

Florida Forever Project Evaluation Report

Keen Ranch ***DeSoto County***



Acquisition Type: Less-Than-Fee

Acres: 995

Just Value: \$2,659,153

Application Date: April 30, 2022

Project Sponsor: National Wildlife Refuge Association

Prepared By:

Division of State Lands

Office of Environmental Services



Submitted to the Acquisition and Restoration Council

October 14, 2022

Executive Summary

The proposed Keen Ranch Florida Forever project contains 5 parcels, owned by Newton D. and Linda W. Keen, totaling 995 acres in DeSoto County. Keen Ranch is a working cattle ranch located south of State Road 70 (SR70). The closest city is Arcadia. The project is proposed as a less-than-fee acquisition and has a total tax assessed value of \$2,596,035.

The Keen family were some of the original settlers of the area. The current owner's father bought the property in 1920 and grew corn and watermelons on-site for many years. In 1940, they expanded the property and began to focus on ranching. Outside of the Keen family's history, there is also a Native American mound located on the property. According to the Division of Historical Resources (DHR), there are seven archaeological sites and one historical cemetery located within or intersecting the boundary of the proposed project and the assemblage of sites found throughout the project collectively contain evidence of a variety of pre-Columbian occupations encompassing over 12,000 years of Florida history. However, no professional surveys have been conducted within the project area.

The property consists of mostly semi-improved pasture with depression marshes and basin swamps scattered throughout the pasture areas. Notably, the property is bisected by two named blackwater streams; Horse Creek, which enters from the east and flows for 1.25 miles before exiting at the south; and Brandy Branch, which enters from the northwest and flows approximately .5 mile before exiting the property to the east, where it converges with Horse Creek. Mesic hammock dominated by mature live oaks and containing epiphytes and orchids surrounds these creeks.

Rare species documented on the property include giant airplant (*Tillandsia utriculata*), gopher tortoise (*Gopherus polyphemus*), eastern indigo snake (*Drymarchon couperi*) and Florida burrowing owl (*Athene cunicularia floridana*). Florida panthers and Florida black bears are known to occur in this area. Over half of the project area is located within Priority 3 of the Florida Ecological Greenways Network (FEGN).

If approved for addition to the 2023 Florida Forever Priority List, the project should be considered as an amendment to the Myakka Ranchlands Florida Forever project boundary in the Less-than-Fee category. All 995 acres proposed for acquisition are considered essential due to the resources documented on the property (see Appendix C). An interagency team conducted a site visit to the project site on June 23, 2022. Information included in this project evaluation report is a result of this site visit.

PURPOSE FOR ACQUISITION

The Keen Ranch project will conserve a working landscape that contains high quality ecological communities that protect Horse Creek a natural blackwater stream and important tributary of the Peace River. The project will protect the water quality and quantity of the Peace River basin and Charlotte Harbor watershed contribute to ecological connectivity in the region and provide valuable habitat for rare wildlife and plant species.

Acquisition of this project would serve to:

- increase the protection of Florida's biodiversity at the species, natural community, and landscape levels
- preserve significant archaeological or historic sites
- conserve and protect a portion of Florida's rural landscape in order to provide and enhance wildlife corridors for rare and imperiled species
- provide surface and groundwater protection and protect natural floodplain functions
- protect, restore, and maintain the quality and natural functions of land, water and wetland systems

LOCATION AND PROXIMITY TO OTHER MANAGED AREAS

The Keen Ranch Florida Forever proposal is 953 acres (calculated through GIS; 995 acres as reported in application) in northwestern DeSoto County west of the town of Arcadia.

The northwestern edge of the property fronts SR 70 for just over a half mile; two additional public roads (NW Florida Ave. and NW Pine Level St.) cross the property, separating a 147-acre block at the southwest edge and a 55 acre strip at the southern edge from the bulk of the project lands. The property is bisected by Horse Creek, which enters at the east edge and flows for 1.25 miles before exiting at the south; and by Brandy Branch, which enters at the northwestern corner of the property and flows approximately a half mile before exiting the property to the east, where it converges with Horse Creek. The property is not adjacent to any existing managed lands or Florida Forever BOT projects, but two project areas that are also associated with Horse Creek – the Horse Creek Ranch Florida Forever BOT Project and the Peace River State Forest--lie 3 miles upstream and 5 miles downstream from the project respectively. Acquisition of the proposal would contribute to protection of Brandy Branch, Horse Creek, and the Peace River, therefore protecting Charlotte Harbor, which receives most of its freshwater from the Peace River.

RESOURCE DESCRIPTION

Florida Natural Areas Inventory (FNAI)

This evaluation is based on information gathered from the proposal, aerial photography, US Geological Survey (USGS) 7.5' topographic maps, FNAI Florida Cooperative Landcover Data (Version 3.5), the FNAI database, and a June 23, 2022 field survey by FNAI biologists Kim Alexander and Geoff Parks along with the Acquisition and Restoration Council (ARC) liaison staff.

The proposal property is situated on the DeSoto Slope (Brooks 1981), a large broad, sandy plain, 30 to 90 feet in elevation, that gradually slopes westward from near the Lake Wales Ridge to the low Barrier Island Coastal Strip. Elevations on the proposal property range from about 60 feet in the pasture north of the cemetery to about 34 feet where Horse Creek flows off the property. Soils are mostly poorly-drained Bradenton-Felda-Chobee fine sands and similar soils, with the notable exception of some moderately-well-drained soils in small areas in the north of the property.

Two blackwater streams cross the property: Brandy Branch, which enters the property from the northwest and travels a half mile across the property; and Horse Creek, which enters from the east before flowing south a distance of about 1.25 miles. Water from these streams flows into the Peace River, the main source of freshwater for Charlotte Harbor. Protection of the proposal property could contribute to water quality protection for the river and the Charlotte Harbor Aquatic Preserve; very little protected land currently exists along the upper Peace River or any of its upper tributaries.

Overall, the property consists predominantly of improved and semi-improved pasture, with natural communities covering an estimated 14% of the project area. Most of the natural areas are forests in a north-south band surrounding the creeks; marshes and swamps, however, are scattered throughout the pastures.

The largest amount of native vegetation in the proposal area consists of mesic hammock generally associated with the Brandy Branch/Horse Creek corridor. These habitats have a canopy of mature live oak (*Quercus virginiana*) festooned with Spanish moss (*Tillandsia usneoides*) and southern needleleaf (*Tillandsia setacea*), along with cabbage palm (*Sabal palmetto*). The understory is scattered cabbage palm along with American snowbell (*Styrax americanus*) and sparkleberry (*Vaccinium arboreum*). Saw palmetto (*Serenoa repens*) commonly occurs over large areas of the hammock; in gaps between the saw palmetto, only a few herbaceous species, including the invasive Caesar's weed (*Urena lobata*;

FISC Category I) and flatsedge (*Cyperus sp.*), were observed. Muscadine (*Vitis rotundifolia*) and yellow jessamine (*Gelsemium sempervirens*) climbed the shrubs and canopy trees.

