

Draft Management Plan for the Three Sisters Springs Property
U.S. Fish and Wildlife Service
April 2018

EXECUTIVE SUMMARY

The Three Sisters Springs project included the public acquisition of a 57-acre site that contains three, second-order springs known as the Three Sisters Springs that play a critical role in both manatee protection and efforts to restore water quality in the Kings Bay/Crystal River spring shed. The property is located immediately south of downtown Crystal River, Florida, and originally was a part of a natural, forested wetland ecosystem adjacent to Kings Bay. In the early 1970's the trees in the forested wetland were removed and an eight-acre lake was dredged in the center of the site. The dredged material was used to fill the immediate wetlands area with the intent of creating a site suitable for residential development.

The successful effort to acquire the site resulted in the property being owned by both the City of Crystal River (City) and Southwest Florida Water Management District (SWFWMD), with the U.S. Fish and Wildlife Service (Service) managing the property as part of the Crystal River National Wildlife Refuge from 2010 until present. The City, Service, and the SWFWMD developed a management plan in 2010 to ensure that the project site will be developed in accordance with the terms and conditions imposed by the Declaration of Restrictive Covenants agreed to by the City and FCT. This revision of that plan reflects changes in management goals for the property, including proposed capital improvements, and the timeline for their accomplishment based on current funding and staffing.

The Three Sisters Springs property will be managed for the conservation, protection and enhancement of natural resources, and for outdoor recreational and educational opportunities compatible with those goals. A Three Sisters Springs Coordination Committee comprised of the refuge manager, city manager, a representative from the SWFWMD, and a liaison from city council will meet regularly to enhance coordination among the partners and to act as a bridge between the partners and city council.

Many goals identified in the 2010 plan have been accomplished through multiple entities (i.e., SWFWMD, City, Service, and the Florida Fish and Wildlife Conservation Commission) working together to provide funding, in-kind services and expertise. The SWFWMD led habitat enhancement projects including the creation of a 6-acre treatment wetland to reduce nutrient loading to the Kings Bay, restoration of one acre of hydric hammock, shoreline stabilization within the springs and the planting of native vegetation in specific areas. The Service plans to establish native upland vegetation and buffer zones, a pollinator garden, and to continue control of exotic and invasive plants and animals.

The Service developed infrastructure for public access and enjoyment, including an access road, a 1,500-foot boardwalk, a picnic pavilion, temporary entrance gate, and 1.75 miles of trails. Next steps include construction of a permanent entry gate and booth, landscaping, and fencing at the public entrance off Three Sisters Springs Trail; new interpretive panels on existing trails; permanent public restrooms; manatee viewing platforms along Magnolia Springs; an observation platform for viewing wetland wildlife (herons, egrets and fish); and trail improvements, including wheelchair accessible surfaces. The

Service will also develop environmental interpretation and education programs to connect people with nature at this unique site.

The City developed the Three Sister Springs Welcome Center and Transit system to route all public visitors into and out of the property year round. The City will continue to operate the transit service and will consider variations to the route to promote new stops in the future if desired.

Three Sisters Springs has become a critical resource for the observation and protection of the manatee, while also playing a key role in the restoration and maintenance of water quality within the Kings Bay/Crystal River springs system. The improvements included in this plan will further enhance natural resources on site and the visitor experience that will be in keeping with the area's reputation as "Florida's Nature Coast".

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INTRODUCTION

The Three Sisters Springs project included the public acquisition of a 57-acre site that contains three, second-order springs known as the Three Sisters Springs (TSS) that play a critical role in both manatee protection and efforts to restore water quality in the Kings Bay/Crystal River spring shed.

In addition to the three second-order springs found on the site itself, there is a second order spring (Magnolia Springs) located along the western perimeter of the property and another second-order spring (Idiot's Delight) located along the southeastern portion of the property. The man-made waterway fed by Magnolia Spring is a seasonal sanctuary for manatees with a second sanctuary located at Idiot's Delight where the spring run feeds into a waterway that flows into Kings Bay. During cold weather, manatees heavily utilize the two warm-water sanctuaries and the Three Sisters Springs themselves.

The Three Sisters Springs property was originally part of a larger forested wetland ecosystem located adjacent to Kings Bay. In the 1970s, the property was cleared and filled with the intent of creating a building site suitable for residential development. A development plan involving the construction of more than 300 residential units had been approved at the time a multi-agency cooperative effort was initiated to bring the site under public ownership. However, prior to completion of the site plan and permitting requirements, the property ownership group acknowledged the environmental importance of the site, and agreed to work with a coalition of conservation groups to see if a feasible plan could be developed to acquire the property for conservation purposes, while also continuing to move forward with development plans in the event the conservation acquisition effort failed.

As a cornerstone in this conservation endeavor, the City of Crystal River (City) agreed to serve as the lead agency in what ultimately was a successful application for a Florida Communities Trust (FCT) grant. The acquisition effort was further bolstered by the Southwest Florida Water Management District (SWFWMD) stepping forward with Florida Forever funding to be used as the match for the FCT grant funding, which resulted in SWFWMD holding a 30% ownership interest in the site.

The Friends of the Crystal River National Wildlife Refuge Complex (Friends) and the National Wildlife Refuge Association took on the leading role in raising \$2.7 million in private funding. The U.S. Congress appropriated \$3.0 million to the US Fish and Wildlife Service (Service) for land acquisition, with the City of Crystal River, Citrus County, and the Citrus County Tourist Development Council also providing financial support. The \$2.7 million in private financial support came from The Felburn Foundation and several other environmental groups, as well as a multitude of private citizens and various civic clubs. Funding from the Service and The Felburn Foundation ultimately went to acquire the Consumptive Use Permit (CUP) and related water value from the site owners.

The successful effort to acquire the site resulted in the property being owned by both the City of Crystal River (City) and Southwest Florida Water Management District (SWFWMD), with the U.S. Fish and Wildlife Service (Service) managing the property as part of the Crystal River National Wildlife Refuge (Refuge) from 2010 until present. The City, Service, and the SWFWMD developed a management plan in 2010 to ensure that the project site will be developed in accordance with the terms and conditions imposed by the Declaration of Restrictive Covenants agreed to by the City and FCT. This revision of that

plan reflects changes in management goals for the property, including proposed capital improvements, and the timeline for their accomplishment based on current funding and staffing. As explained further herein, this management plan describes the development of visitor facilities and services on-site, habitat restoration needs, and the potential construction of a visitor welcome center off-site. The project site will be managed for the conservation, protection and enhancement of natural resources, and for outdoor recreation compatible with those goals.

PURPOSE

The Three Sisters Spring project was pursued by a broad array of public and private partners for the purposes of:

- Creating superb outdoor-oriented recreational and educational opportunities such as wildlife viewing, wildlife photography, environmental education, fishing, for both the citizens and visitors to Crystal River, compatible with the all purposes of the project;
- Conserving, protecting and enhancing natural resources;
- Protecting and recovering endangered West Indian Manatees and other fish and wildlife;
- Restoring native habitat and biodiversity;
- Protecting water quality and quantity in Kings bay, Florida; and
- Protecting the scenic and open space qualities of the Three Sisters Springs property.

PROJECT CONSISTENCY WITH CITY'S COMPREHENSIVE PLAN

The Three Sisters Spring project supports the City's Comprehensive Plan in a number of ways, as indicated below:

Conservation Element

The Conservation Element states that "the City shall protect and conserve the natural functions of rivers, bays, wetlands, estuarine, and marine habitats, in order to assure the protection of fisheries, native flora and fauna and associated habitat, and especially species designated as endangered, threatened or species of special concern under the Endangered Species Act." [Objective 1.3] There is also language that states that "No net loss of essential upland habitat for endangered or threatened species or species of special concern will be permitted." [Objective 1.6] In addition, there is language that states that "the present quality of surface and groundwater entering Kings Bay and Crystal River will be maintained." [Objective 1.11] The Three Sisters Springs project clearly supports these objectives by protecting manatee habitat and the present quality of water entering Kings Bay, both through protection of the springs themselves and by providing for wetlands treatment of storm water runoff from adjacent commercial and residential areas.

Recreation Element

The Recreation Element states that "public access to natural resource-based parks will be provided to assist in meeting Crystal River's recreation demands without diminishing the overall quality of those resources." [Goal #1] Specific objectives that will be supported by the Three Sisters Springs

project include increasing the amount of public fishing pier access [Objective 1.1]; establishing one mile of nature trails within Crystal River [Objective 1.3]; establishing a program for the identification, designation, management and protection of environmentally sensitive lands [Objective 1.4]; and providing for a sufficient quantity and distribution of open space to meet the City's needs [Objective 3.1]. By providing open space, protection of the natural resources, and a nature trail, the Three Sisters Springs project is both consistent with and strongly supportive of the goals set forth in the Recreation Element of the City's Comprehensive Plan.

Coastal Management Element

The Coastal Management Element establishes that the City shall "ensure the protection and enhancement of significant vegetative communities which support wildlife through preserving the diversity and viability of Coastal habitat areas." [Objective 1.1] it further establishes that the City will "increase public access to the Coastal Area's natural resources through acquisition of new property, which will be consistent with the public's needs and the natural resource capacity of the selected area." [Objective 5.1] The Three Sisters Springs project will preserve the viability of the on-site habitat areas and increase public access to a natural coastal setting, with appropriate management oversight.

NATURAL AND CULTURAL RESOURCES

Natural Communities

Prior to extensive residential and commercial development in and around the project area, the property consisted of a forested wetland system that surrounded the second-order springs known as TSS. Spring magnitude is a category based on the volume of flow from a spring per unit time. There are eight magnitude categories; first-magnitude springs discharge the greatest amount of water at 100 or more cubic feet per second (cfs) and a second order magnitude discharges 10 to 100 cfs (Meinzer 1927).

The topography, hydrology, and vegetation of the site have been altered considerably since the 1940's (City, Service, and SWFWMD 2010, 2012). Currently, the site is generally comprised of open space with scattered trees. A hardwood fringe surrounds the perimeter of the property and provides a buffer around the spring boils and run. Much of the open area was bedded for the planting of pine seedlings and limestone rock but the seedlings were removed and the ground was leveled by the Service during 2011 and 2012.

Wetlands and waterbodies

Early aerial photographs of the property, as well as the remnant vegetation along its perimeter, seem to indicate that the property was originally a mesic or hydric hammock. Three springs are located on its periphery. Magnolia Springs is located on the western margin, Idiots Delight on the southern margin, and the TSS on the southern end of the TSS property. Magnolia Springs reportedly had rock spires and an extensive cave system that collapsed around 1963. Idiots Delight is a group of three vertical shafts that are at least 20 feet deep. The opening of the largest shaft is approximately five feet wide. The springs known as "Three Sisters Springs" are located north of Idiots Delight. TSS consists of three major springheads: Pretty Sister, Deep Sister, and Little Sister, which comprise a complex of three "lobes," aligned on a northwest-southeast axis, with an approximate total length of 250 feet. The springs, as well as the waterways or runs that they feed, are heavily utilized as seasonal sanctuaries by manatees.

