# Presentation

Ron Chicone, Jr., Central Region Land Management Specialist, gave a presentation on the Pine Island Conservation Area Proposed Site Management Plan A copy of the MS Power Point file used in the presentation is available upon request.

The following was noted:

* + This management plan is for the Pine Island Conservation Area, located at 6195 N. Tropical Trail Merritt Island, FL 32953
	+ The purpose of this summary is to allow the Selection and Management Committee the opportunity to provide preliminary feedback on the Pine Island Conservation Area Site Management Plan.
	+ Comments gathered at this meeting will be incorporated into the Site Management Plan, and the resulting draft will be submitted to the Selection and Management Committee.
	+ The Pine Island Conservation area is approximately 876 acres. The boundary encompasses areas from N Tropical Trail to Ransom Road and is bounded by the Indian River Lagoon on the west, private properties to the east and the Merritt Island Wildlife Refuge to the north. The site includes stormwater management facilities and the unpaved portion of Pine Island Road.
	+ There are gated public access points at 6195 North Tropical Trail and 2100 Pine Island Road (Figure 2). The N. Tropical Trail gate provides access to the Education Center (1875 cabin, 1888 house, kitchen and public restroom building, screened pavilion), the Land Management Center (maintenance shop/office building, equipment storage areas, tool sheds), ADA trail and outdoor educational exhibits, hiking trails and event parking.
	+ The Pine Island Road gate is open from 8:30AM to Sunset, 7 days a week, 365 days a year. This gate provides access to parking, informational kiosks, trails, 2 kayak launches, and a non-motorized watercraft lake access area.
	+ The Site Map is a depiction of the current Pine Island Conservation Area property boundary overlaid on a recent color aerial photograph. The boundary encompasses approximately 898 acres from N Tropical Trail to Ransom Road. The property is bounded by the Indian River Lagoon on the west, private properties to the east and the Merritt Island Wildlife Refuge to the North. The site includes stormwater management facilities and the unpaved portion of Pine Island Road.
	+ The Optimal Boundary Map shows the optimal boundaries that would allow managed Pine Island lands to connect to, or support a corridor to, surrounding managed conservation lands or the Indian River Lagoon if they were acquired or managed by the Environmentally Endangered Lands Program. They would include privately-owned out-parcels within the current boundary, and adjacent properties that would enhance the beneficial functions being provided by the sanctuary. Optimal boundary property locations can be grouped into four categories:
* The historic mouth of Sams Creek
* The out-parcels north of Pine Island Road
* The undeveloped property to the east of the northern portion of Pine Island Conservation Area
* The undeveloped property bordering the Indian River Lagoon north of the sanctuary.
	+ Natural Communities Map shows the types occurring on Pine Island: mesic flatwoods, wet flatwoods, mesic hammock, hydric hammock, depression marsh, basin marsh, salt marsh, mangrove swamp, estuarine unconsolidated substrate and tidal creek.
	+ Other habitats or land cover types on PICA are the result of significant anthropomorphic alteration: stormwater Lakes, drainage ditches, berms, dirt and grassed roads, powerlines, ruderal woodland, restoration areas, gardens, and landscaped and mowed areas.
	+ The NRCS (Natural Resources Conservation Service) Soils Map shows the following soil types occurring on site:
* Anclote sand is mapped on approximately 2% of the site. This soil series consist of a nearly level, very poorly drained sandy soil in marshy depressions in the flatwoods, in broad areas on flood plains, and in poorly defined drainage ways.
* Basinger sand is mapped on approximately 2% of the site. This soil series is a nearly level, poorly drained, sandy soil in sloughs of poorly defined drainageways and depressions in the flatwoods.
* Bessie muck is mapped on approximately 5% of the site. This soil series consists of very deep, very poorly drained, slow or very slow permeable organic soils in coastal mangrove swamps that are subject to daily or periodic flooding by high tides.
* Candler fine sand is mapped on approximately 2% of the site. This soil series consists of very deep, excessively drained, very rapidly to rapidly permeable soils on uplands of Atlantic Coast Flatwoods.
* Canaveral-Anclote Complex is mapped on approximately 11% of the site. This soil series consists of very deep, somewhat poorly to moderately well drained, very rapidly permeable soils on side slopes of dune-like ridges bordering depressions and sloughs along the coast in peninsular Florida.
* Immokalee sand is mapped on approximately 7% of the site. This soil series consists of very deep, very poorly drained soils that formed in sandy marine sediments.
* Myakka sand is mapped on approximately 4% of the site. This soil series consists of nearly level, poorly drained sandy soils in broad areas in the flatwoods, in depressions, and in area between sand ridges and ponds and sloughs.
* Pomello sand is mapped on approximately 0.2% of the site. This soil series consists of very deep, moderately well to somewhat poorly drained soils that formed in sandy marine sediments.
* Quartzipsamments, smoothed is mapped on approximately 6% of the site. These are nearly level to steep sandy soils that have been reworked and shaped by earthmoving equipment. Many areas are former sloughs, marshes, or shallow ponds that have been filled with various soil material to surrounding ground level or above natural ground level.