Floodplain swamp occurs in a band of irregular width surrounding the creeks. Large bald cypress (*Taxodium distichum*) with huge knees are found in the canopy, along with swamp laurel oak (*Quercus laurifolia*), Carolina ash (*Fraxinus carolinianus*) and water locust (*Gleditsia aquatica*). Common buttonbush (*Cephalanthus occidentalis*) frequently grows along the banks. Occasional backwater sloughs and oxbows retaining standing water during the site visit were occupied by water paspalum (*Paspalum repens*) and panicum (*Coleataenia sp.*), while higher areas within the swamp showed signs of recent flood flows; herbs in these areas include common yellow stargrass (*Hypoxis curtisii*), and low densities of invasive wetland nightshade (*Solanum tampicense*; FISC Category I) and Caesar's weed.

Depression marshes are found in the pastures both east and west of Horse Creek; collectively, these 7 wetlands make up 1% of the site. Two were visited during the site visit. One was a deep and relatively open marsh surrounded by a ring of swamp tupelo (*Nyssa biflora*); the other was a marshy fringe around a basin swamp within improved pasture. Herbaceous plants included spadeleaf (*Centella asiatica*), the invasive West Indian marsh grass (*Hymenachne amplexicaulis*; FISC Category I), soft rush (*Juncus effusus ssp. solutus*), dotted smartweed (*Persicaria punctata*), pickerelweed (*Pontederia cordata*), mock bishopsweed (*Ptilimnium capillaceum*), and lizard's tail (*Saururus cernuus*).

Several basin swamps occur within both pasture and hammock areas. These consistently occurred on slopes where they are likely fed by groundwater seepage and where baygalls would typically occur; however, these swamps mostly lacked the evergreen tree species typical of baygalls. Canopy species in these swamps were generally American elm (*Ulmus americana*), swamp tupelo (*Nyssa biflora*), red maple, and occasional sweetbay (*Magnolia virginiana*), with an understory of common buttonbush, southern bayberry, and cabbage palm. The lush growth of ferns and other herbaceous plants includes Virginia chain fern (*Woodwardia virginica*), lizard's tail, giant leather fern (*Acrostichum danaeifolium*), string lily (*Crinum americanum*), and toothed midsorus fern (*Telmatoblechnum serrulatum*). Vines such as groundnut (*Apios americana*) and eastern poison ivy (*Toxicodendron radicans*) climb occasionally in the shrubs and trees.

Horse Creek and Brandy Branch are blackwater streams, although there is the possibility that they receive some of their baseflow from groundwater seepage. As is typical, these streams lacked any appreciable aquatic vegetation. The stream bottom was sandy (with occasional gravel bars containing shark teeth and other fossils) and the banks somewhat steep with some signs of erosion, likely due to stormwater impacts stemming from changes in land use upstream.

Improved pastures are the dominant landcover in the proposal (61% of the project site), occurring in two large areas on either side of the forests surrounding the creeks. Improved pastures at Keen Ranch are dominated by a continuous growth of bahiagrass (*Paspalum notatum*) with scattered native herbaceous species and occasional live oaks. On dry areas at higher elevations on the northwestern part of the property, active gopher tortoise burrows were noted, along with pineland species such as netted pawpaw (*Asimina reticulata*), blackroot (*Pterocaulon pycnostachyum*), and lupine (*Lupinus sp.*). Pastures occupying wet former marsh or swamp land have West Indian marsh grass and extensive growth of iris (*Iris sp.*).

Much of the forested or semi-forested area upslope from the floodplain swamp around the creek corridors is semi-improved pasture, which is estimated to occupy about a quarter of the site. These areas contain species characteristic of mesic hammocks (large live oak, saw palmetto) interspersed with open areas consisting of bahiagrass and a variety of native grasses. Not all of these areas were visited during the site inspection and it is likely that additional areas of mesic hammock occur in what has been mapped as semi-improved pasture.

A small developed area on the property (a homestead reported to have a single-family residence and a pole barn) was not seen during the site visit. Other non-natural areas that collectively make up a small portion of the property are a small amount of agricultural land (two narrow wedges of larger areas of citrus cultivation that were not visited) and a sparse network of unpaved roads.

Although a majority of this property is pasture, much of it is only semi-improved which likely provides good stormwater buffering and is suitable for a variety of wildlife species. The improved pastures were noted to provide habitat for gopher tortoises and for a few native upland and wetland plant species.

Table 1. Natural communities and landcover types within Florida Forever proposal

Community or Landcover	Acres	Percent of Proposal
mesic hammock	86	9
floodplain swamp	25	3
depression marsh	11	1
basin swamp	10	1
pasture—improved	584	61
pasture—semi-improved	225	24
road	4	<1
developed	4	<1
agriculture	3	<1
Totals	952	100%

Florida Fish and Wildlife Conservation Commission (FWC)

This summary provides a resource assessment of the Keen Ranch Florida Forever proposal based on field observations and results of the GIS analysis. Keen Ranch is in the vicinity of several conservation projects and fills an important gap in the landscape in this area by improving connectivity between several conservation easements to the north and south. Multiple other Florida Forever projects, conservation easements, mitigation parks, and the Peace River State Forest are within ten miles of Keen Ranch to the south. The Keen Ranch acquisition would provide greater connectivity to protect water quality and quantity for the Peace River basin and Charlotte Harbor watershed.

Keen Ranch is comprised of improved pasture (550 acres), freshwater forested wetlands (351 acres), and prairies/bogs (25 acres). The remaining land cover types (orchards/groves, high intensity urban, vineyard and nurseries, transportation, rural, mixed hardwood-coniferous, marshes) each comprise less than 1% of Keen Ranch. Horse Creek Ranch bisects improved pastures on Keen Ranch from northeast to southwest and the creek is bordered by freshwater forested wetlands. The Keen Ranch pastures have interspersed pockets of vegetation.

Keen Ranch does not use prescribed fire due to limited resources, though occasional wildfires have left fire scars on trees. The dominant native community on the property is not typically considered fire-dependent, but the pockets of native habitat in pastures and edges of forested wetlands would benefit from more frequent prescribed fire. Pastures on Keen Ranch are relatively open, with snags and trees to provide perching and roosting habitat for wildlife. Invasive non-native plant species do not appear to be a widespread issue on Keen Ranch, aside from the non-native pasture grasses. Overall, native communities on Keen Ranch would benefit from an increase in the application of prescribed fire. However, the dominant community type on Keen Ranch is not typically maintained with fire and is in overall good condition.