Beginning in the late 1950s, property development began in earnest in the Kings Bay area. Development began on the 57-acre property in the late 1960s and early 1970s. A series of canals had been excavated south and west of the parcel between 1960 and 1974. Clearing of the parcel's extensive forested wetland began by 1974. An 8-acre lake, now known as Lake Crystal, was excavated in the property's center to provide spoil material to fill in the wetlands and create upland areas suitable for residential development (City of Crystal River, U.S. Fish and Wildlife Service, and Southwest Florida Water Management District 2012).

In 2015, a 6-acre treatment wetland on the eastern side of the property was created by the SWFWMD in accordance with the Covenants and PMP. This created wetland filters stormwater run-off from approximately 100 acres of nearby commercial and residential land and helps reduce nutrient loading to Kings Bay. The wetland was designed to be a tidally influenced marsh dominated by emergent vegetation. As part of this effort, a one-acre hydric hammock was restored in the southeastern corner of Lake Crystal using material excavated during construction of the treatment wetland on site. Lake Crystal is now 7 acres in size with steep slopes characteristic of most borrow pits and has a maximum depth of 40 feet.

Uplands

The uplands within the project site consist of grasses, herbaceous plants, and scattered red cedar (*Juniperus silicicola*). The perimeter of the springs and the property includes red maple (*Acer rubrum*), black cherry (*Prunus serotina*), Virginia willow (*Itea virginica*), sweetgum (*Liquidambar styraciflua*), red cedar, American elm (*Ulmus americana*), sweet bay (*Magnolia virginiana*), pop ash (*Fraxinus caroliniana*), wild coffee (*Psychotria nervosa*), live oak (*Quercus virginiana*), laurel oak (*Q. laurifolia*), water oak (*Q. nigra*), and white basswood (*Tilia americana var. heterophylla*).

Wildlife and Plants

Florida sandhill cranes (*Grus canadensis pratensis*, state threatened), Southeastern American kestrels (*Falco sparverius Paulus*, state threatened), wood storks (*Mycteria Americana*, federally threatened), and Florida manatees (federally threatened) have been identified using the site, as well as herons, egrets, and ibis (Florida Fish and Wildlife Conservation Commission 2013, City of Crystal River, the Service, and SWFWMD 2010, 2012). Alligators (federally threatened by similarity of appearance) have been confirmed in Lake Crystal and the adjacent springs and canals.

Currently, there are no known federally endangered or threatened plant species on the site.

Non-native and nuisance plant and animal species have been identified by Service staff and intergovernmental partners as one of the priority management issues. Invasive species found in the uplands of TSS include exotic Brazilian pepper (*Schinus terebinthifolius*), cogon grass (*Imperata cylindrica*), air potato (*Dioscorea bulbifera*), Japanese climbing fern (*Lygodium japonicum*), wild taro (*Colocasia esculenta*), torpedo grass (*Panicum repens*), and lantana (*Lantana camara*). Other non-native plants may also be present as they are found in nearby uplands, including skunk vine (*Paederia foetida*) and chinaberry (*Melia azedarach*). Feral cats (*Felis catus*) occasionally roam the site. Non-native animals include Cuban tree frogs (*Osteopilus septentrionalis*) and island apple snails (*Pomacea canaliculata*) (City of Crystal River, the Service, and SWFWMD 2010, 2012).

Additionally, numerous species of birds, mammals, fish, reptiles, and amphibians currently use the site.

Manatee Management

The project area is one of the most important properties in Florida for the West Indian Manatee (*Trichechus manatus*). To illustrate, 489 manatees, representing approximately 8% of the entire Florida Manatee population, were observed using this site during a cold front in February 2016. The manatees use the springs on the property, which deliver millions of gallons of 72 degrees Fahrenheit water each day, to avoid exposure to debilitating cold water temperatures that create a physiological need for warm water for their survival. As previously mentioned, the protection of manatees was one of the driving goals of the project. Three Sisters Springs is particularly important to mothers with newborn calves.

Several large boulders and pilings were placed in the spring run by a previous landowner to prevent motor boats from accessing the spring run and the Three Sisters Springs. The boulders impeded the movement of manatees in and out of the springs during low tide, thus making the springs unavailable to manatees for 20% to 30% of the time. The boulders were removed by the Service in 2010 to improve manatee access throughout the tide cycle and the number of manatees using the springs has increased significantly since that time.

The refuge strives to protect warm water habitat at Three Sisters Springs for manatees when they need to be there to survive while maintaining public access. Dramatic increases in manatee ecotourism in Kings Bay coupled with increases in the overall manatee population has led the refuge to evaluate human and manatee interactions within the springs and to develop and implement science-based management protocols to protect manatees. Initially, the refuge closed portions of the springs to human activity (e.g., lobe closures), restricted use of paddle craft during manatee season, and required commercial guides to escort their visitors into the springs. The refuge has contracted the U.S. Geological Survey (USGS) Sirenia Project to analyze movements of telemetry-tagged manatees monitored by satellite in combination with environmental information such as water temperature and level in the Gulf, Crystal and Salt Rivers and local springs to provide valuable insight into their habitat use patterns relative to measurable ambient conditions. Manatees showed the expected pattern of more occurrences in the springs when Gulf temperatures were relatively cold (i.e., less than 20 °C). A detailed look at manatee GPS locations revealed that when Gulf water temperatures at Shell Island were colder than 17 °C, manatee habitat use patterns shift from the Gulf to higher occurrences in Three Sisters Springs and the adjacent springs known as Idiot's Delight. Thus, the Service now closes Three Sisters Springs to all human activity when Gulf temperatures at Shell Island drop to 17 °C and the springs remains closed until temperatures rise above 17 °C for 24 hours or longer.

In order to provide for the protection of resting manatees, the Refuge maintained a comprehensive protocol for closing the springs complex at the most critical times throughout the 2016/17 winter season based on environmental and biological parameters. Uniformed staff evaluated the environmental conditions and manatee locations and behavior within the springs several times a day, and closed the springs to public access as appropriate. USGS continued to monitor manatee locations by satellite through the 2017/18 season and Refuge staff monitored manatee use of the springs. The Refuge will use analysis of the telemetry data and observational data collected to write a management plan for protection of manatees at Three Sisters Springs.

In keeping with the intent of maintaining and sustaining quality visitor experience while at the same time providing adequate protected areas for manatees, Service will continue to utilize existing federal authorities or rulemaking processes to manage the balance of visitors and manatees. Three Sisters

Springs will remain open to the public during non-manatee season for swimming, paddle boarding, and canoeing/kayaking.

Magnolia Springs was designated as a manatee sanctuary under the Endangered Species Act and is therefore closed to public access by water during the winter months. Construction of observation platforms on the western side of the property will improve manatee viewing opportunities at Magnolia Springs.

Restoration

The uplands areas on the property will be converted to an upland forest community by planting live oaks, red cedar, cabbage palms, wax myrtle, and other species native to the area. Some areas will remain open to attract a variety of wildlife species. Nest boxes have already been provided for bluebirds and a bat house has been installed. As resources are available, a garden with native species may be planted to attract butterflies and other pollinators. Restoration of mesic and /or hydric hammock on the site will require removal of fill material, which can be costly. Replanting of mesic hammock (typical species include Shumard oak, white ash, beech, Florida maple, southern magnolia, laurel oak, and pignut hickory) will be limited primarily to areas surrounding the springs and along the canal that flanks the southern and western borders of the property. Planting a live oak/cabbage palm forest would not require removal of fill.

Following acquisition of the property in 2010, refuge staff documented significant erosion of the shoreline within the springs. The shoreline was eroded and undercut up to 4 feet as a result of years of direct and indirect human and manatee activity. The erosion caused sediment to enter the spring vents, trees along the shoreline to fall into the springs, and/or tree islands to break away from the shore resulting in an overall loss of shoreline habitat. This posed a safety concern for manatees and visitors due to falling trees and potential entrapment if the shoreline caverns collapsed. The Service partnered with University of Florida, Florida Fish and Wildlife Conservation Commission (FWC), and The Nature Conservancy to document the shoreline conditions and develop alternatives to stabilize the banks. The Service funded initial shoreline surveys and obtained the U.S. Army Corps of Engineers permit for the bank stabilization project; FWC purchased the 1,800 ton of limestone rock used to stabilize the bank; and the SWFWMD ultimately funded the design and construction which was completed in 2016 and native vegetation was planted around the springs. SWFWMD is now proposing to stabilize the spring run and the canal banks along the border of the entire property by 2020.

Water Treatment Wetlands

As discussed above, SWFWMD completed construction of a 6-acre treatment wetland on the eastern side of the property in 2016 and will maintain the wetland for three years post-construction. The Service will then assume management/maintenance responsibility of the wetland including control of invasive and exotic plants. The refuge proposes to construct one viewing platform overlooking the wetlands.

Exotic Plant Program

The property contains exotic plants including Brazilian pepper; cogon grass and air-potato which are all listed as Category I species on the Florida Exotic Pest Plant Council list. All exotic and invasive vegetation was removed from the entire property in 2013 by a licensed contractor. Spot treatments are conducted

annually by refuge staff to keep infestations under control. Another full treatment of the property by a qualified contractor is planned for 2018. The “Exotic Pest Plant Council’s List of Florida’s most invasive Species” will be used to identify invasive exotic plant species.

Feral Animal Program

Currently, there are no feral animals on the property and since purchase this has only been one animal removed (a feral cat). The property will continue to be monitored for introduction of exotic/nuisance animals. If any feral animals are found on the site, they will be removed by qualified personnel.

Listed Plant Species

There are no listed plant species known to occur on the site.

Listed Animal Species

The West Indian manatee, Florida sandhill crane (state threatened) and wood stork (federally threatened) have been identified using the site. The development of the site will be done in such a manner to enhance the habitat used by listed species, with a strong emphasis on protecting the manatee habitat.

Archaeological, Cultural, and Historical Resources Protection

There are no known archaeological, cultural, and historical resources on the site. The Service will notify the City and the Division of Historical Resources immediately if evidence is found indicating an archeological or historic resource at the project site, and will also take appropriate measures to protect such resources. The collection of artifacts or the disturbance of archeological or historic sites that may be found or identified on the project site will be prohibited unless prior authorization has been obtained from the Division of Historical Resources within the Department of State. The management of the archeological and historic resources will comply with the provisions of Chapter 267, Florida Statutes specifically Sections 267.061 2(a) and (b).

