assistant Park Manager Residence
- 13 — Park Manager Residence
- 14 — Administrative Offices Building
- 15 — Visitor Entrance & Ticket Booths
- 16 — Gift Shop
- 17 — Decorative Arbor
- 18 — Spring Overlook & Waiting Area
- 19 — Mermaid Theater
- 20 — Captain's Quarters
- 21 — Banquet Hall
- 22 — Restroom
- 23 — Galley Restaurant
- 24 — Grandstand Seating Area
- 25 — Wildlife Theater & Seating
- 26 — Tour Boat Dock
- 27 — Pavilion
- 28 — Floating Platform & Swim Area
- 29 — Buccaneer Bay Slides
- 30 — Food & Beverage Concession
- 31 — Pavilion
- 32 — Sand Volleyball Court
- 33 — Splash Pool Area
- 34 — Tube Storage Corral
- 35 — Tiki Bar
- 36 — Tower & First Aid Building





Weeki Wachee Springs State Park Conceptual Land Use Plan (CLUP) Map



Legend

- State Park Boundary
- New Entrance Area
- Page 2 Improvements
- Proposed Improvements
- Kayak Shuttle Road
- Weeki Wachee River
- Weeki Wachee Spring
- Conservation Lands



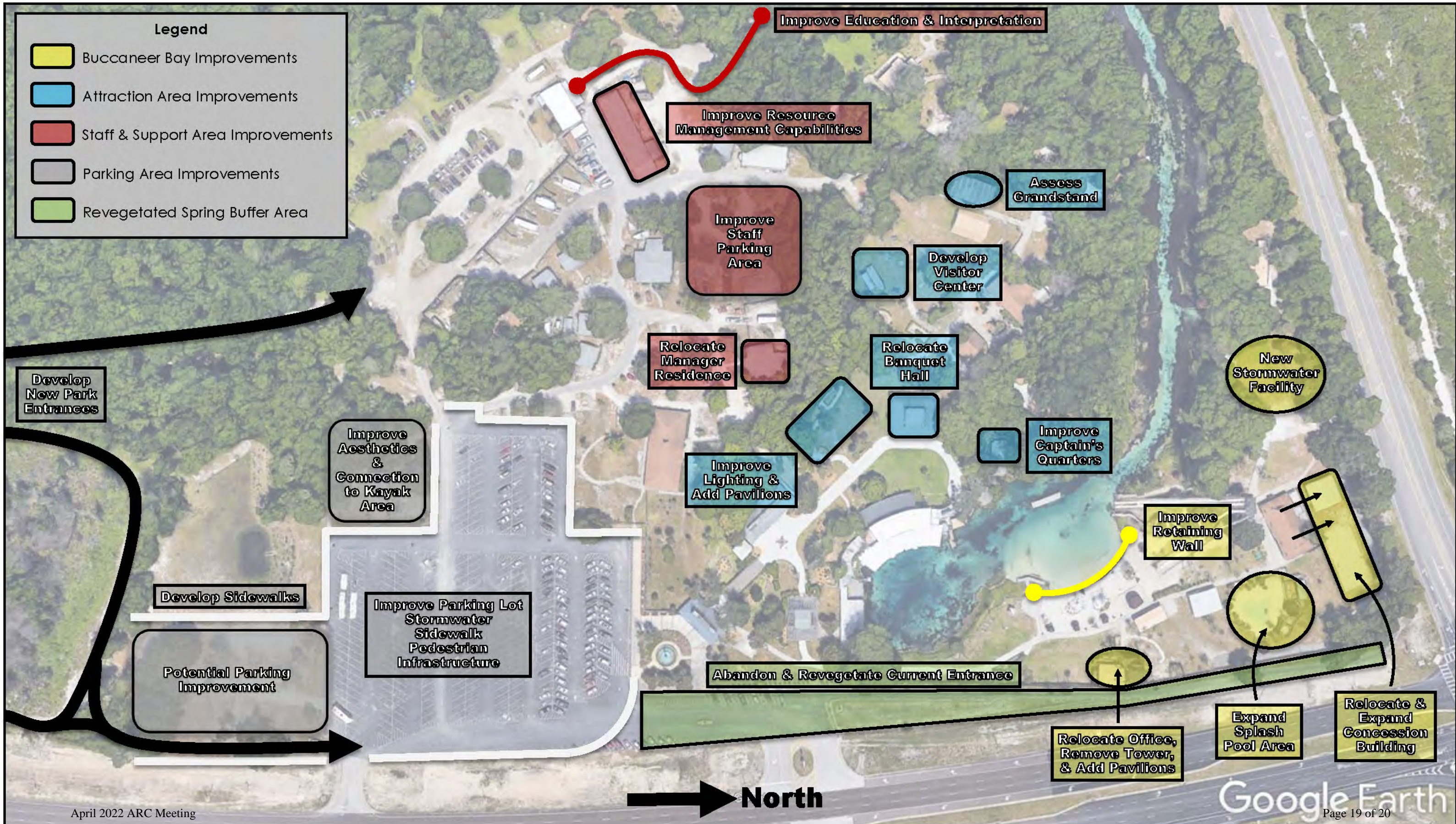
Weeki Wachee Springs State Park Conceptual Land Use Plan (CLUP) Map — Page 2

Future Capital Improvement Projects — Ten-Year Planning Period

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*Intended for planning purposes and external communication

**Not to scale





Weeki Wachee Springs State Park Optimum Boundary Map

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