The cattle program on Keen Ranch consists of approximately 250 cows in a cow/calf operation, which have access to both native and non-native areas.

Wildlife species observed during the tour included red-shouldered hawk (*Buteo lineatus*), white-tailed deer (*Odocoileus virginianus*), northern mockingbird (*Mimus polyglottos*), wild turkey (*Meleagris gallopavo*), and many other species. Feral hogs (*Sus scrofa*) sign was observed. The landowner also reports that the southern fox squirrel (*Sciurus niger niger*), Florida panther (*Puma concolor coryi*), and Florida black bear (*Ursus americanus floridanus*) have been observed on-site.

During the field visit, listed wildlife species observed included active gopher tortoise burrows. The pastures on Keen Ranch are suitable for use by other listed wildlife such as the northern crested caracara (*Caracara cheriway*), Florida sandhill crane (*Antigone canadensis pratensis*), and southeastern American kestrel (*Falco sparverius paulus*). Horse Creek Ranch and nearby Brandy Branch provide habitat for imperiled wading birds such as the little blue heron (*Egretta caerulea*) and wood stork (*Mycteria americana*). These species were not observed during the field tour but are known to occur in the surrounding landscape.

Keen Ranch is a well-kept property that is located within a larger landscape of lands critical to the long-range conservation of wildlife and natural communities. Its proximity to existing conservation lands and those protected under easement provides a vital link connecting protected lands west of the Peace River. Florida panthers and Florida black bears are known to occur in this area and protection of the Keen Ranch in the long-term would be very beneficial to these wide-ranging imperiled species.

The FWC GIS analysis of the Cooperative Land Cover v3.5 indicates that Keen Ranch is a mix of many different community types including improved pasture (58%), mixed wetland hardwoods (37%), and wet prairie (3%).

The FNAI database identified 70% of Keen Ranch as potential habitat for the eastern indigo snake and a small percentage for wood stork. The FWC Florida Landscape Assessment Model (FLAM) is a GIS model that determines the landscape value based on natural resources and fish and wildlife habitat. The FLAM ranks habitat from 0-10: a rank of 10 being the greatest value. The mean FLAM score for this property is 5.1. The analysis also shows approximately 45% is habitat for a range of 1 to 3 focal species, 46% is habitat for a range of 4 to 6 focal species, and 6% is habitat for 7 to 9 focal species (imperiled or rare wildlife). Most of the property (94%) is identified as Priority 1 or 2 for the Critical Lands and Waters Identification Project. Majority of the property is within Priority 3 of the FEGN, or Florida Wildlife Corridor.

Approximately 30% of Keen Ranch lies within a designated FWC Strategic Habitat Conservation Area (SHCA) for the Cooper's hawk (*Accipiter cooperii*). The FWC GIS Environmental Resources Analysis containing more detailed information concerning the FWC's FLAM analysis, focal species data, SHCA data, wildlife observation data, etc. is provided as an addendum to this assessment.

In summary, acquisition of Keen Ranch would begin to fill the gap in the amount of protected area within the surrounding landscape and enhance connectivity between existing protected areas. A habitat management program that incorporates routine prescribed fire, particularly within native habitats on Keen Ranch, will improve and maintain conditions in native habitat and benefit many imperiled wildlife species. Keen Ranch lies within a landscape that is increasingly under pressure from expansion of nearby phosphate mine operations, cities, and developments. Long-term protection of intact private lands such as Keen Ranch is vital to the long-term persistence of wildlife in this region.

GOALS, MEASURES AND CRITERIA

GOAL A:

ENHANCE THE COORDINATION AND COMPLETION OF LAND ACQUISITION PROJECTS

Measure A1:

The number of acres acquired through the state’s land acquisition programs that contribute to the enhancement of essential natural resources, ecosystem service parcels, and connecting linkage corridors as identified and developed by the best available scientific data.

If acquired, all 995 acres would contribute to the enhancement of essential natural resources, ecosystem service parcels and connecting linkage corridors.

Measure A2:

The number of acres protected through the use of alternatives to fee simple acquisition.

The entirety of the project (995 acres) is proposed for less-than-fee acquisition via conservation easement.

Measure A3:

The number of shared acquisition projects among Florida Forever funding partners and partners with other funding sources, including local governments and the federal government.

No funding partners have been identified for this project. This property is also eligible for funding through the Rural and Family Lands Program administered by the Florida Forest Service (FFS).

GOAL B:

INCREASE THE PROTECTION OF FLORIDA’S BIODIVERSITY AT THE SPECIES, NATURAL COMMUNITY, AND LANDSCAPE LEVELS

Measure B1:

The number of acres acquired of significant Strategic Habitat Conservation Areas.

The SHCA Florida Forever Conservation Needs layer identifies important remaining habitat conservation needs for 33 terrestrial vertebrates on private lands. Priority 1 and 2 represent habitat for species considered imperiled or critically imperiled in Florida. The Florida Forever Measures Evaluation (FFME) table (Appendix B) reports the site contains approximately 842 acres (88% of site) of SHCA. This is primarily within Priority 5 (88% of site) with the remainder in Priority 3 (<1%).

Measure B2:

The number of acres acquired of highest priority conservation areas for Florida's rarest species.

Habitat conservation priorities for 633 of Florida’s rarest species were mapped and divided into six priority classes. The FFME reports the proposed project contains approximately 948 acres (99% of site) of rare species habitat. The habitat is mostly divided between Priority 5 (52% of site), and Priority 4 (40%), with the remainder in Priorities 6, 3, and 2 (5%, 2%, and <1%, respectively).

The following table lists the acres of habitat for each species that may be found on the site, based on the FNAI Habitat Conservation Priorities. Please note that habitats for these species overlap, so that the sum total of habitat for all species is more than the total acreage of the priority conservation areas. Acreage for aquatic species includes a terrestrial buffer.

Table 2. Rare species habitat based on FNAI Habitat Conservation Priorities

Scientific Name	Common Name	Global Rank	Acres
<i>Lythrum flagellare</i>	lowland loosestrife	G3	0
<i>Progomphus alachuensis</i>	tawny sanddragon	G3	331
<i>Antigone canadensis pratensis</i>	Florida sandhill crane	G5T2	35

Scientific Name	Common Name	Global Rank	Acres
<i>Caracara cheriway</i>	crested caracara	G5	590
<i>Mycteria americana</i>	wood stork	G4	11
<i>Mustela frenata peninsulæ</i>	Florida long-tailed weasel	G5T3?	689

Measure B3:

The number of acres acquired of significant landscapes, landscape linkages, and conservation corridors, giving priority to completing linkages

The FFME reports approximately 807 acres (85%) of the proposed project contributes to protection of ecological greenways all of it falling within Priority 2 areas. Prioritization is based on such factors as importance for wide-ranging species like Florida panther and Florida black bear, importance for maintaining a connected reserve network, and riparian corridors.

Measure B4:

The number of acres acquired of under-represented native ecosystems.

The Florida Forever natural community analysis includes only those communities that are under-represented on existing conservation lands. This analysis provides a conservative estimate of the extent of these communities, because it identifies only relatively undisturbed portions of these communities that occur within their historic range. The FFME lists the acreages of under-represented natural communities found on the site. Based on this analysis, the Keen Ranch proposal contains none of the under-represented natural communities.

Measure B5:

The number of landscape-sized protection areas of at least 50,000 acres that exhibit a mosaic of predominantly intact or restorable natural communities established through new acquisition projects, or augmentations to previous projects.

The Keen Ranch proposal would not contribute to a contiguous landscape-sized protection area of >50,000 acres. It is approximately 3.5 miles from closest landscape-sized protection area.

Measure B6:

The percentage increase in the number of occurrences of imperiled species on publicly managed conservation areas.

This site has the potential to provide habitat for several rare species of conservation concern. Giant airplant was seen during the site visit, and multiple gopher tortoise burrows were observed in higher areas of the improved pastures. Several species reported from the property but not seen during the site assessment are listed in the table below. More extensive surveys may reveal the occurrence of additional species of rare plants or animals.

The FFME lists the number of Element Occurrences by Global Rank (G-rank) that are found on the proposal. Note that the number of occurrences does not necessarily match the number of species in the following table because a) some species may have more than one occurrence on the proposal site, or b) some species observed on site do not meet the criteria for addition to the FNAI database at this time. The table below contains species falling into any of these observational categories, as well as species gleaned from other sources (e.g., Florida Breeding Bird Atlas) with different degrees of locational precision. Rarity rankings are in the following order: FNAI global (G, T) and state (S) ranks, federal status, state status. Species ranks and conservation status are described in Appendix D.

Table 3. Rare plants and animals documented or reported to occur within the proposed project

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Rare plants documented on site					
<i>Tillandsia utriculata</i>	giant airplant	G5	S3	N	E
Additional rare plants reported on site by applicant					
none					
Rare animals documented on site					
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	C	ST
Additional rare animals reported on site by applicant					
<i>Drymarchon couperi</i>	eastern indigo snake	G3	S2?	T	FT
<i>Caracara cheriway</i>	crested caracara	G5	S2	T	FT
<i>Athene cunicularia floridana</i>	Florida burrowing owl	G4T3	S3		ST

GOAL C:

PROTECT, RESTORE AND MAINTAIN THE QUALITY OF NATURAL FUNCTIONS OF LAND, WATER, AND WETLAND SYSTEMS OF THE STATE

Measure C1:

The number of acres of publicly-owned land identified as needing restoration; enhancement, and management, acres undergoing restoration or enhancement; acres with restoration activities completed, and acres managed to maintain such restored or enhanced conditions; the number of acres which represent actual or potential imperiled species habitat; the number of acres which are available pursuant to a management plan to restore, enhance, repopulate, and manage imperiled species habitat; and the number of acres of imperiled species habitat managed, restored, and enhanced, repopulated, or acquired.

As this is a less-than-fee proposal and the intended future uses of the property would likely be to continue the current cattle operation, the restoration of the pastures to native natural communities would not be reasonable for a working cattle ranch.

Invasive exotic plant control needs, while not insignificant, appear to be relatively minor considering the generally localized populations observed during the site visit. Cogon grass should continue to be treated aggressively to halt further increases. If a conservation easement is pursued for this property, a thorough baseline assessment of invasive plant occurrences would be advisable.

Measure C4:

The number of acres acquired that protect natural floodplain functions.

The FFME reports approximately 613 acres (64%) of the proposed project may contribute to the protection of natural floodplain function. This area is mostly divided between Priority 4 (34% of site) and Priority 5 (26%), with the remainder in Priorities 3 and 6 (3% and 2%, respectively). Priority 1 areas are the most natural with the lowest intensity land uses.

Measure C5:

The number of acres acquired that protect surface waters of the State.

The FFME reports approximately 946 acres (99%) of the proposed project could provide protection for those surface waters of the State that currently remain in good condition. This area is primarily divided between Priority 3 (72% of site) and Priority 5 (27%), with the remainder in Priority 4 (<1% of site). These areas represent acreage that contributes to the protection of state-designated Outstanding Florida Waters, springs, rare fish habitat, or other surface waters.

Measure C8:

The number of acres of functional wetland systems protected.

The FFME reports approximately 385 acres (40%) of the proposed project would provide protection for functional wetland systems. This area is divided between Priority 4 (33% of site), Priority 5 (4%), and Priority 3 (3%), with the remainder in Priority 6 (<1%). Priority 1 areas are the most natural with the lowest intensity land uses.

Measure C11:

The number of acres of public conservation lands in which upland invasive, exotic plants are under maintenance control.

Non-native invasive plants are relatively infrequent. The owner indicated that he treats invasive plants when encountered, with particular focus on cogongrass (only sporadically at low density on the property). Other invasive species were seen in a variety of natural communities, but generally were infrequent.

GOAL D:

ENSURE THAT SUFFICIENT QUANTITIES OF WATER ARE AVAILABLE TO MEET THE CURRENT AND FUTURE NEEDS OF NATURAL SYSTEMS AND THE CITIZENS OF THE STATE

Measure D1:

The number of acres acquired which provide retention and storage of surface water in naturally occurring storage areas, such as lakes and wetlands, consistent with the maintenance of water resources or water supplies and consistent with district water supply plans.

The Keen Ranch project is located within the Peace River basin. Protection of the project area would benefit water quality and quantity within the Peace River watershed, a Southwest Florida Water Management District (SWFWMD) priority.

Measure D2:

The quantity of water made available through the water resource development component of a district water supply plan for which a water management district is responsible.

The Keen Ranch project is located within the District's Southern Planning Region (SWFWMD 2020). Acquisition of the project area would benefit the water quality and quantity of the Peace River and its respective watershed (SWFWMD 2020).

Measure D3:

The number of acres acquired of groundwater recharge areas critical to springs, sinks, aquifers, other natural systems, or water supply.

The property is not in a restoration plan area, but the property would provide surface and ground water protection.