STRUCTURES AND IMPROVEMENTS

Acknowledgement and Boundary Signs

There is a sign at the entrance of the property that acknowledges the property was acquired using funds from the Florida Communities Trust and the SWFWMD. The sign also acknowledges the managers of the property (FWS) and major financial contributors (the Felburn Foundation, SWFWMD, Jane’s Trust, Citrus County, Citrus County Tourist Development Council, the City of Crystal River and FWS). The sign will be landscaped in native xeric vegetation.

Existing Physical Improvements

Existing facilities and infrastructure include a 1,500 linear-foot boardwalk that is Americans with Disabilities Act (ADA) compliant, approximately 1.75 miles of unimproved trails, a picnic pavilion, two kiosks with six interpretive panels, a visitor access gate, fee booth, a partially paved access road entering

the property from Three Sisters Springs Trail, an unimproved dirt parking area, a public access trolley to the property from off-site managed by the City of Crystal River, a gate and dirt access road for emergency vehicles and staff/volunteer access from Kings Bay Drive, temporary toilets and hand washing station, a weather shelter, bird nesting boxes, and a bat house. Year-round public access to the property is permitted for wildlife-dependent recreational activities including wildlife observation, photography, and environmental education and interpretation.

Proposed Physical Improvements

This plan proposes improvements to existing infrastructure and habitat conditions described above and construction of additional facilities to further develop on-site recreational activities and improve and diversify visitor experience (Figure 1, Table 1). The property has been zoned by the City as “conservation lands” which has a five percent limit for impervious surfaces. All facilities would be built to current code and all required permits would be obtained. Funding is currently available to implement the project components described under Tier 1 and those projects will be completed within two years from the date this plan and updated management agreement are approved and signed by all parties. Project components described under Tier 2 would be implemented within 3 to 8 years of that date if funding is available. Tier 3 would be implemented in the future as funding becomes available.

Tier 1:

A permanent fee booth (up to 144 square feet (s.f.)), entrance gate, landscaping, and fencing would be constructed at the public entrance off Three Sisters Springs Trail to replace the temporary facilities previously installed.

Seven new interpretive panels would be installed along existing trails.

A freestanding public restroom (up to 1,200 s.f.) would be constructed to replace the temporary toilets and handwashing station. Restrooms may include a changing room.

Two viewing platforms (up to 150 s.f. each) would be built along the trail bordering the Magnolia Springs on the western edge of the property for observation of manatees using the springs, particularly during the cold weather months.

One observation platform (up to 150 s.f.) would be constructed on the treatment wetland to enhance wildlife (e.g., birds, alligators, and fish) and wetland plant/habitat viewing opportunities.

Improvements would be made to the approximately 1.75 miles of nature trails, including installing wheelchair accessible surfaces such as boardwalks, paving, or natural or pervious materials. The trails provide visitors with a view of the springs and treatment wetlands and would connect the proposed outdoor class room or environmental education center (Tier 3), manatee viewing platforms, pier, and restrooms to the existing picnic pavilion and boardwalk. Trails would be used for wildlife viewing, bird watching, photography, and environmental education and interpretation. Benches would be installed along the trails and shade areas would be established with native plantings.

Temporary accessible parking spaces would be constructed near the boardwalk. These temporary spaces would be used until permanent parking facilities are constructed under Tier 2.

Additional utilities, including water, electric power, fiber optic, sewer, and li station would be installed on the property to service the existing and newly constructed facilities.

A vegetative buffer (25 to 50 feet wide) comprised of native plants would be established along the property boundary bordering Magnolia Springs and other areas as needed.

Structural improvements to guardrails on the boardwalk were required to meet building code even though the boardwalk was deemed structurally sound by an independent structural engineer. The improvements were completed in 2017 and the boardwalk was inspected and certified by a structural engineer that the boardwalk meets local building codes.

The entire property will be treated for exotic and invasive plants by an experienced and licensed contractor during 2018.

Tier 2:

An outdoor environmental education facility (up to 1,000 s.f.) would be built on the south side of Lake Crystal with a parking lot to accommodate up to 10 vehicles and 2 buses. The facility may be open air or a screened porch with ceiling fans, electrical outlets, etc. to support a projector and viewing screen. The facility may include a small air conditioned space. The facility would provide education and interpretation for visitors ranging from kindergarten through adulthood. Educational programs may include but are not limited to the ecology of the springs, the use of the springs as a manatee sanctuary, manatee ecology, manatee habitat, water quality, wetland ecology, and wildlife stewardship/conservation. Amenities included in the center could be limited to interactive displays within the building with class instruction occurring in the outdoor classroom. All facilities would be built to blend in to the natural setting. Additional parking spaces may be necessary to provide accessible parking near other constructed facilities and/or to meet operational needs. The need for additional spaces, the number, and their location will be evaluated by the Three Sisters Springs Coordination Committee described under the Coordinated Management section on pages 20 and 21.

Up to two accessible docks or piers (up to 500 s.f.) would be constructed on the south side of Lake Crystal to provide limited recreational, catch-and-release fishing. The property will not be open to fishing until the Service has evaluated the use through the Comprehensive Conservation Plan (CCP). A draft CCP is expected in 2019.

A weather shelter would be built on an existing concrete slab (up to 450 s.f.) to provide shelter for visitors during poor weather conditions.

A maintenance shed (up to 150 s.f.) would be constructed to house tools and equipment needed for maintenance of the property and facilities.

The access roads from both entrance gates (i.e., the visitor and emergency/service gates) and the remainder of the unimproved parking area would be resurfaced (approximately 54,200 s.f.) as needed to reduce dust using permeable materials where feasible.

Up to 34 acres of native vegetation, including a pollinator garden would be planted with native vegetation.

Tier 3:

This plan includes an off-site visitor center (2,000 to 12,000 s.f.). That facility would not be built by the Service nor would it be built on Service-owned or managed lands.

Littoral shelves would be created at strategic locations along the bank of Lake Crystal to provide wetlands and improved aquatic habitats for fish and wildlife.

A Children’s Nature Trail and/or Adult Art Trail that would education visitors on native wildlife and habitats is proposed. The trails could include bird nests; animal dens; replicas of wildlife and their tracks and scat; etc.

Table 1. Proposed facilities, infrastructure, habitat improvements, and public use opportunities on the uplands at TSS.

Visitor Facilities, Infrastructure, and Improvements	Existing	Proposed	Documents used to inform Plan (yes, if supported - no, if not mentioned or opposed)		
			Deed of Restrictive Covenants	2016 Community Working Group Recommendation	2010 Project Management Plan
Tier 1: Funding currently available, construction expected within 2 years of signed agreement.					
Entrance	Existing	Construct a permanent entrance fee booth (144 s.f.), gate, landscaping and fencing	No	No	Yes
Interpretive signage	2 Existing kiosks with 6 panels each	Add 7 new interpretive signs, update and improve existing kiosk panels	Yes	Yes	Yes
Restroom building	None	Construct a restroom	Yes*	Yes	No
Viewing platforms along Magnolia Springs	None	Construct two viewing platforms (up to 150 s.f.) along Magnolia Springs manatee sanctuary	Yes*	Yes	Yes
Wetland area viewing platform	None	Construct a viewing platform (up to 150 s.f.) at the edge of the wetland restoration area	Yes*	Yes	Yes

Nature trails	Existing	Improve approximately 1.75 miles of existing trails (resurface with boardwalk, paving, natural and pervious materials)	Yes	Yes	Yes
Temporary parking lot	Existing dirt parking lot	Construct accessible parking spaces	Yes	Yes	Yes
Utilities	Limited utilities for restrooms	Add utilities such as water, electric, phone, sewer, lift station	No	No	No
Vegetative buffer	None	Proposed along Magnolia Trail (approximately 0.15 miles) and along property boundary where needed.	Yes	Yes	Yes
Boardwalk enhancement	1500-linear foot boardwalk	Enhance support posts to meet code	No	No	No
Exotic and invasive plant control	Initial treatment conducted in 2013. Spot treatments conducted annually thereafter.	Exotic/Invasive plant removal by chemical and hand-pulling	Yes	Yes	Yes
Tier 2: Projects to be completed as funding becomes available (3-8 years to fund/construct).					
Outdoor environmental education facility	None	Develop an outdoor education facility (up to 1,000 s.f.)	No	Yes	Yes
Parking lot for education center and/or outdoor classroom	None	Up to 12 parking spaces including accessible spaces and buses	No	Yes	Yes

Piers or docks	None	Construct one or two piers/docks (up to 500 s.f.) on Lake Crystal	Yes	Yes	Yes
Weather shelter	10 x 15 aluminum carport over concrete slab	Construct a cover over the existing concrete slab (450 s.f.) to provide shelter for visitors during weather events	No	No	No
Maintenance shed	None	Construct up to 150 s.f. Maintenance shed	No	No	No
Roads	Existing entrance road	Resurface 54,200 s.f. of access road to reduce dust	Yes	Yes	Yes
Native plants	None	Proposed to restore an estimated 34 acres of native plants including a pollinator garden	Yes	Yes	Yes
Tier 3: Long-term planning, unknown time frame.					
Off-site visitor center	None	Develop an off-site visitor center (2,000 to 12,000 s.f.)	No	Yes	Yes
Littoral Zones	None	Construct littoral zones in Lake Crystal	No	No	Yes
Children's Nature Trail and/or Adult Art Trail	None	Educate visitors on native wildlife and habitats using replicas of bird nests, animal dens, fish, wildlife, animal tracks and scat	No	No	No

* Not specifically identified in the covenants but will count towards the minimum of four recreational facilities required by the Florida Communities Trust.

Improvements considered but eliminated from the plan

During development of this plan, many different options were considered. Table 2 identifies components that were considered but not included in this plan.

Table 2. Components considered but eliminated from the Plan.

Components	Reason for Elimination
On-site visitor center (10,000 to 12,000 s.f.)	Not supported by community working group
Semi-permeable overflow parking area (1,175 s.f.) and 65-space parking lot	
Bunkhouse (2,000 s.f.)	
Maintenance building (1,700 s.f.)	
Recreational vehicle (RV) pad with water and sewer	
Canoe/Kayak Launch	
Children's splash pad	Not consistent with wildlife-dependent recreation

Estimated Costs of On-Site Physical Improvements

Table 3 includes costs (2017 dollars) associated with the design and building of the facilities and infrastructure identified above.

Table 3. Estimated costs of proposed improvements

Item	(2017 dollars)
Tier 1: Funding currently available, construction expected in 2 years.	
Fee booth (144 s.f.), entrance gates, landscaping, and fencing	\$100,000*
Interpretative signage (8 signs, 6 panels)	\$20,000**
Free standing restrooms (1,200 s.f.)	\$350,000*
Restroom site work, 30 space parking lot w/ accessible parking, landscaping	\$250,000*
Restroom utilities: water, sewer, electricity	\$115,000*
Two manatee and one wetland viewing platforms (up to 150 s.f. each)	\$60,000*
Nature trails (1.75 miles long, 5 ft. wide, granular)	\$75,000*
Vegetative buffer along boundary as needed (25 to 50 s.f. wide)	\$35,000*
Exotic/invasive plant removal	\$35,000**
Tier 2: Projects to be completed as funding becomes available (2 to 8 years to fund/construct)	
Outdoor environmental education facility (1,000 s.f.)	\$350,000

Item	(2017 dollars)
Pier or dock (1 or 2 up to 500 s.f.)	\$125,000
Weather shelter (concrete pad existing, 450 s.f.)	\$10,000
Maintenance shed (approximately 150 s.f.)	\$2,500
Resurface road (less than 1 acre)	\$500,000 to \$600,000
Upland native plant restoration (34 acres)	\$50,000
Wetland native plant restoration (17 acres; if wetland restoration desired, only 17 acres of upland would be planted instead of 34)	Up to \$200,000
Pollinator garden	\$5,000
Tier 3: Timeframe unknown	
Off-site visitor center (2,000 to 12,000 s.f.)	\$1M to \$5.5M
Littoral zones	TBD
Children's nature trail/Adult Art Walk	TBD

Funding Source: *Service, **Refuge, +Friends

PERMITS

Development work may include the construction of facilities such as an education center, observation platform(s), a dock or pier, restrooms, trails, parking lot, and signage. Restoration activities will include exotic plant removal and native vegetation planting.

A number of potential permits and/or orders and authorizations for development and restoration activities have been identified. These can include:

- A City of Crystal River building permit;
- A Citrus County Florida Development Order/Permit;
- A Citrus County Florida Development Order issued by the Citrus County Building Division for any activities not specifically exempted by land development code;
- A State Programmatic General Permit (SPGP) for minor work located in waters of the United States;
- A Noticed General Environmental Resources Permit issued by the Southwest Florida Water Management District in conjunction with the Florida Department of Environmental Protection;
- A Nationwide Permit 27 for stream and wetland restoration activities issued by the U.S. Army Corps of Engineers; and
- An authorization to use Sovereign Submerged Lands.

As part of the FCT grant conditions, and to ensure that other permitting requirements are not missed, the agencies listed below will be contacted prior to initiating any site development activities as appropriate.

- Florida Fish and Wildlife Conservation Commission
- Florida Department of Environmental Protection
- Florida Department of Agriculture and Consumer Services, Division of Forestry
- Florida Department of State, Division of Historic Resources
- Southwest Florida Water Management District
- U.S. Army Corps of Engineers

PUBLIC USES

Water Access to the Springs

The public currently accesses the springs by water, either by swimming in through the spring run or by paddle craft. No motorized craft, such as motorboats, jet skis, etc., are allowed in the springs or the spring run. During manatee season, no canoes, kayaks or other paddle craft are allowed in the springs. Visitors may access the springs by water by swimming or snorkeling into the springs. Management activities will include providing compatible, wildlife-oriented recreational opportunities for visitors while optimizing use of the springs for manatees. Compatible uses of the site will likely include existing in-water uses, managed to enhance visitor experience and minimize manatee disturbance. The Service may enact partial or complete closure of Three Sisters Springs to people when environmental conditions warrant additional protection for manatees. Any additional management actions concerning the protection of manatees in the springs and adjacent areas will be made independent of this plan and with input from the public as provided for by federal law.

Land Access to the Springs

At present, the public is prohibited from accessing the springs from land and are also prohibited from accessing the shoreline and property from the water. In as much as the water bottoms are included in the acquisition, access to the water bottoms from land and water will be managed. Management actions will include preserving shoreline vegetation, controlling erosion, and maintaining water clarity. Consistent with these actions, access to the water from land and vice versa will continue to be restricted. Manatee rescues and regular maintenance activities will be the only exceptions to these restrictions. Land-based uses will include the use of an observation boardwalk to provide visitors with an opportunity to view manatees from shore; gates in the boardwalk will be provided to allow access to the shoreline by law enforcement and Service personnel, but will be locked to prevent public access.

Fishing

Fishing in the springs is not compatible with currently planned visitor activities or with manatee protection, and therefore will not be allowed in the springs. However, there are opportunities for limited fishing in the man-made lake and a pier/dock is planned. If fishing is determined to be a compatible use through the refuge's comprehensive conservation planning process, disturbance from

angling activities and fishing gear litter would be minimized and these uses would be controlled and monitored. All fishing activities would be restricted to a designated fishing pier(s). Fishing would not be permitted on any other area of the property in order to minimize wildlife disturbance. The pier(s) will be ADA-compliant and would be of sufficient size to accommodate several individuals at one time. The springs and the canal banks along the perimeter of the property will be closed to fishing year-round.

Environmental Education and Interpretation

The refuge will continue to conduct environmental education and interpretive programs on the property. The refuge has established a free interpretive program for visitors. The program includes guided tours, walks and public education along the trails and boardwalk. The tours focus on native vegetation around the springs and the wetland, wildlife, springs, and history of the property. Birdwatching tours are also conducted during fall and spring migration and the winter when species diversity is higher. Almost 90 species of birds have been seen on the property. The refuge plans to continue these programs and develop additional year-round educational activities as visitor facilities are developed.

The Friends of the Crystal River National Wildlife Refuge Complex (Friends) and the refuge have developed a successful environmental education program with the Homosassa Elementary School that has been implemented annually since 2012. The program targets 4th and 5th graders and the lesson plans are geared to enhance knowledge of the state science curriculum. Armed with magnifying glasses and clipboards, students are transported to the Salt Marsh Trail on the Chassahowitzka National Wildlife Refuge to learn about food webs, ecosystems and salt marsh habitat, photosynthesis, and the water cycle. The 5th graders' standardized test scores were the highest in the state of Florida in 2015 and continue to be the highest in the school district every year. The elementary school administration feels that this hands-on program is a strong factor in their students' success.

We piloted the program with the Crystal River Primary School (CRPS) on the Three Sisters Springs property during the 2016/2017 school year. The (CRPS) was impressed with the program and requested that we conduct the program as a teacher training this past fall. The Friends and refuge plan to continue development of this educational program with the CRPS.

Festivals & Special Events

The project site may be used for festivals and special events that are oriented toward conservation/appreciation of natural resources, wildlife protection, and other environmental themes.

MANAGEMENT ISSUES

Coordinated Management

The Three Sisters Springs property will continue to be managed by the Service. The Service has broad experience in co-managing property with municipal and state governments. The Service will hold a management agreement over the land and water to manage the property as part of the Crystal River National Wildlife Refuge and the National Wildlife Refuge System. The governance of refuges follows the

National Wildlife Refuge Administration Act, as amended, the Refuge Recreation Act, and other regulatory statutes that apply to all lands owned or managed by the Service.

The management agreement will span a minimum length of 20-years and will obligate the Service to manage the project in such a way as to allow the City to comply with the Declaration of Restrictive Covenants (Appendix A). The agreement may be modified at any time by mutual written consent of the parties and may be terminated by either party for any reason upon six (6) months advance written notice to the other party.

The Service is restricted in using appropriated funds to make permanent improvements to property not owned by the federal government unless authorized by statute or if the following conditions are met (GAO-01-179SP Appropriations Law-Vol. IV, pages 16-206 to 16-210):

1. The improvement must be incident to and essential for the effective accomplishment of an authorized purpose of the appropriation;
2. The amount of the expenditure must be reasonable;
3. The improvement must be for the principal benefit of the United States government; and
4. The interests of the United States government in the improvement must be protected.

Condition 4 can only be met at Three Sisters if the Service will continue to have management authority for at least the estimated life of the structures and improvements made. Therefore, if the City terminates the agreement before its expiration, then the City agrees to reimburse the USFWS prior to final termination for the depreciated costs of all capital improvements placed on the land through the agreement from this point forward.

All parties agree that no activity will be conducted or permitted on the property that adversely impacts the volume of flow from the Three Sisters Springs or the quality of the water being discharged therein. It is expressly agreed by all parties that public access to the spring for kayaking/canoeing, swimming, snorkeling, diving and wildlife observation does not adversely impact the integrity of the springs, as long as they are properly managed.

Once this management plan and/or any revision to the plan is approved by all parties, the Service and/or City may proceed with implementation of elements within the plan without requiring further approval by City Council. A Three Sisters Springs Coordination Committee (Coordination Committee) comprised of the refuge manager, city manager, a representative from the SWFWMD, a resident of Crystal River selected by the committee through an application process, and a liaison from city council will meet regularly to enhance coordination among the partners and to act as a bridge between the partners and city council. The committee will provide valued input on management goals for the property and review and evaluate progress through regularly scheduled committee meetings. All partners will have input upfront during planning efforts for development of visitor services and activities allowed on the property and through the 30% design phase of capital improvements through this committee. Public engagement is required on proposed capital improvements and development of planning documents on federally owned or managed lands. Therefore, public input will generally follow federal policy and guidelines. If consensus cannot be reached by the committee on a particular issue, the refuge manager will consult with committee members and make a final decision consistent with National Wildlife Refuge System mission and policy.

Bicycle/Walking Access

An extension of the City's Crosstown Trail was completed by the City to provide for access to the Three Sisters Springs property. Entry into the property will require payment of an entrance fee. Bicycle and pedestrian entrance fees will be used by the Service to maintain the property and facilities, including the land-based nature and hiking trails within the property.

Trolley Access

The City for the last three years has changed its overall departmental structure to provide transportation and entrance gate control for year round access to the PROPERTY. This included development of a Three Sister Springs Welcome Center and Transit system to route all public visitors into and out of the property in accordance with a November 2016 Memorandum of Understanding (MOU) between the Service and the City. The route provides stops at a public park and in the CRA to enhance the visitors experience and support downtown economic development. These changes have improved the economic health of this area and new private investment in this area. The City will continue to operate the transit service and will consider variations to the route to promote new stops requested by either party. Changes may or may not change the ticket cost based on the time and distance of the proposed change. If in the future the City decides to discontinue the trolley, the Service would require a 6-month notice to make alternative arrangements to replace the City-managed trolley.

The Welcome Center and Transit System will be operated as an Enterprise Fund where the costs of providing transportation services to the general public on a continuing basis will be financed or recovered primarily through user charges. The Three Sisters Springs Coordination Committee may periodically decide that net income is appropriate for specific capital improvements or maintenance projects.

Funds from ticket sales will be shared with the Service once the refuge has established an entrance fee under the Federal Lands Recreation Enhancement Act (REA). The Service will receive up to 30% of the ticket price (i.e., \$3 to \$5 per person) and the balance will go to the City. The Service's portion of entry fees will be waived for visitors holding a valid federal pass. Ticket prices may change as required to meet expenses incurred during operation of the Welcome Center and Transit System. Changes to ticket prices must be approved by the Coordination Committee and City Council annually.

Funds from ticket sales may be used by the City for all costs associated with Three Sister Springs Enterprise Fund, which may include:

- Website and ticketing systems;
- Interpretive;
- Welcome Center Operational Costs;
- Transit Operational Costs;
- Labor costs directly related to Three Sisters Springs;
- Advertising Costs; and
- Any maintenance related directly to the Three Sister Springs Enterprise Fund.

Funds received by the Service must be spent in accordance with the REA and may include development of visitor services, visitor information, interpretation and signs; habitat restoration directly related to

wildlife-dependent recreation; and repair, maintenance, and facility enhancement directly related to visitor enjoyment, visitor access, and health and safety. This includes annual or routine maintenance, deferred maintenance, and capital improvements.

Maintenance

The Service will be responsible for the long-term maintenance of all the facilities and infrastructure on the Three Sisters Springs property.

Law Enforcement

The Refuge Complex has two full-time Federal Wildlife Officers that work staggered schedules to provide coverage 7 days a week. These officers cover law enforcement issues on Three Sisters and should be called for any incidents. However, the Service does not have exclusive jurisdiction over the Three Sisters property nor does the refuge have the resources to provide 24-hour/7days per week law enforcement response to the property. The Service exercises proprietary jurisdiction over the property, which essentially means State and local officers can respond to any type of criminal incident if refuge officers can't be reached or are not available. The Service estimates that 25% of officer time will be spent patrolling the Three Sisters Springs property by land or water. Additional officers may be provided by the Service at special events or particularly busy times of the year if needed.

Concessions

If in the future the City decides to discontinue the trolley, the Service may provide visitor access through a concession contract in accordance with Service policy.

It is acknowledged that the City must provide 60 days written notice to FTC on the lease of any interest, the operation of any concession, or other contracts of a similar nature, and that execution of any such document requires review and approval by FCT.

STAFFING

There are currently 9 full-time employees currently working at the Refuge Complex. Staff is comprised of Refuge Managers, a Visitor Services Specialist/Refuge Ranger, Law Enforcement Officers, a Biologist, a Natural Resource Planner, an Administrative Specialist and Maintenance Workers. Initially, management would be achieved by staff allocating an estimated percentage of their time at no less than the rates and projected annual costs listed below. These costs will be covered under the existing refuge budget until entrance fees are established. Please note that all staffing and management actions proposed are contingent upon the availability of funding through the Federal government budget process. Note that the refuge is currently allocating approximately 32% of overall staff time at an estimated annual cost of \$301,715 during Fiscal Year 2017.

Cost Estimates for Current Staffing/Management

Refuge Manager – 20% FTE	\$ 30,000
Deputy Manager – 10% FTE (Vacant)	\$ 15,000
Wildlife Biologist – 10% FTE	\$ 10,000
2 Law Enforcement Officers – 25% FTE each	\$ 55,000
Visitor Services Specialist/Refuge Ranger (Vacant) – 20% FTE	\$ 20,000

2 Maintenance workers – 10% FTE	each	\$ 15,000
<u>Maintenance budget</u>		<u>\$ 25,000</u>
TOTAL		\$170,000

Once an entrance fee is established, the refuge will seek to add positions to increase management and education at the site, including a full-time Volunteer Coordinator/Refuge Ranger and possibly two fee collectors depending on the level of involvement desired by the City. The City currently staffs the fee booth 7 days a week. Once the property has been fully developed, anticipated user fee collections may reach approximately \$402,500 annually (e.g., average ticket sales of \$11.50 per person X 35,000 visitors). The Service's portion of the entrance fees (i.e., \$105,000 to \$175,000) will be used in accordance with the REA, including additional staff salary and benefits, the upkeep and maintenance of the property and facilities, development of visitor programs and activities.

Cost Estimate for Increased Management if City continues operation of the Trolley/Fee Booth

Volunteer Coordinator/Refuge Ranger – 100% FTE	\$100,000
<u>Maintenance</u>	<u>\$25,000</u>
TOTAL:	\$125,000

Cost Estimates for Increased Management if Service operates the Trolley/Fee Booth

2 Fee Booth Collectors – 100% each FTE	\$100,000
Volunteer Coordinator/Refuge Ranger – 100% FTE	\$100,000
2.5 Bus Drivers – 100%	\$150,000
<u>Maintenance</u>	<u>\$25,000</u>
TOTAL:	\$375,000

MONITORING AND REPORTING

The following will be monitored and reported by the Service and the City:

- Number of visitors;
- Breakdown in ticketing categories and sales;
- Number of manatee/human disturbance issues;
- Temporary spring closures;
- Annual update to list of birds and/or other wildlife using the property;
- Removal of exotic plants; and
- Infrastructure needs or concerns.

These findings will be compiled in a report and given to FCT, SWFWMD and the Service on an annual basis, with such report to be filed by no later than January 30th of each year.

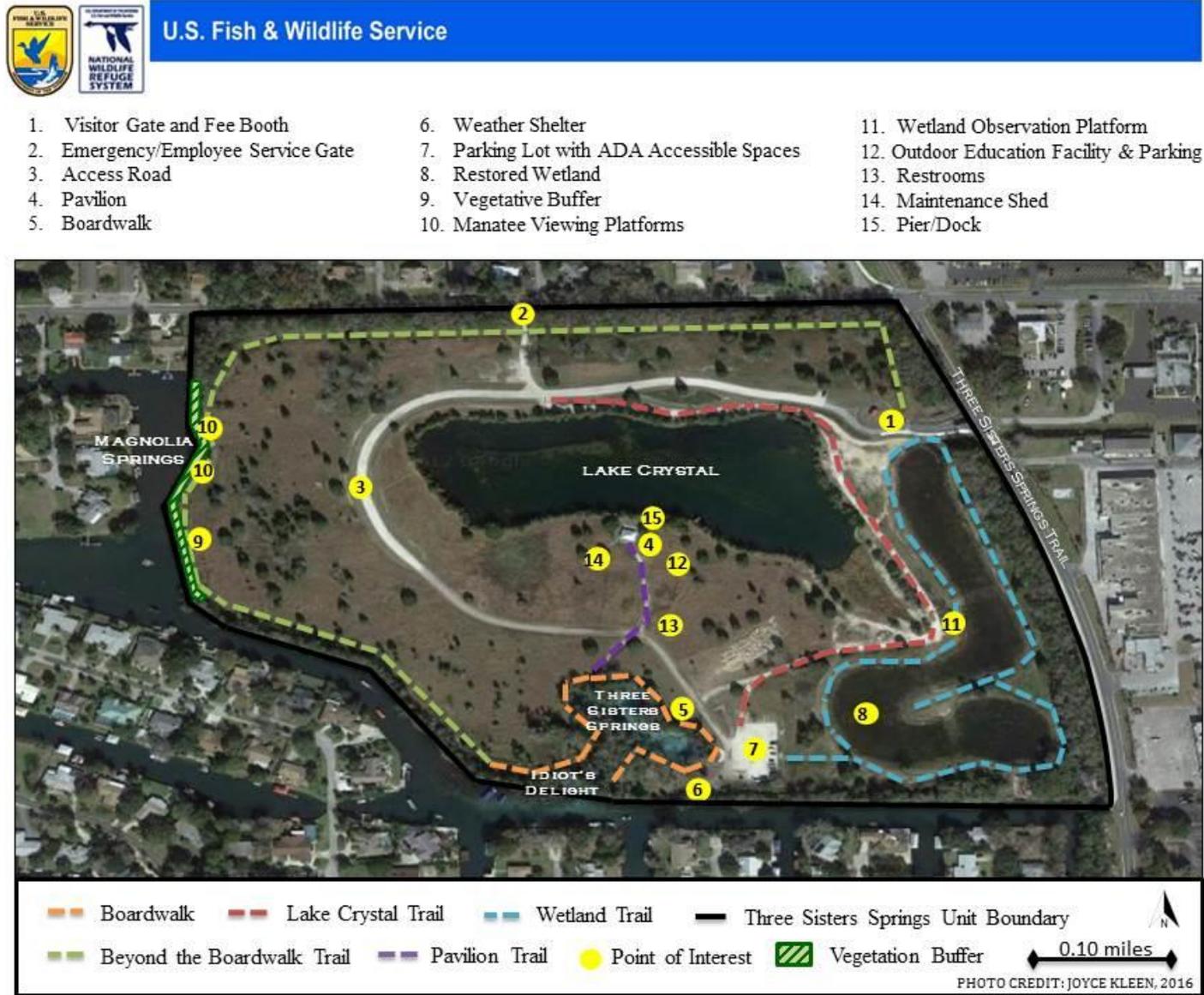
Annual Stewardship Report

The City of Crystal River and FWS will prepare an Annual Stewardship Report, due to FCT on January 30th of each year. The report will evaluate the implementation of the Management Plan.

MANAGEMENT PLAN REVISIONS

It is acknowledged that written approval must be requested from FCT before undertaking any site alteration or physical improvement that is not addressed in the approved management plan. Once the plan and/or any revision to the plan is approved by all parties, the Service and/or City may proceed with implementation of elements within the plan without requiring further approval by City Council.

FIGURE 1. PROPOSED NEW OR IMPROVED EXISTING FACILITIES, INFRASTRUCTURE, AND IMPROVED HABITAT CONDITIONS



APPENDIX A: STATUS OF DECLARATION OF RESTRICTIVE COVENANTS

1. The future land use and zoning designations of the project site shall be changed to conservation, outdoor recreation, open space or other similar category.
Completed.
2. At least four recreational facilities, such as a canoe/kayak launching platform, fishing pier, picnic pavilions and wildlife platforms shall be provided. The facilities shall be developed in a manner that allows the general public reasonable access for observation and appreciation of the natural resources on the project site without causing harm to those resources.

Partially complete. A boardwalk with 5 viewing platforms and a picnic pavilion have been constructed. The canoe/kayak launch has been removed from the plan due to lack of community support. Two manatee viewing platforms, an observation platform over the wetlands and a fishing pier/dock are planned for the future.
3. The project shall provide access facilities to an existing open water shoreline, such as a canoe/kayak launching platform and fishing pier.
Initiated. The canoe/kayak launching platform has been proposed for removal from the plan. Design and location of the fishing pier was addressed in an Environmental Assessment and will be installed contingent upon agreement by the City and funding.
4. A permanent recognition sign, at a minimum size of 3' X 4', shall be maintained at the entrance area of the project site. The sign shall acknowledge the project site was purchased with funds from the Florida Communities Trust Program and the Recipient.
Complete.
5. Interpretive signs or kiosks shall be provided on the project site to educate visitors about the natural environment or history of the area.
Complete. However, additional interpretive signs are being developed.
6. At least 12 regularly scheduled educational classes or programs shall be provided at the project site per year. These programs shall promote the protection of environmental resources.
Complete/On-going. The refuge conducts guided tours and interpretive programs for free to the public during manatee season and plans to expand the schedule year round. Two of these tours are offered twice daily: "Beyond the Boardwalk" and "A Walk Through the Wetlands." Additionally, two Birdwatching Tours were offered per week resulting in up to 30 programs per week during manatee season.
7. The natural communities that occur on the site shall be preserved and appropriately managed to ensure the long-term viability of these communities.

Complete/On-going. The shoreline of the springs was restored using sandbags and boulders to prevent erosion and shoreline collapse. Native wetland vegetation was planted along the shoreline and vicinity of the boardwalk. Restoration is planned for the remaining areas, including a butterfly/pollinator garden contingent upon agreement from the City.

8. The project site shall be maintained in a manner that protects and enhances the listed and non-listed native wildlife species and their habitat. Periodic surveys shall be conducted of listed species using the project site.
Complete/On-going. Bird surveys are conducted regularly as well as a floristic inventory. Manatee use of the springs is monitored regularly and human access is restricted to protect manatees during cold weather events.
9. The location and design of any parking facility shall be designed to have minimal impacts on natural resources. The parking area shall incorporate pervious materials wherever feasible.
Complete, although needs improvements.
10. The quality of surface waters shall be improved by the installation of storm water facilities on the project site that provide wildlife habitat and/or open space in a park like setting. The development of the storm water facilities shall be coordinated with and constructed by the Southwest Florida Water Management District.
Complete.
11. Any proposed storm water facility for the project site shall be designed to provide recreation open space or wildlife habitat.
Complete. The storm water treatment wetland was planted with native vegetation and attracts a variety of wildlife, particularly water birds. An observation platform will be constructed overlooking the wetland contingent upon agreement by the City.
12. A significant portion of the upland area on the project shall be planted with native vegetation.
Partially complete/On-going. A variety of native hardwoods were planted to help stabilize the bank around Three Sisters Springs, restore areas that had significant amounts of Brazilian Pepper removed during 2013, provide future shade along the boardwalk, and create a buffer between Three Sisters Springs and the neighboring properties. A total of 60 trees were planted, including the following species: eastern red cedar, bald cypress, water tupelo/black gum, sweetgum, red maple, sassafras, Walter's viburnum, and buttonbush. Restoration is planned for the remaining open areas, including a butterfly/pollinator garden contingent upon agreement from the City and funding.
13. A significant portion of the wetland area on the project shall be planted with native vegetation.
Complete.
14. Exotic vegetation shall be removed from the project site.
Complete/On-going. The exotic and invasive vegetation was removed from the entire property in 2013. Maintenance treatments are conducted annually by refuge staff.

15. An ongoing monitoring and control program for invasive vegetation including exotic (non-native) and nuisance native plant species shall be implemented at the project site. The objective of the control program shall be the elimination of invasive exotic plant species and the maintenance of a diverse association of native vegetation. The management plan shall reference the Exotic Pest Plant Council's List of Florida's Most Invasive Species to assist in identifying invasive exotics on the project site.
Complete/On-going. The exotic and invasive vegetation was removed from the entire property in 2013. Maintenance treatments are conducted annually by refuge staff.
16. A feral animal removal program shall be developed and implemented for the project site.
Complete/On-going. Since 2010, only one feral animal has been documented and removed from the project site.
17. Prior to the commencement of any proposed development activities, measures will be taken to determine the presence of any archaeological sites. All planned activities involving known archaeological sites or potential site areas shall be closely coordinated with the Division of Historical Resources in order to prevent the disturbance of these sites. Information on significant historical and archaeological sites shall be provided to the Division of Historical Resources for the purpose of updating the Florida Master Site file.
Complete/On-going, as appropriate. No archaeological sites are known to exist on the property.
18. A safe pedestrian sidewalk connection shall be provided between the project site and the sidewalk network in the adjacent neighborhood.
Complete.
19. A nature trail of at least one quarter mile shall be provided on the project site.
Complete. Approximately 1.75 miles of trails currently exist on the site.
20. The development and management of the project site shall be coordinated with the agencies managing the Cross Town Trail, to ensure the project site is managed as part of a linked land-based trail system.
Complete.
21. Neither the Recipient nor any third party shall pump, withdraw, divert from or impound on the FCT project site ground or surface water for the purposes of commercial or industrial use.
Complete.

APPENDIX B: ACCOMPLISHMENTS UNDER THE 2010 THREE SISTERS SPRINGS MANAGEMENT PLAN

2010 Management Plan Elements	2010 Projected Completion	Year Completed	Responsible Party	Cost
Remove unwanted existing structures (dock picnic tables with shades, barbeque pit, storage shed, scrap metal and barbed wire/chain link fence)	Not specified	2010	USFWS	labor/materials
Remove Boulders	Not specified	2010	USFWS	labor/materials
Creation of Nature Trail	2012	2012	USFWS	labor/materials
Entrance sign with FCT recognition	2012	2012	USFWS	unknown
Bat box	Not specified	2013	USFWS	labor/materials
Feral animal removal program	2012 then annually	2017	USFWS	labor/materials
Educational programs	2012 then annually	2010 annually through scheduled tours, 2016/17 manatee season conducted 30 weekly interpretive programs	USFWS	labor/materials
Exotic plant removal	2012 then annually	2010 to present by staff, 2013 by contract, 2018 contract scheduled	USFWS	2013 \$25,000; plus annual cost of labor/materials
Wildlife survey/monitoring	2012 then annually	2011 (annual CBC), 2015 to present (regularly scheduled bird surveys)	USFWS	labor/materials
Installation of First Observation Platform	2012	2011 as part of boardwalk	USFWS	Included in boardwalk \$280,000
Installation of Second Observation Platform	2014	2011 as part of boardwalk	USFWS	Included in boardwalk \$280,000

Upland restoration	2012-2016	2011 limited planting of 60+ trees	USFWS	labor/materials
Parking Facilities	2012	2011 temporary entrance road, turn-around loop, and parking area	USFWS	included in \$782,502 contracted costs
Bluebird boxes	Not specified	2012 10 boxes installed, currently have 20 boxes	USFWS	labor/materials
Bike rack	2015	2014?	USFWS	unknown
Landscaping	2012-2016	2015 limited	USFWS	labor/materials
Plant survey/monitoring	2012 then annually	2015, 2016, 2017	USFWS	labor/materials
Interpretive Signs/kiosks	2014	2015, 2016, 2018	USFWS/SWFWMD	\$12,800
Remove pine plantation and hip rows	Not specified	2011/2012	USFWS/Friends of CRNWRC	labor/materials
Picnic Pavilion	2014	2013 including trail from boardwalk to pavilion	USFWS/Friends of CRNWRC	\$19,126
Creation of Wetland Treatment Area and 1 acre of hydric hammock in Lake Crystal	2012	2015	SWFWMD	\$561,000
Amend Future Land Use Designation	2012	2010	City	
Amend Zoning Designation	2013	2012	City	
Bike trail access from Crosstown Trail	2015	Completed	City	
<i>Kayak/Canoe Launch</i>	2014	<i>Removed from plan</i>	<i>Removed from plan</i>	<i>Removed from plan</i>
<i>Volunteer Trailer Pads</i>	2015	<i>Removed from plan</i>	<i>Removed from plan</i>	<i>Removed from plan</i>
<i>Fishing Pier</i>	2015			
<i>Education Center</i>	2015			
<i>Photo monitoring</i>	2012 then annually	<i>Removed from plan</i>	<i>Removed from plan</i>	<i>Removed from plan</i>

APPENDIX C: ADDITIONAL ACCOMPLISHMENTS NOT IDENTIFIED IN THE 2010 THREE SISTERS SPRINGS MANAGEMENT PLAN

Elements not specifically identified in the 2010 plan		Year Completed	Responsible Party	Cost
Purchase of water rights/easement		2010	USFWS/private donations	USFWS: \$3,225,000 Private: \$1,775,000
Main entrance redesigned to improve safety and new entrance gates		2016	USFWS/FLAP Grant	included in \$782,502 contracted costs
Bank Stabilization Conceptual Design Report by The Nature Conservancy		2012	TNC/FWC/USFWS	\$42,887 TNC \$42,887 State Wildlife Grant funded by USFWS
Bank stabilization survey and permitting		2012	USFWS/Friends of CRNWRC	\$12,500
Bank stabilization obtained 1,800 tons of rock from Florida Fish and Wildlife Conservation Commission		2015	USFWS/FWC	\$60,000 included in \$100,000 FWC contributed to total cost of bank stabilization project
Permanent access road, guard house, underground utilities along new road, swing gates and retention swales		2015	USFWS and Federal Lands Access Program Grant to City	included in \$782,502 contracted costs plus \$380,628 Federal Lands Access Program grant

Temporary restrooms		2014	USFWS (and City since 2015/16)	FWS purchased one portable toilet (city rents two)
Boardwalk with 5 viewing areas		2011	USFWS	\$280,000
3SS Master site plan design		2014	USFWS	\$144,170
Temporary Entrance Road, electronic gate and concrete pad for daily visitation		2014	USFWS	included in \$782,502 contracted costs
design, engineering, surveying, permitting a 3SS entrance and roadway		2015	USFWS	\$82,100
Boardwalk handrails reinforced and boardwalk certified that meet code		2016	USFWS	\$35,000
Identified need for bank stabilization/received Univ. of FI report on proposed solutions		2010/2011	USFWS	labor/materials
Bank stabilization construction		2016	SWFWMD/FWC	SWFWMD: \$663,000 FWC: \$100,000
Wetland culvert outfall area, wetland plant maintenance, and additional manatee grates.		2015/2016	SWFWMD	\$10,000

APPENDIX D: PUBLIC USE BY LAND

Public Use by Land		Year Completed	Responsible Party
Monthly open houses during Manatee season		2010, 2011, 2012, 2013	USFWS
Daily access during manatee season		2014/15	USFWS/Special Use Permit holder
Daily access during manatee season		2015/16, 2016/17, 2017/18	USFWS/City as Special Use Permit holder
Daily access year round		2017	USFWS/City as Special Use Permit holder
Manatee use and human interaction research to manage public access to springs		2011 to 2018	USFWS

APPENDIX E: U.S. FISH AND WILDLIFE SERVICE EXPENDITURES AND INVESTMENT IN THREE SISTERS SPRINGS

USFWS investment:	Amount	
Capital Improvements	\$1,323,978	
Resource management (manatee research/exotic plant removal)	\$60,000	
Bank Stabilization (State Wildlife Grant)	\$42,887	
Purchase of water rights	\$3,225,000	
Total	\$4,651,865	
Friends of CRNWRC investment:	\$87,227	
Federal Lands Access Program grant:	\$380,628	
Annual Investment:	FY 16 and 17	Annual Value
Staff time (11 to 12 employees)	32%	\$276,000 to \$301,715
Volunteer hours donated (\geq \$23.56 per hour)	10,000 to 14,000	\$231,000 to \$329,840
Maintenance		\$25,000
Total		> \$527,000

APPENDIX F: APRIL 2017 LETTER TO CITY OF CRYSTAL RIVER REQUESTING UPDATE TO MANAGEMENT AGREEMENT



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Crystal River National Wildlife Refuge Complex
Chassahowitzka, Crystal River, Egmont Key, Passage Key,
and Pinellas National Wildlife Refuges
7798 South Suncoast Boulevard
Homosassa, Florida 34448
Phone: (352) 382-1040 Fax: (352) 795-7961
April 18, 2017



Dave Burnell
City Manager
City of Crystal River
123 Northwest Highway 19
Crystal River, FL 34428

Mr. Burnell,

Thank you for your letter requesting that the Crystal River National Wildlife Refuge (Refuge) establish a 50- to 100-foot buffer between existing walking trails and the shoreline on the Three Sisters Springs property to minimize erosion and disturbance to residential neighbors. That request was made in accordance with the "Management Agreement for Certain Land Located Within the City of Crystal River (City), Citrus County, State of Florida" (Management Agreement) between the City, the Southwest Florida Water Management District (SWFWMD) and the U.S. Fish and Wildlife Service (Service), as well as the Three Sisters Springs Project Management Plan (PMP) developed by the City, the SWFWMD, and the Service. As you and I discussed during a January 19, 2017, meeting, and as I discussed with City Council during the January 25, 2017, City Council Workshop, the Service will not invest any more money in improvements to the property until we meet to update our Management Agreement and PMP for the Three Sisters Springs property. This process will help us establish priorities for the short- and long-term management of the property and improve the coordination between the City and the Refuge to accomplish common goals.

I met with you and Mayor Farley on February 7, 2017, to discuss these items and we agreed to meet weekly to update the Management Agreement and set management priorities. I attempted to schedule subsequent meetings for which you were unavailable until Monday, April 3, 2017. During that meeting and a follow up meeting held April 12, you informed me that you have been tasked by City Council to formulate three cost alternatives for management of the Three Sisters Property instead of updating the Management Agreement and PMP. The alternatives include comparison of costs to the City if the City managed the Three Sisters Springs property independently, if the City managed the property in partnership with the Refuge, and if the Refuge managed the property independently. You asked me to assist in developing the second and third alternatives and to include reasonable timelines for management milestones. The Refuge would like to continue managing the Three Sisters Springs property and is more than willing to assist in developing the alternatives. Working together to improve communication and coordination is imperative in enhancing our ability to effectively manage the property.

The Service has funding available to construct a visitor contact station/environmental education facility, free-standing public restrooms, and manatee observation platforms; and to improve the existing trails. The Refuge drafted an environmental assessment (EA) to analyze the potential effects of those proposed construction activities on the environment in accordance with the National Environmental Policy Act of 1970. On May 9, 2016, the City Council requested that the Service participate in upcoming Community Working Group (CWG) meetings to reach consensus among local stakeholders on actions and priorities for the Three Sisters Springs property. As a result, the Refuge put the EA on hold until the CWG reached agreement on 6 priorities and presented their recommendations to the City Council on October 24, 2017. Those recommendations have now been incorporated into a new EA to be released for public comment in the near future.

The Service is restricted in using appropriated funds to make permanent improvements to property not owned by the federal government unless authorized by statute or if the following conditions are met (GAO-01-179SP Appropriations Law-Vol. IV, pages 16-206 to 16-210):

1. The improvement must be incident to and essential for the effective accomplishment of an authorized purpose of the appropriation;
2. The amount of the expenditure must be reasonable;
3. The improvement must be for the principal benefit of the United States government; and
4. The interests of the United States government in the improvement must be protected.

Condition 4 can only be met at Three Sisters if the Service will continue to have management authority for at least the estimated life of the structures and improvements made. If our management authority ends prematurely, the City and/or SWFWMD would be required to reimburse the Service for the pro-rated value or fair market appraisal of the structures and improvements made to the property from this point forward. The Refuge must request that our Management Agreement be updated to include those conditions in writing prior to expending any appropriated funds on structures and improvements at Three Sisters Springs.

I look forward to our continued partnership in managing Three Sisters Springs. If you have any questions or wish to arrange a meeting to update our Management Agreement and PMP, please contact me at (352) 436-7156 or by email at joyce_palmer@fws.gov.

Sincerely,



Joyce Palmer
Wildlife Refuge Manager

CC: Kathleen Burchett, Area Supervisor, SE Region, National Wildlife Refuge System, Service
David Viker, Chief, Southeast Region, National Wildlife Refuge System, Service
Jim Farley, Mayor, City
Michael Gudis, Vice-Mayor, City
Pat Fitzpatrick, Council Member, City
Ken Brown, Council Member, City
Robert Holmes, Council Member, City
Carmen Sanders, Land Resources Manager, Operations & Land Management Bureau,
SWFWMD

APPENDIX G: NOVEMBER 2017 RESPONSE TO CITY OF CRYSTAL RIVER TERMINATION NOTICE



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Crystal River National Wildlife Refuge Complex
Chassahowitzka, Crystal River, Egmont Key, Passage Key,
and Pinellas National Wildlife Refuges
7798 South Suncoast Boulevard
Homosassa, Florida 34448
Phone: (352) 382-1040 Fax: (352) 795-7961
November 16, 2017



Dave Burnell
City Manager
City of Crystal River
123 Northwest Highway 19
Crystal River, Florida 34428

Mr. Burnell,

I received your August 21, 2017, letter notifying the U.S. Fish and Wildlife Service (Service) of the City of Crystal River's (City) intent to terminate the Service's agreement with the City and the Southwest Florida Water Management District (SWFWMD) to manage the Three Sisters Springs property (Property) as part of the Crystal River National Wildlife Refuge (Refuge). The "Management Agreement for Certain Land Located Within the City of Crystal River, Citrus County, State of Florida" (Management Agreement) may be terminated by the City and/or the SWFWMD if either party determines that the Service has failed to manage the Property in accordance with the provisions of the 2010 Three Sisters Springs Project Management Plan (PMP) or the Management Agreement, and then only after we have been given a period of not less than three (3) months to correct documented performance shortfalls.

According to your letter, the Service's performance has been deficient in four areas: (1) planning, (2) public access, (3) funding and staffing, and (4) capital improvements. While we acknowledge that PMP implementation has not progressed as desired, we dispute that the Service has been deficient in these areas. Specific reasoning and examples are contained in the attached document. In general, implementation has been impeded by a lack of unified vision among the parties and within the broader public, miscommunications between the Service and the City, and limitations in appropriated funds.

We respect the City's and SWFWMD's right to determine the fate of the Property. However, we feel that the Service can play a vital role in management of the Property given certain conditions. Therefore, we have and will continue to work in good faith with the City to both develop management scenarios and to update the PMP, as agreed upon so that the City Council has the information needed to make informed decisions on the future direction of the Property. We have proceeded with or intentionally delayed projects over the last two years based on the requests and/or direction (and some cases lack of direction) from the City and/or City Council.

Regardless, the Refuge has assisted the City in meeting the intent of Florida Communities Trust in granting funds to the City for purchase of the Property and 19 of the 21 covenants have been completed or are ongoing. We are also prepared to invest significant funding into permanent structures, but must ensure a long-term lease to do so.

I look forward to our continued partnership in managing Three Sisters Springs. If you have any questions, please contact me at (352) 436-7156 or by email at joyce_palmer@fws.gov.

Sincerely yours,

Joyce Palmer
Wildlife Refuge Manager

CC: Kathleen Burchett, Area Supervisor, Southeast Region, National Wildlife Refuge System, Service
David Viker, Chief, SE Region, NWRS, Service
Jim Farley, Mayor, City
Michael Gudis, Vice-Mayor, City
Pat Fitzpatrick, Council Member, City
Ken Brown, Council Member, City
Robert Holmes, Council Member, City
Ken Frink, SWFWMD
Lauren Reamy, Deputy Legislative Director, Senator Rubio
Gary Clark, Chairman of Florida Community Trust

Attachment

ATTACHMENT

U.S. Fish and Wildlife Service response to issues raised by the
City of Crystal River in its August 21, 2017, letter

Planning

City comment: The SERVICE, to date, has failed to follow certain provisions of the National Wildlife Refuge System Improvement Act of 1997 and 602 FW 3 Comprehensive Conservation Planning Process, which exposes the property to potential closure by legal action.

Response: Refuges are established to protect wildlife and habitat, with specific purposes. Comprehensive conservation plans (CCP) are prepared to ensure that the use of refuge lands and waters meets those purposes and to help fulfill the mission of the National Wildlife Refuge System (NWRS). Plans address the conservation of fish, wildlife, and plant resources and their habitats and facilitate compatible wildlife-dependent recreation while providing a forum for public involvement during the decision-making process. The Crystal River National Wildlife Refuge (Refuge) initiated the planning process in 2008 but put the plan on hold to incorporate management of the Three Sisters Springs property (Property) in the document. The Refuge has recently resumed its CCP development and held a final public scoping meeting October 26, 2017. We expect to complete the planning process and release a final plan by June of 2019.

Although the CCP is not yet completed, the Refuge completed and released a draft Environmental Assessment (EA) in June 2017 on the Development of Visitor Services Facilities, Infrastructure, and Habitat Improvements at Three Sisters Springs that evaluated proposed wildlife-dependent recreational activities to determine their appropriateness and compatibility in relationship to the purposes of the Refuge and the mission of the NWRS. Wildlife observation and photography; environmental education and interpretation; scientific research and monitoring; land-based commercial services; commercial wildlife and nature photography, filming, and other art forms from land; and bicycle use were determined to be appropriate and compatible public uses for the Refuge. This process satisfies applicable regulations, Service policy, and National Environmental Policy Act and Refuge Improvement Act requirements. All legislative and policy requirements to prevent the closure of the Property by legal action have been completed by the Service.

Public Access

City comment (in part): Operations of the site for public use have been limited for the first six (6) years following execution of the AGREEMENT. The location remained closed to the general public for the first four (4) years, excluding approximately four (4) "Refuge Days" events per year.

Response: Public access was limited until 2014 because the Refuge had neither developed visitor services facilities on the Property nor a wildlife-dependent recreation program, including an access fee, as identified in the 2010 Three Sisters Springs Project Management Plan (PMP). Opening refuge lands to public access for wildlife-dependent recreational activities and establishing an entrance fee is a lengthy (i.e., 9 to 12 months) process involving significant public input into the activities proposed and fees established. The Refuge has initiated that process concurrent with the CCP. In the interim, the Refuge has provided public access to the

Property through other mechanisms, initially by holding open house events without charge, followed by facilitating the use of an independent, locally-owned commercial operator (i.e., River Ventures, LLC) to conduct tours under a Special Use Permit (SUP). When manatee use of Three Sisters Springs and the subsequent visitor demand increased exponentially, the City requested to operate those tours internally under a SUP and Memorandum of Understanding (MOU).

The initial SUP holder did an excellent job for the unpredicted volume of people visiting the springs during the 2014/2015 manatee season. The Refuge Manager has consulted with previous staff and completed an evaluation of all reviews of the permit holder's performance. The reviews focused on the SUP holder's operation of the land-based tours during that manatee season that were posted on Trip Advisor, Facebook, Google, and Yelp, and articles written in the Citrus County Chronicle (Chronicle). Only one negative complaint was posted on any of those online venues. The complaint focused on the length of time the customer had to wait in line for the shuttle to the Property. The only complaint identified in the Chronicle was from residents along Kings Bay Drive that were unhappy that the SUP holder was using the entrance on Kings Bay Drive to access the Property for the tours. The Chronicle complaint was not related to the quality of the service provided by the SUP holder. Residents' complaints were resolved when construction of the entrance on Three Sisters Springs Trail was completed in 2015. Additionally, the SUP holder's satisfactory performance resulted in the City Council approving a 30-day extension to their contract, and a councilmember stating River Ventures was "doing a great job maintaining control." Likewise, Three Sisters Springs was named the second best spring to visit in Florida during spring 2015 by Agape Voyage. This nomination is based on the number of people who visited the Springs and other factors such as "popularity, the length of the river, amenities and, of course, ratings from other people who have been found online."

Since at least February 2015, City Council has publicly expressed that they want to solely control public access to the land portion of Three Sisters Springs. The timing coincided with an exponential increase in the popularity of manatee viewing from the boardwalk that the Refuge constructed on the Property and a corresponding increase in local tourism. City Council convened a tourism workshop in April of that year to determine how to harness the economic benefits for the City as "City Council decided to take a different direction with Three Sisters Springs, in that the City will try to take over the land portion...." Subsequently, in May 2015, City staff proposed that the City would "1) organize visitors offsite to educate and bring them into the Refuge via shuttle, 2) maintain a gate to allow visitors via shuttle, bicycles and walk-ons into the Refuge, and 3) maintain orderly site via education and supervision of visitors." The Refuge would be responsible for managing the swim-with manatees program, monitoring manatee habitat on the Property and managing Refuge lands. The party responsible for maintenance of facilities and grounds was not determined at that time.

The Refuge agreed to the City's request to act as a concessionaire and, during the last two manatee seasons, the City has accomplished items 1 and 2 above in accordance with USFWS policy through a MOU and SUP. Reviews of the City's performance posted on Trip Advisor, Facebook, Google, and Yelp are similar to those posted for River Ventures in terms of quality with one exception. Guests, both local and nonresident, frequently complained about the high fees charged by the City for the trolley service and walk-on access. The fees rose from \$6.00 per

adult when River Ventures was operating the shuttle service to \$15.00 per adult during manatee season and \$7.50 during the off-season under the City's operation of the trolley service. Additionally, visitors that walk onto the Property from nearby residences are charged the same fee as visitors that take the trolley to the Property. The City's response to those that complain emphasize that "100% of the proceeds go back into paying for local jobs and developments at Three Sisters Springs." However, the City has not invested any money into site development or facilities and grounds maintenance on the Property. The Refuge has invested considerable time and money in both.

This past year, the Refuge opened the entire Property for visitor access to existing trails in addition to the boardwalk and agreed to year-round access as we are committed to providing a quality visitor experience. In addition to providing daily boardwalk interpreters, the Refuge developed and implemented interpretive programs and birding tours of the Property throughout manatee season. Two of these tours were offered twice daily, "Beyond the Boardwalk" and "A Walk Through the Wetlands". Additionally, the birdwatching tours were offered twice weekly, resulting in 30 programs per week. All programs were presented to the public free-of-charge, well received, and widely attended by Refuge visitors (i.e., over 2,000 visitors). These programs were provided to diversify the visitor experience and engage visitors, particularly on warm days when no manatees were present.

Funding and Staffing

City comment: The necessary funding set forth in the plan is substantial in nature and adequate to operate the refuge... During the last several years however, existing staff has been reduced further minimizing contributions to the operation of the property. It is evident that the SERVICE is not meeting its obligation to provide services as expressed in the PLAN. In recent discussions, it has been determined that only a portion of the operational requirements will be satisfied and only after the SERVICE develops and implements a fee package for the property.

Response: The Refuge is not only meeting but significantly exceeding the predicted annual staff investment identified for initial management. The 2010 Three Sisters Springs PMP identifies that 10 to 25 % of 8 staff members time for an average 17.5% of those 8 positions combined, would be invested by the Refuge to manage the Property. The actual percentage of 11 staff members' time committed to management of Three Sisters Springs during Fiscal Year (FY) 2016 was 32% at a cost of \$276,000. Despite declining budget and staffing levels, our committed staff time during FY2017 increased to 32% of 12 staff members' time. The Refuge currently has 9 full-time permanent employees and one temporary hire which is similar to our 2010 staffing level. We are currently holding 3 positions vacant with plans to fill at least one in the near future.

The PMP states if funds are available, we would seek to add positions (i.e., up to seven positions costing \$545,000) to manage the site when it is fully developed which included establishment of an entrance fee to pay for those additional salaries and the \$200,000 annual maintenance fund (see pages 15 to 16 of the PMP). The Refuge has not yet established an entrance fee as identified in the PMP to hire additional staff dedicated to the Property or to fund maintenance needs. The Refuge has supported staff, volunteers, and maintenance needs solely from our annual budget. Site development and construction have been funded through both Regional and Refuge funds. For example, the Refuge spent 27% (i.e., \$297,000) of our total FY2016 budget on the Property,

as well as \$1,465,130 on site development and construction (e.g. temporary fee booth and gate, entrance road, boardwalk, etc.) since FY 2012 for an average of \$366,282 per year over the last 4 years.

Many state and federal land management agencies rely heavily on a volunteer work force and non-profit partnerships to meet daily demands. Similarly, the City initiated a volunteer program to supplement its own workforce this summer. The Refuge also has a well-developed and extremely dedicated volunteer force that donated almost 10,000 hours to the management of Three Sisters Springs during FY 2016 at an estimated value of \$231,000 (i.e., \$23.56 per hour according to independentsector.org) and 14,322 hours during FY 2017 at an estimated value of \$345,733 (i.e., \$24.14 per hour according to independentsector.org). Additionally, the non-profit organization Friends of the Crystal River National Wildlife Refuge Complex (Friends group) has also provided approximately \$90,000 in financial support for the acquisition of the Property, permit requirements for the shoreline stabilization, construction of the pavilion, and various other projects. Refuge volunteers and the Friends group are and will continue to be an invaluable asset to management of the Property regardless of our staffing and funding levels. We accomplish more with their strong support than the Refuge would independently.

Capital Improvements

City comment: The PMP includes a "projected timeline" based on funding availability that extends through 2016. The City has expressed concern that all projects identified in the plan were not completed by then.

Response: Of the 26 projects specified in the PMP, the Refuge was responsible for 20, the City was responsible for 3, and SWFWMD was responsible for 3. Twelve of the projects have been completed by the Refuge or are inherently recurring/unending projects such as control of exotic and invasive plants and feral animals or educational programs. Three projects have been initiated but not completed such as limited installation of interpretive signs and the construction of a temporary parking area instead of permanent. The majority of the capital improvements the Refuge has not completed have been a point of contention with the local community, including the canoe/kayak launch, an education center, volunteer pad, and permanent parking facilities. As a result, the City sponsored a Community Working Group (CWG) that met last summer/fall to reach consensus among local stakeholders on actions and priorities for the Property. The City Council also requested that the Service participate in these meetings at the May 9, 2016 Council meeting. We agreed and placed a draft EA that included the facilities mentioned in your letter on hold until the CWG reached agreement. The CWG reached consensus, presented their recommendations to the City Council on October 24, 2016 and then reconvened to prioritize those recommendations. The Refuge has incorporated the CWG recommendations into a new EA that was released for public comment on June 23, 2017. The Service has funding available to construct a permanent entrance booth, gate, fencing, free-standing public restrooms, and three additional observation platforms; and to improve the existing trails, temporary parking, and landscaping. Once the EA is finalized and our management plan and agreement are updated, we can initiate construction.

As we have discussed previously (i.e., during the January 25, 2017 City Council Workshop and via an April 18, 2017 letter), the Service will not invest any more money in improvements to the

Property until we update our Management Agreement and PMP for the Three Sisters Springs Property. This process will help the Refuge establish priorities for the short- and long-term management of the Property and improve the coordination between the City and the Refuge to accomplish common goals. The Service also informed the City that progress on capital improvement projects might “be slowed or stopped because of City actions to remove USFWS from the Property” during a May 26, 2015 Council meeting. At that time, the Service had committed to spending approximately \$1.5 million if the City and Refuge came to agreement on operating the site in a “collaborative manner.” We discussed at that time that the Service would “request return of its capital investment if a mutually beneficial resolution [was] not reached” as the Service is restricted in using appropriated funds to make permanent improvements to property not owned by the federal government unless authorized by statute or specific conditions are met. Those conditions include that the improvements must be for the principal benefit of the United States Government and that the interests of the United States Government in the improvements must be protected (GAO-01-179SP Appropriations Law-Vol. IV, pages 16-206 to 16-210). Those conditions can only be met for the Property if the Service will continue to have management authority for at least the estimated life of the structures and improvements made. If the Service’s management authority ends prematurely, the City and/or SWFWMD would be required to reimburse the Service for the pro-rated value or fair market appraisal of the structures and improvements made to the Property from this point forward. The Refuge must request that our Management Agreement be updated to include those conditions in writing prior to expending any appropriated funds on structures and improvements at Three Sisters Springs.

The Refuge would like to continue managing the Property and has been working cooperatively with the City to update the PMP. Our intention is to work together with the City to develop the Property as mutually agreed upon. We have proceeded with or intentionally delayed projects over the last two years based on the requests and/or direction (and some cases lack of direction) from the City and/or City Council. We are prepared to invest significant funding into permanent structures, but must ensure a long-term lease to do so. Regardless, the Refuge has assisted the City in meeting the intent of Florida Communities Trust in granting funds to the City for purchase of the Property and 19 of the 21 covenants have been completed or are ongoing.