* St. Johns sand is mapped on approximately 9% of the site. This soil series consists of nearly level, poorly drained sandy soils on broad low ridges, in sloughs, in poorly defined drainageways, and in shallow intermittent ponds in the flatwoods.
* Turnbull and Riomar soils are mapped on approximately 26% of the site. These soil series consists of very deep, very poorly drained, very slowly permeable soils near sea level and are flooded periodically by tidal overwash.
* Water is mapped on approximately 14% of the site. This is open water within the site that is not contiguous with the IRL (includes borrow/stormwater lakes and interior bays).
* Waters of the Atlantic Ocean is mapped on approximately 12% of the site. This is open water within Sams Creek/Rinker Canal.
	+ Threatened and Endangered Species Observed within Sanctuary Boundaries are:
* Giant air plant (*Tillandsia utriculata, T. fasciculata*) is listed as Endangered by Florida
* Gopher tortoise (*Gopherus polyphemus*) is currently listed as Threatened by Florida and is under review by the U.S. Fish and Wildlife Service (FWS)
* Wood Stork (*Mycteria Americana*), listed as Threatened by US FWS and the state of Florida
* West Indian manatee (*Trichechus manatus*), listed as Threatened by US FWS and the state of Florida
	+ Protected Species and Species of Special Concern Observed Within Sanctuary Boundaries consist of only the American Bald Eagle. Bald eagles have been observed and there is currently one active nest on PICA and one inactive nest near the property. Bald eagles are currently protected under the state eagle rule (68A-16.002, F.A.C.), the Migratory Bird Treaty Act, and the Bald and Golden Eagle Act
	+ Potential Occurrences of Threatened, Endangered or Protected Species include only Curtiss’ Sandgrass *(Sporobolus vaseyi)*.
	+ The 1943 black and white aerial photograph shows a relatively undeveloped Pine Island. Sams Creek appears natural and undisturbed except for Pine Island Road ditch. There is no visible evidence of mosquito ditches or impoundments. Pine Island Road and an adjacent ditch/canal dissect the site to the Lagoon.
	+ Conservation Value includes:
* Protecting approximately 10,200 feet of continuous shoreline along the eastern shore of the Indian River Lagoon
* Preserving hundreds of acres of wetlands adjacent to the Indian River Lagoon
* The Judson Canal drains approximately 6,000 acres of North Merritt Island toward the Indian River Lagoon at Pine Island. The Stormwater Facility address both flood protection and Indian River Lagoon water quality issues
* Protecting a large tidal creek system (Sams Creek) which is critical manatee habitat
* The property is contiguous with the National Wildlife Refuge
	+ Accomplishments are:
* Removal of 63 acres of dredge spoil from a 1969 development project and restoration of the underlying salt marsh habitat
* Restoration of hydrologic connections to the IRL through several culverts
* Restoration of Pine Island flatwoods with exotic removal, roller chopping and four prescribed burns
* Restoration of abandoned citrus groves to scrubby flatwoods for state-Threatened gopher tortoise habitat
* Ground-breaking archeology at Sams Creek and at Sams House
* Restoration of historic structures and the establishment of a Center with facilities, education programs and public access
	+ The site has been divided into seven fire units. Five of these units (1, 2, 5, 6, & 7) are managed with prescribed burning. Units 1 and 2 include all of the flatwoods habitats in the northern and central portions of the site. Units 5, 6, & 7 and very small, approximately two acres each, and located near the Sams House. These are part of a former citrus grove and are being restored to scrub/scrubby flatwoods.
	+ There are gated public access points at 6195 North Tropical Trail and 2100 Pine Island Road (Figure 2).
	+ The N. Tropical Trail gate provides access to the Education Center (1875 cabin, 1888 house, kitchen and public restroom building, screened pavilion), the Land Management Center (maintenance shop/office building, equipment storage areas, tool sheds), ADA trail and outdoor educational exhibits, hiking trails and event parking.
	+ The Pine Island Road gate provides access to parking, informational kiosks, trails, 2 kayak launches, and a non-motorized watercraft launch.
	+ There are approximately 8.2 miles of marked hiking, biking and equestrian trails, and approximately 5.5 miles of kayak trails.
	+ Parking: Three small unimproved parking areas were constructed at the Pine Island Road entrance. Access is also available at 6195 North Tropical Trail. This is the access point to the Education Center with a coquina-surfaced parking area and a large grassed parking area for events.
	+ Hiking: Many of the trails at Pine Island Conservation Area are best suited to hiking. They are single-track, primitive trails through dense vegetation, with uneven surfaces and foot walks over wetlands. Other trails through flatwoods or atop berms are wider with relatively level surfaces. There is also a 0.1-mile ADA accessible paved loop trail.
	+ Bird Watching: Birding is a passive recreational activity that is encouraged at the Sanctuary.