Table 4. Spatial Analysis for Potential Water Quality Benefits of Keen Ranch

Categories	Scoring Criteria	Project Score
DEP High Profile Springs (In 1,2,3 or > spring sheds)	12, 24, 36	0
DEP Select Agricultural Land Use (0-30%, >30-65%, >65%)	4,8,12	8
DEP Florida Aquifer Vulnerability (FAVA)	4,7,10	7
DEP Special Nutrient Impaired WBIDs	9	0
DEP Distance to Major Lakes (100, 500, 1000 meters)	8,7,6	0
DEP Springsheds or within 5 miles	10, 7	0
DEP BMAPs	10	0
DEP Distance to Major Rivers (100, 500, 1000 meters)	6,5,4	0
Total Possible	101	14

GIS Evaluation score is converted to a 1 to 5 value (low to high)

FINAL DEAR SCORE = 1 - Low water quality protection benefits

GOAL E:

INCREASE NATURAL RESOURCE-BASED PUBLIC RECREATIONAL AND EDUCATIONAL OPPORTUNITIES

Measures E1-E3

The Keen Ranch project is proposed for less-than-fee acquisition with no public access. However, the landowner would consider hosting Operation Outdoor Freedom or youth hunts on the property (administered by FFS).

GOAL F:

PRESERVE SIGNIFICANT ARCHAEOLOGICAL OR HISTORIC SITES

Measure F1:

The increase in the number of and percentage of historic and archaeological properties listed in the Florida Master Site File or National Register of Historic Places which are protected or preserved for public use.

As a less-than-fee project, the Keen Ranch project would not increase the number or percentage of historic and archaeological properties listed in the Florida Master Site File or National Register of Historic Places which are preserved for public use. However, through a conservation easement agreement that stipulates cultural resource protection, the Keen Ranch Florida Forever project would protect historic and archaeological sites that are listed in the Florida Master Site File.

Measure F2:

The increase in the number and percentage of historic and archaeological properties that are in state ownership.

As a less-than-fee project, Keen Ranch would not meet Measure F2, as the number and percentage of historic and archaeological properties on the project would remain privately owned.

CULTURAL RESOURCES:

According to DHR’s Florida Master Site File, there are currently seven archaeological sites and one historical cemetery located within or intersecting the boundary of the Keen Ranch Florida Forever project. The assemblage of sites found throughout the project collectively contain evidence of a variety of pre-Columbian occupations encompassing over 12,000 years of Florida history.

The Florida Master Site File indicates that the boundary of Historical Keen Cemetery (DE53) extends within the Keen Ranch project boundary. While the cemetery appears to be an inholding of this Florida Forever project, please note that DHR's records indicate that burials may extend beyond the inholding boundaries.

Additionally, the Pine Level Prehistoric Site (DE2) within the Keen Ranch Florida Forever Project Boundary has been noted in the Florida Master Site File as containing human remains. Regardless of acquisition, this site is protected under §872.05, Florida Statutes. No ground disturbance may be conducted within the boundary of site DE2 without prior consultation with the State Historic Preservation Office.

FIELD OBSERVATIONS:

No staff from DHR participated in the field evaluation of the Keen Ranch Florida Forever Project.

GOAL G:

INCREASE THE AMOUNT OF FORESTLAND AVAILABLE FOR SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

Sustainable forest management on the property comes in the form of conservation of the oak hammocks and cypress domes, as they are very important to maintaining the health of the Peace River. This can be accomplished by establishing an invasive plant species control plan and a proper burn regime that will emulate natural fire. There is little potential for sustainable pine management on the property due to very few slash pines observed onsite.

Measure G1:

The number of acres acquired that are available for sustainable forest management.

The FFME reports approximately 563 acres (59% of site) could be available for sustainable forest management, all of which is in Priority 5 areas. Prioritization is based on 4 criteria set by FFS: whether trees are natural or planted, size of tract, distance to market, and hydrology. Priority 5 areas are considered "potential" pinelands; agricultural areas that could be restored to pineland.

Measure G2:

The number of acres of state owned forestland managed for economic return in accordance with current best management practices.

There is no potential for economic return from forested land on this property.

Measure G3:

The number of acres of forestland acquired that will serve to maintain natural groundwater recharge functions.

The FFME reports the proposed project would not provide any forestland to maintain natural groundwater recharge functions.

Measure G4:

The percentage and number of acres identified for restoration actually restored by reforestation.

There is a low potential for restoration by reforestation. Most of the property is in its natural state with the exception of the pastures. The 10 acres of cooperative land cover labeled as mixed hardwood-coniferous would benefit from prescribed fire.

FLORIDA FOREVER CRITERIA

The proposed project meets the following Florida Forever criteria (§ 259.105, F.S.)

- the project meets multiple goals
- the project is part of an ongoing governmental effort to restore, protect, or develop land areas or water resources projects that contribute to the solution of water resource problems on a regional basis
- the project has a significant portion of its land area in imminent danger of development, in imminent danger of losing its significant natural attributes or recreational open space, or in imminent danger of subdivision which would result in multiple ownership and make acquisition of the project costly or less likely to be accomplished
- the project may be acquired, in whole or in part, using alternatives to fee simple, including but not limited to, tax incentives, mitigation funds, or other revenues; the purchase of development rights, hunting rights, agricultural or silvicultural rights, or mineral rights; or obtaining conservation easements or flowage easement.
- projects that contribute to improving the quality and quantity of surface water and groundwater

MANAGEMENT

If acquired as a perpetual conservation easement, primary management responsibility would remain with the landowner. Periodic monitoring of the site's management would occur to confirm continued compliance with the conditions of the easement. Monitoring would be coordinated by the Department of Environmental Protection (DEP), Division of State Lands (DSL), Office of Environmental Services (OES).

FUNDING SOURCES

Florida Forever would be the funding source.

OWNERSHIP PATTERN AND ACQUISITION PLANNING

Title and Legal Access, Jurisdictional and Sovereignty Lands, Legal Issues

Record of title, a designation of jurisdictional and sovereignty lands and any other legal Issues will be determined at the time of acquisition and are not known at this time.

Known Encumbrances (easement, long-term leases, restrictive covenants, etc.)

The easements and encumbrances of record would be determined during the appraisal mapping. A current title insurance commitment would be obtained, or the owner's title insurance policy would be reviewed if the policy is available. The easements and encumbrances would be depicted or noted on the appraisal map.

Description and location of hazardous waste sites, dumps, borrow pits

There are no apparent contamination sites within the project based on the application form.

Estimated Cost of Appraisal and Mapping

DEP Bureau of Appraisal estimates \$10,000 to \$20,000 in appraisal fees.

Acquisition Phases

Subject to funding, the Keen Ranch Florida Forever project will be phased based upon price.

GOVERNMENT PLANNING AND DEVELOPMENT

Contribution to Recreation and Open Space Needs

The proposal has a moderate to high potential for contributing to recreation and open space needs. The proposal is for less than fee simple acquisition, and thus, the opportunity for public access recreation would depend on the terms of the acquisition. The property could function as a wildlife corridor located between surrounding conservation areas. Potential recreational activities could include bicycling, camping, dog walking, environmental education and interpretation, fishing, hiking/jogging, horseback riding, wildlife observation and photography. These recreational uses would likely be compatible with the future land use designation of Rural/Agriculture.

Potential for Losing Significant Natural Attributes or Recreational Open Spaces

The subject property contains wetlands (40% of total site area), an abundance of natural resource features that provide habitat for an array of rare plants and animals as well as aquifer recharge. The property provides significant watershed and water quality protection. The potential for urban development is low in this area, however, there is a moderate to high potential for mining in the area.

Potential for Being Subdivided

The subject property has a low potential for being subdivided because it is not in proximity to existing urban type uses, the future land use designation has a maximum residential density of one dwelling unit per ten acres, and DeSoto County has a relatively low rate of population growth. The subject property is surrounded predominantly by the Rural/Agriculture future land use designation and mines. The surrounding existing land uses are predominantly agricultural and mining in character, which pose only a low potential of conversion of the subject property to residential use.

Development Potential

Based on the DeSoto County Comprehensive Plan future land use designation (Rural/Agriculture), the subject property has a development potential of 99 residential dwelling units.

Existing Land Uses and Future Land Use Designations

Existing Land Uses: The existing land use on the subject property is agricultural. The project site is located adjacent to a planned phosphate mine and generally surrounded by lands currently under mining permit.

Future Land Uses: The subject property is designated as "Rural/Agriculture" and "Conservation" on the DeSoto County Comprehensive Plan Future Land Use Map. The Rural/Agriculture future land use category allows the following: agriculture use; residential density of one dwelling unit per ten acres. A portion of the property is in the "Conservation Overlay Designation" which identifies environmentally sensitive areas with a maximum development density of 1 residential dwelling unit per 10 gross acres where development is clustered to non-wetland portions of the site and buffered from the wetland appropriately.

Transportation Planning Issues

The project falls within Florida Department of Transportation (FDOT) District 1 and is located adjacent to State Road 70, a Strategic Intermodal System (SIS) facility. Within two miles of the project site are two designated evacuation routes, SR 70 and SR 72. A Corridor Vision and Action Plan Report has been created for the SR 70 corridor which looks at and prioritizes segments for widening from 2 to 4 lanes.

The segment of the corridor in the vicinity of this project site has been noted to be a mid to long term priority for widening, and the Department anticipates that 100 feet of additional Right-of-Way (ROW) space from the existing ROW along SR 70 will be needed to accommodate future widening. There should be coordination with the appropriate FDOT District staff during the acquisition process to ensure that any ROW issues can be addressed and incorporated into the project.

REFERENCES CITED

Brooks. 1981. *Guide to the physiographic divisions of Florida*. Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, University of Florida.

Southwest Florida Water Management District. 2020. *2020 Regional Water Supply Plan - Southern Planning Region*. Brooksville; Southwest Florida Water Management District.

Southwest Florida Water Management District. *District Maps – Major Watersheds*. Southwest Florida Water Management District. Retrieved from <https://www4.swfwmd.state.fl.us/with/map/>.

ACKNOWLEDGEMENTS

Staff in the DEP's Division of State Lands (DSL) and FNAI determined the final project recommendations. Sine Murray and Hannah Turbiville in DSL's Office of Environmental Services were responsible for the overall coordination of this report, with contributions from the following:

- Florida Natural Areas Inventory – Geoffrey Parks & Kimberely Alexander
- Florida Fish and Wildlife Conservation Commission – Rachael Welsh, Ethan Noel & Jennifer Myers
- Florida Forest Service – Catherine Ingram & Eric Strickland
- Florida Department of State, Division of Historical Resources – Jason O'Donoghue & Brandon Ackermann
- Florida Department of Transportation – Ben Naselius
- Florida Department of Economic Opportunity – Barbara Powell
- DEP, Division of Environmental Assessment and Restoration – Kevin Coyne
- DEP DSL, Bureau of Appraisal

APPENDICES

Appendix A:

Final FF measures table: Report requirement 259.105 (15)d, prepared by FNAI

Keen Ranch: Florida Forever Measure Evaluation 20220803

GIS ACRES = 953

MEASURES	Resource Acres ^a	% of project
B1: Strategic Habitat Conservation Areas		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	7	< 1%
Priority 4	0	0%
Priority 5	834	88%
Total Acres	842	88%
B2: FNAI Habitat Conservation Priorities		
Priority 1	0	0%
Priority 2	2	0%
Priority 3	23	2%
Priority 4	378	40%
Priority 5	494	52%
Priority 6	51	5%
Total Acres	948	99%
B3: Ecological Greenways		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	807	85%
Priority 4	0	0%
Priority 5	0	0%
Total Acres	807	85%
B4: Under-represented Natural Communities		
Upland Glade (G1)	0	0%
Pine Rockland (G1)	0	0%
Scrub and Scrubby Flatwoods (G2)	0	0%
Rockland Hammock (G2)	0	0%
Dry Prairie (G2)	0	0%
Seepage Slope (G2)	0	0%
Sandhill (G3)	0	0%
Sandhill Upland Lake (G3)	0	0%
Upland Pine (G3)	0	0%
Mesic/Wet Flatwoods (G4)	0	0%
Upland Hardwood Forest (G5)	0	0%
Total Acres	0	0%
B6: Occurrences of FNAI Tracked Species		
G1	0	
G2	0	
G3	1	
G4	0	
G5	0	
Total	1	
C4: Natural Floodplain Function		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	25	3%
Priority 4	325	34%
Priority 5	247	26%
Priority 6	16	2%
Total Acres	613	64%

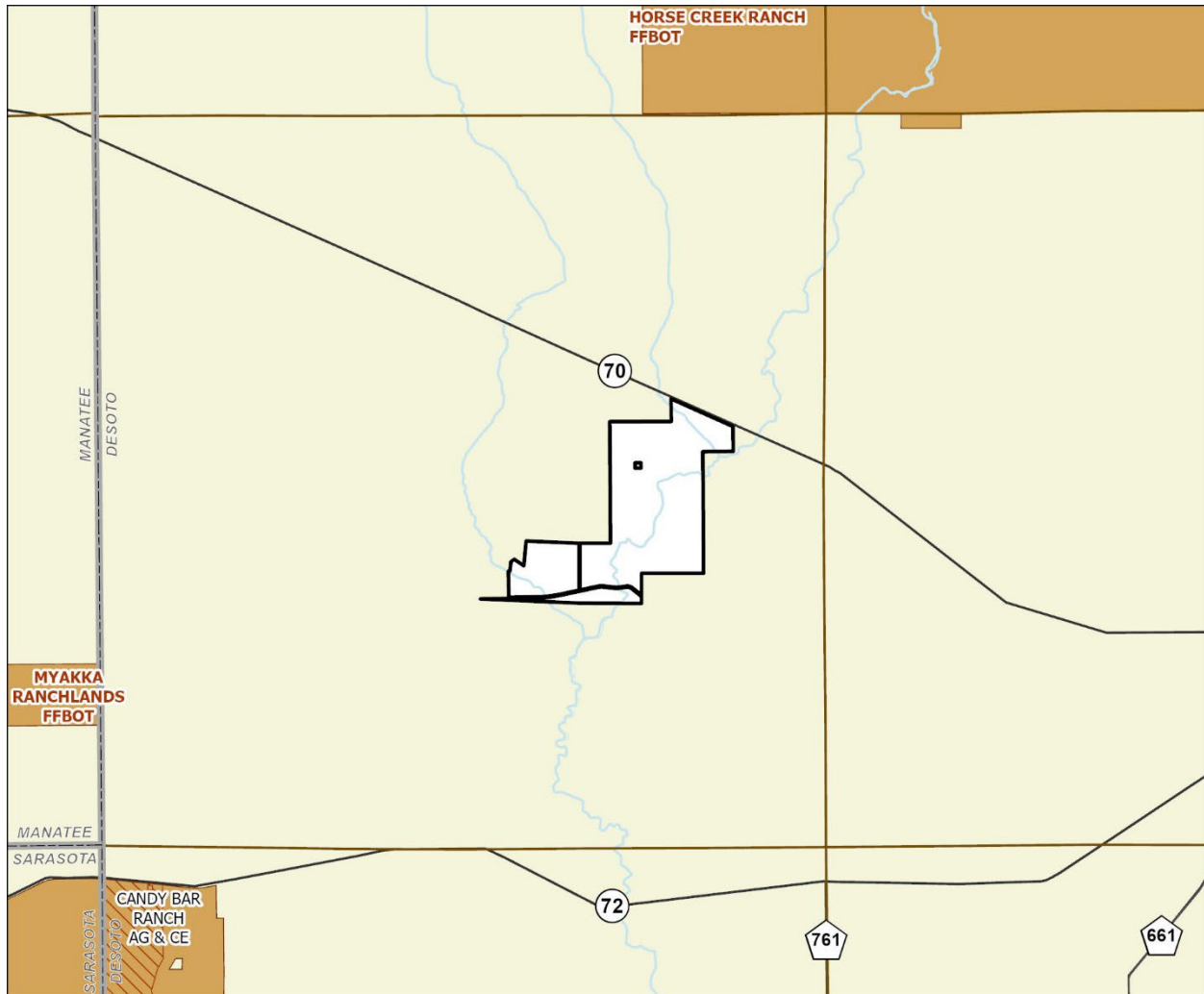
MEASURES (continued)	Resource Acres ^a	% of project
C5: Surface Water Protection		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	689	72%
Priority 4	1	< 1%
Priority 5	256	27%
Priority 6	0	0%
Priority 7	0	0%
Total Acres	946	99%
C7: Fragile Coastal Resources		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
C8: Functional Wetlands		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	25	3%
Priority 4	317	33%
Priority 5	43	4%
Priority 6	1	< 1%
Total Acres	385	40%
D3: Aquifer Recharge		
Priority 1	0	0%
Priority 2	73	8%
Priority 3	0	0%
Priority 4	257	27%
Priority 5	572	60%
Priority 6	51	5%
Total Acres	953	100%
E2: Recreational Trails (miles)		
<small>(prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)</small>		
Land Trail Priorities	0.0	
Land Trail Opportunities	1.3	
Total Miles	1.3	
F2: Arch. & Historical Sites (number)		
	7 sites	
G1: Sustainable Forestry		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5 - Potential Pinelands	563	59%
Total Acres	563	59%
G3: Forestland for Recharge		
	0	0%

^aAcres of each resource in the project and percentage of project represented by each resource are listed except where noted. This analysis converts site boundary into pixels, which causes slight differences from GIS acres; this effect is most noticeable on small sites.

Appendix B:

Final FF proposal boundary maps: Report requirement 259.105 (15)k, prepared by FNAI

B1: Florida Forever map



KEEN RANCH FLORIDA FOREVER PROPOSAL

DESOTO COUNTY

-  Proposed Florida Forever BOT Project
-  Florida Forever BOT Projects
-  State Owned Lands
-  Other Conservation Lands

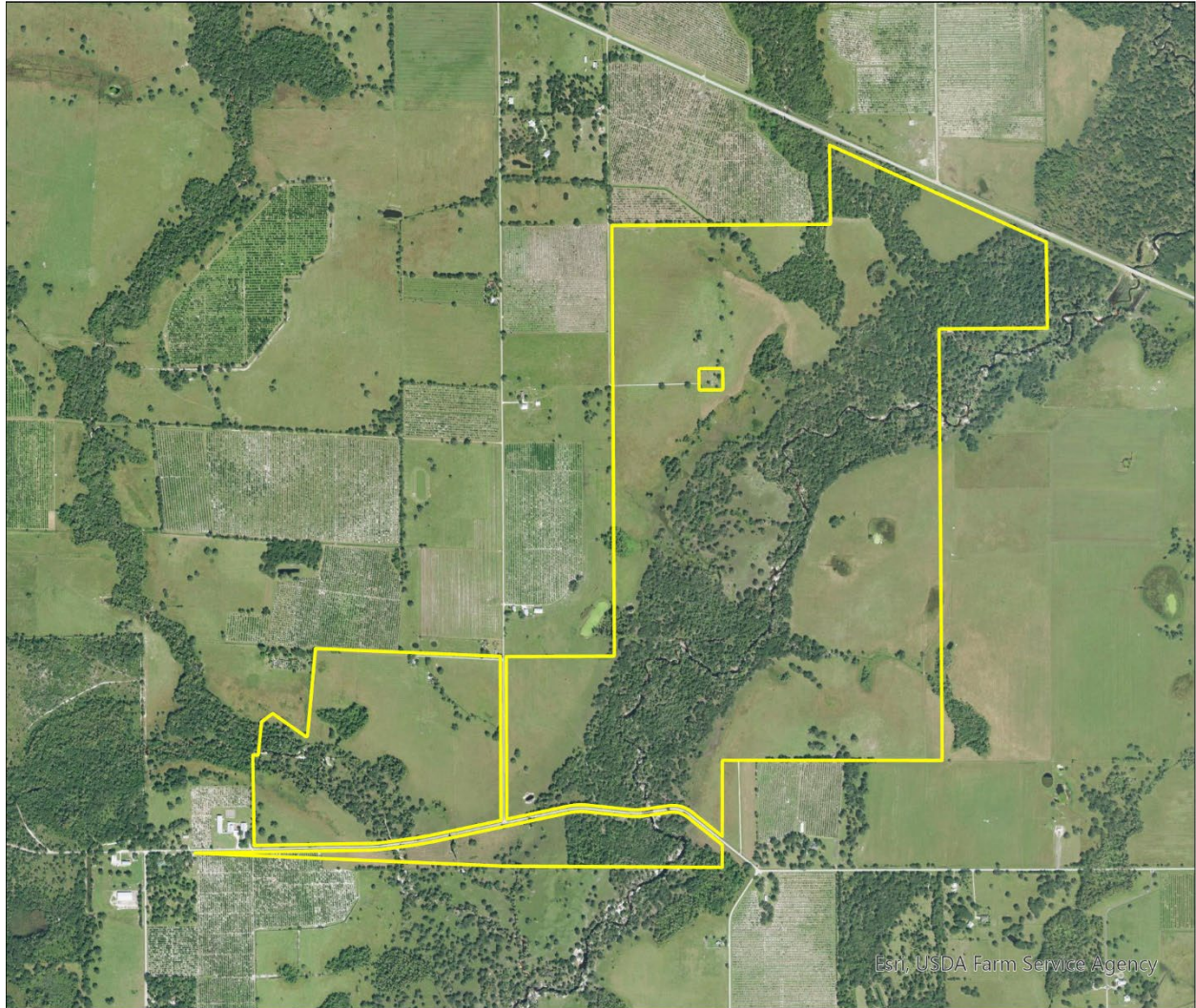


JULY 2022

B2: Aerial map

Keen Ranch Florida Forever Proposal

FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF JULY 2022



Map Produced by: N. Pasco, July 2022

Background: USA NAIP Imagery Resolution = 1.0 meter



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Appendix C:

PROPERTY ID #'S FOR FINAL RECOMMENDED BOUNDARY

COUNTY	PARCEL ID	OWNER	ACRES PER TAX CARD	JUST VALUE	ASSESSED VALUE	PARCEL DESIGNATION
DeSoto	13-37-23-0000-0060-0000	Newton D. & Linda W. Keen	49.20	\$196,800	\$4,209	Essential
DeSoto	14-37-23-0000-0070-0000	Newton D. & Linda W. Keen	262.90	\$788,700	\$32,494	Essential
DeSoto	23-37-23-0000-0020-0000	Newton D. & Linda W. Keen	480.00	\$960,000	\$70,553	Essential
DeSoto	22-37-23-0000-0040-0000	Newton D. & Linda W. Keen	194.32	\$658,078	\$112,435	Essential
DeSoto	22-37-23-0000-0100-0000	Newton D. & Linda W. Keen	8.55	\$55,575	\$1,147	Essential
			994.97	\$2,659,153	\$220,868	

Appendix E:**Imperiled Species FNAI Ranking Definitions**

FNAI
Definitions of imperiled species ranks and conservation status

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

FNAI GLOBAL ELEMENT RANK

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

FNAI STATE ELEMENT RANK

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

FEDERAL LEGAL STATUS

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

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

2019-04-19

Page 2

FNAI
Definitions of imperiled species ranks and conservation status

populations and that federal status may differ elsewhere.

- C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
- E = Endangered: species in danger of extinction throughout all or a significant portion of its range.
- E, T = Species currently listed endangered in a portion of its range but only listed as threatened in other areas
- E, PDL = Species currently listed endangered but has been proposed for delisting.
- E, PT = Species currently listed endangered but has been proposed for listing as threatened.
- E, XN = Species currently listed endangered but tracked population is a non-essential experimental population.
- T = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
- PE = Species proposed for listing as endangered
- PS = Partial status: some but not all of the species' infraspecific taxa have federal
- PT = Species proposed for listing as threatened
- SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
- SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

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

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

- C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service
- FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
- FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service
- FXN = Federal listed as an experimental population in Florida
- FT(S/A) = Federal Threatened due to similarity of appearance
- ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)
- N = Not currently listed, nor currently being considered for listing.

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

- E = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.
- T = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.
- N = Not currently listed, nor currently being considered for listing.

Appendix F:
Site Visit Photos



1. Semi-improved pasture



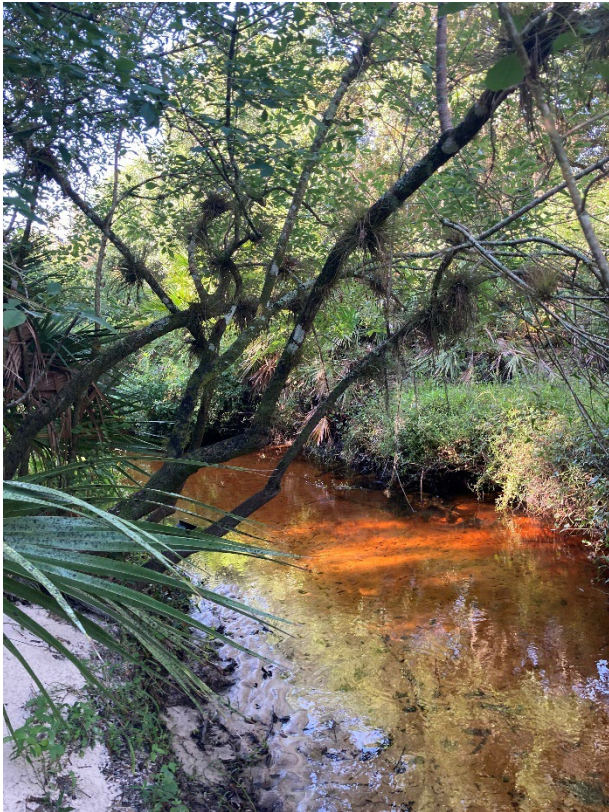
2. Basin marsh



3. Horse Creek



4. Mature Live Oak within Mesic Hammock at Keen Ranch



5. Brandy Branch



6. Epiphytes, ferns and orchids