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FEI No. 204894676

July 21, 2014

Summer B. Araque
Senior Environmental Specialist
Natural Resources Department
Collier County Growth Management Division
2800 N. Horseshoe Drive
Naples, FL 34104

RE: Pre-Construction Listed Species Survey, 40 Acres Phase 1 Area
Collier County Resource Recovery Park
ACOE Permit No: SAJ-2011-00626(SP-KDS)
FDEP Permit No: 11-0285328-002
USFWS Consultation Code: 2012-F-0324

Ecologists from Earth Tech Environmental have completed a pre-clearing survey for listed species on the subject property. The survey covered the proposed phase 1 construction area as depicted in **(Figure 1)**. The phase 1 construction is approximately 40 acres and constitutes just a portion of the approved project development area. The pre-clearing survey is a requirement of the project's listed species management plan, which was incorporated into its approved United States Fish & Wildlife Service (USFWS) biological opinion.

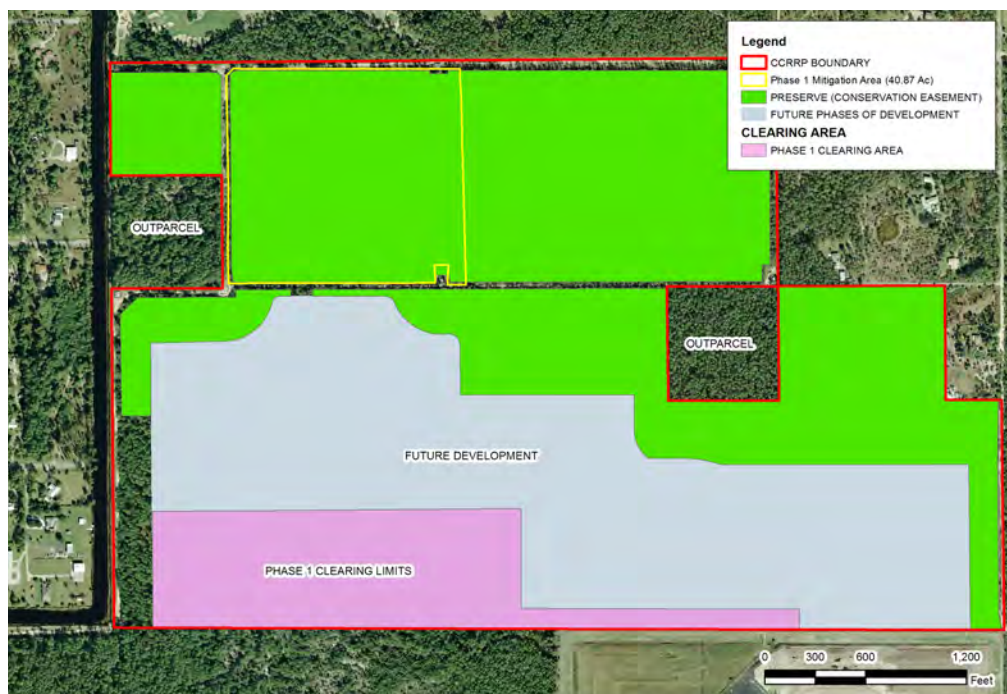


Figure 1. Phase 1 Clearing Limits



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The purpose of the pre-clearing survey was to search the phase 1 construction area for listed species (as outlined in Table 1) prior to the initial clearing work. Specifically, the survey looked for the following species:

Table 1. Protected Species Search Criteria

Protected Species	Search Criteria \ Action
Big Cypress Fox Squirrel (<i>Sciurus niger avicennia</i>)	Signs of individuals and potentially active nests within work area.
Gopher Tortoise (<i>Gopherus polyphemus</i>)	Verification that no burrows are present within the work area.
Florida Bonneted Bat (<i>Eumops floridanus</i>)	Tree to tree cavity search. Scope all accessible cavities with a pole camera.
Common Wild Pine (<i>Tillandsia fasciculate</i>)	Individuals observed that can be reached are relocated to an onsite preserve.
Butterfly Orchid (<i>Encyclia tampensis</i>)	Individuals observed that can be reached are relocated to an onsite preserve.

SURVEY METHODOLOGY

The pre-clearing survey was conducted using a methodology similar to that discussed in the Florida Fish & Wildlife Conservation Commission (FWC) publication “Ecology and Habitat Protection Needs of Gopher Tortoise (*Gopherus polyphemus*) Populations Found on Lands Slated for Large-scale Development in Florida.” This methodology is as follows: Existing vegetation communities or land-uses on the subject site are delineated on a recent aerial photograph (Collier County 2013) using the Florida Land Use, Cover and Forms Classification System (FLUCCS). See FLUCCS Map (**Figure 2**) for FLUCCS communities as mapped within the phase 1 clearing area. The resulting FLUCCS codes are cross-referenced with a list of protected plant and animal species. The lists were obtained from two agency publications:

- A list of animals and birds was obtained from the FWC publication “Florida’s Endangered Species, Threatened Species & Species of Special Concern-Official Lists”, Publication Date: October 2012.
- A list of protected plant species was obtained from the publication “Notes on Florida’s Endangered and Threatened Plants”, Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Bureau of Entomology, Nematology & Plant Pathology-Botany Section, Contribution 38, 5th Edition-2010).

In the field, each FLUCCS community was searched for listed species or signs of listed species. This was accomplished using a series of transects throughout each vegetation community. Approximate survey transects are shown on (**Figure 3**). If necessary, transect integrity was maintained using a handheld GPS in track mode. Results of this survey are detailed below.



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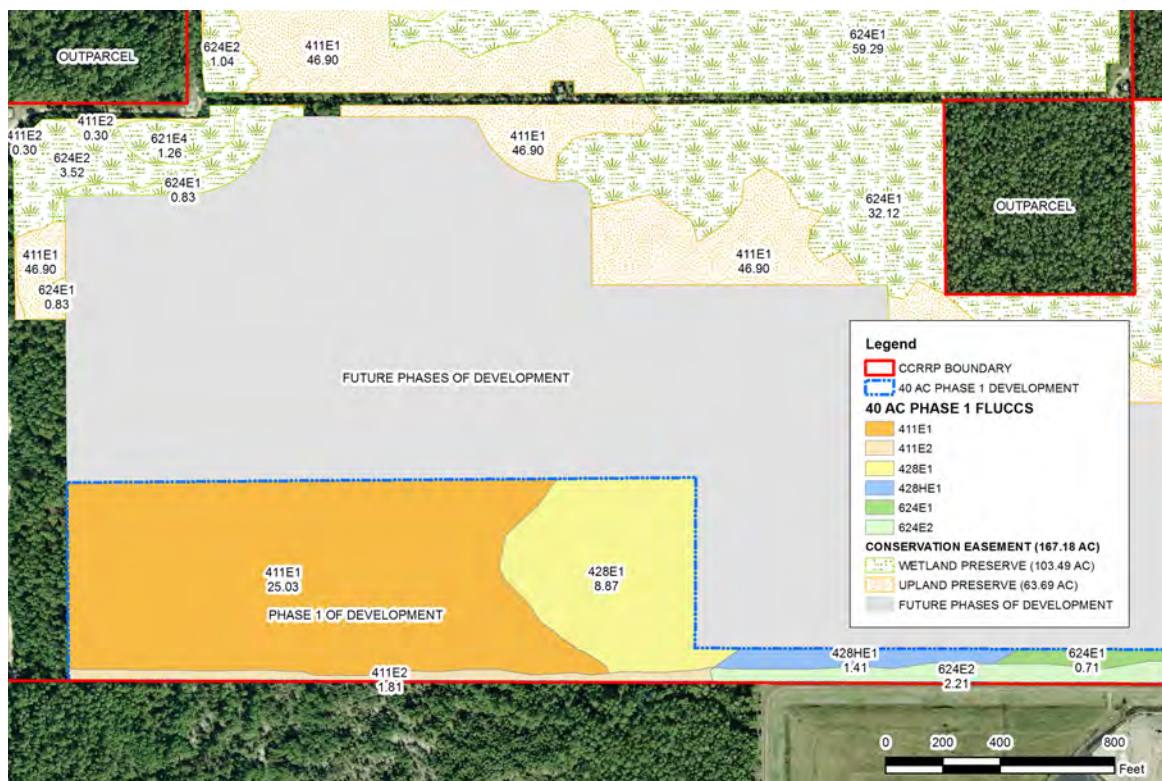


Figure 2. 40 AC Phase 1 FLUCCS Mapping

SURVEY RESULTS

Big Cypress Fox Squirrel (*Sciurus niger avicennia*)

The proposed phase 1 development area was surveyed for fox squirrels and signs of fox squirrels. No fox squirrels, day beds, or nests were observed during the survey.

Gopher Tortoise (*Gopherus polyphemus*)

The proposed phase 1 development area was surveyed for gopher tortoise and gopher tortoise burrows. The original protected species survey completed during permitting for the project did not find any tortoise burrows within the phase 1 development area and none were observed during this pre-construction survey.

Florida Bonneted Bat (*Eumops floridanus*)

The proposed phase 1 development area was surveyed for tree snags with cavities that could be used as roosting habitat for bonneted bats. During survey transects, any snags with cavities low enough to be scoped (~ 20 feet high) were marked with GPS. Once all these cavities were marked, each one was scoped using a peeper camera in order to determine whether any species of bats were present in the cavity. A total of 14 snag trees with cavities were marked in the field and scoped. Approximate locations of snag trees that were scoped are shown on (Figure 3). No listed species were observed utilizing any of the scoped cavity trees.



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Figure 3. 40 AC Phase 1 Species Survey

Common Wild Pine (*Tillandsia fasciculata*)

The proposed phase 1 development area was surveyed for common wild pine. A total of 24 individuals were observed during transects and relocated to the onsite preserve in the northern portion of the property.

Butterfly Orchid (*Encyclia tampensis*)

The proposed phase 1 development area was surveyed for butterfly orchids. A total of 11 individuals were observed during transects and relocated to the onsite preserve in the northern portion of the property.

CONCLUSION

This concludes the pre-clearing survey for the Subject Property. Wild pine and butterfly orchids were observed and relocated to the onsite preserve. No other listed species or signs of listed species were observed within the proposed clearing area.



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Sincerely,

Jeremy Sterk

Ecologist/FWC Gopher Tortoise Authorized Agent