	+ Bicycling: Biking is allowed on all trails within PICA. Staff maintains the right to close any trail to biking if the trail becomes damaged due to the excess of this activity.
	+ Equestrian:The 3.4-mile Equestrian Loop makes use of several existing roads: forested berm roads from past mosquito impoundments, mowed berms along the north stormwater lake, and natural-surfaced portions of Pine Island Road within the sanctuary.
	+ Hunting/ Fishing: No hunting will be allowed within the sanctuary unless given special permission through the EEL permitting process. Only hog hunting and trapping is permitted on site with permission. Fishing is allowed on site and FWC rules are to be followed. Law enforcement is onsite periodically to oversee these rules.
	+ No Pets are allowed on site by County Ordinance 78-116 titled Wildlife and Domestic Animals, which reads: “Unless otherwise permitted by law, no person shall feed, hunt, catch, harm, kill, trap, chase, tease, shoot or throw missiles at any animal nor remove or have in his possession the young of any wild animal or eggs or nest thereof in any park, recreational facility or department managed lands. Hunting may be allowed by permit in designated areas, subject to applicable governmental rules, regulations and agency requirements. No person shall abandon an animal in any park, or recreational facility, or department managed lands.”
	+ “No person shall bring an animal into any park, recreational facility, or department managed lands unless it is a service animal or it is an area designated for such purpose. The service animal must be under the control of its handler and must have a harness, leash, or other tether, unless either the handler is unable because of a disability to use a harness, leash, or other tether, or the use of a harness, leash, or other tether would interfere with the service animal's safe, effective performance of work or tasks, in which case the service animal must be otherwise under the handler's control by means of voice control, signals, or other effective means. The service animal must be properly vaccinated and licensed. It is required to clean up after your service animal. Licenses and proof of vaccination must be presented to department personnel or law enforcement upon demand.”
	+ Commercial Activities: All commercial activities must be permitted through the county process.
	+ Proposed trail (Service Trail): This trail would connect Sams House to the berm of the south stormwater lake. This ATV accessible trail will be mostly adjacent to the southeast boundary, will help in securing and maintaining the property and fenceline, will allow access for emergency personnel to contain wildfires, and will allow access to remote areas for control of invasive vegetation and habitat restoration. It will require minimal clearing, will cross one large ditch and one wetland.
	+ Proposed trail (Little Inlet Trail): This trail will be along an existing berm system south of the flatwoods Trail. This berm separates marsh on the southeast side from hydric hammock on the northwest side offering these two habitat views. Its terminus will overlook the Indian River Lagoon at a stable shoreline location beside a small lagoon/inlet offering two points of interest. Shrubby vegetation on the berm offers a buffer that will shield wildlife but allow for public viewing.
* Proposed Decommission of Saltmarsh Trail
* The overlook view at the terminus of the Saltmarsh Trail has become obstructed by the natural encroachment of white mangroves (*Laguncularia racemose*).
* It no longer has a destination point of interest other than the existing shelter structure itself which was built in 2012.
* The trail’s berm also has three wooden bridges that will need replacing in the future to continue to allow visitor and maintenance access.
* The removal of the berm and adjacent ditches may offer a good opportunity for ecological restoration. These structures currently divide and partially drain the large brackish marsh system south of Pine Island Road.
* Proposed Future Facilities: Public Toilet
* Permanent building containing 2 to 4 single toilets with ADA accessibility
* Vault-style or septic. With or without running water and electric
* Will limit human waste in natural areas
* Will offer convenience for kayakers, hikers and anglers
* Will require additional security, vandalism prevention, and maintenance
* Exact location within the Pine Island entrance area to be determined
* Proposed Future Facilities: Caretaker Residence
* Will offer improved security at the Pine Island entrance for any associated future facilities
* Will facilitate access to opening and closing of toilets and gates
* Exact location within the Pine Island entrance area to be determined
* Future Restoration Opportunity of Shoreline
* Much of the shoreline along parts of Pine Island has little or no transitional zone of mangroves or salt marsh to buffer wave action and prevent erosion.
* Flatwoods habitat directly abuts the Lagoon in many locations which leaves shoreline stability dependent on plants that do not have high salt tolerance.
* Where erosive forces have created a vertical bank the shoreline becomes susceptible to erosion during periods of high energy wave action and fluctuating water levels (i.e. hurricanes and storms),.
* These locations could be considered in the future for “living shoreline restoration,” which would involve reestablishing salt-tolerant vegetation transition zone to absorb wave action and mitigate for water level fluctuations.
* Future Restoration Opportunity of Impoundments
* Impoundment of the salt marsh communities for management of the salt marsh mosquito began in 1960’s.
* The physical alterations of the impoundment activities include a system of perimeter ditches and dikes which isolate the marsh systems from the estuarine waters of the Indian River and have changed the ecology of these systems.
* Reconnect coastal wetlands to the lagoon by returning dikes and ditches to their natural wetland elevations.
* At Pine Island dredge spoil removal has restored 63 acres of coastal wetland elevation.

Comments and questions from the Selection and Management Committee were as follows: