



ECOSYSTEMS MANAGEMENT PLAN

TREVESTA

June 2019
Revised September 2019

Prepared for:
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INTRODUCTION

This Ecosystems Management Plan is provided to document the environmental benefits associated with the applicant's request for an Amended Preliminary Site Plan (PSP) approval. The overall Trevesta project area is approximately 441 acres. The proposed amended PSP is necessary in order to construct the project as initially proposed and does not include any additional lots or commercial square footage within the project limits. The proposed revisions include proposed wetland buffer encroachments, both permanent and those associated with fill slopes, wetland buffer compensation slightly increased wetland impacts, and additional upland preservation areas. The project is located east of south side of Mendoza Road and East of Interstate 75 in Section 33, Township 33 South, Range 18 East in Manatee County.

The purpose of this Ecosystems Management Plan is to document the activities to be conducted on the site to enhance the overall onsite habitats. The overall wetland impact acreage has increased slightly with this proposed Ecosystems Management Plan. The Ecosystems Management Plan includes impacts to wetlands and wetland buffers with compensation which far exceed the minimum mitigation/compensation requirements. The table below identifies the differences between the previously approved PSP and what is currently proposed.

	Previously approved	Proposed	
Wetland Impacts	7.936	8.01	+0.074
Wetland Enhancement	67.6	67.526	-0.074
Permanent Wetland Buffer Encroachments*	N/A	0.72	+0.72
Wetland Buffer Fill Slope Encroachments**	N/A	0.94	+0.94
Wetland Buffer Compensation	N/A	2.72	+2.72
Upland Preservation	17.13	20.21	+3.08
Wildlife Connectivity Areas	N/A	0.27	+0.27
Mitigation Bank Credits	N/A	±1.50	+1.50

EXISTING CONDITIONS

There have been no significant changes in the existing conditions of the project area with the exception of construction activities associated with approved Final Site Plans (FSP).

Onsite jurisdictional wetlands and other surface waters (OSW) were delineated and flagged by E Co Consultants, Inc. (E Co) pursuant to the 62-340, Florida Administrative Code, F.A.C. The Southwest Florida Water Management District (SWFWMD) reviewed the Trevesta property on May 5 and 6, 2014, and issued a Formal Determination of the Landward Extent of Wetlands and Other Surface Waters permit, no. 42041835.000, on October 1, 2014. The approved wetland and surface water limits are included in the maps associated with the Amended PSP application.

Land uses of the project area prior to approved construction activities are identified below:

Wetland and Other Surface Water Habitats

FLUCCS Code 510 Streams and Waterways

Vegetation: Several excavated agricultural ditches with sandy bottoms containing various amounts of herbaceous vegetation are present throughout the subject parcel. There are also two excavated agricultural irrigation ponds within active and fallow row crop lands. These two ponds are actively used for irrigation on row crops.

Impacts: These are all excavated features associated with historical agricultural activity.

Hydrology: Agricultural ditches most likely flow in response to rain events.

Wildlife: The on-site agricultural ditches provide very limited habitat for wildlife.

FLUCCS Code 523 Lakes Greater than 10 Acres, Less than 100 Acres

Vegetation: A large borrow pit is located on the subject parcel. It is ringed by a herbaceous littoral zone containing both nuisance/exotic and native wetland species.

Impacts: This is an excavated borrow pit most likely utilized for the construction of I-75.

Hydrology: This pit has a permanent hydrology.

Wildlife: The borrow pit most likely supports common wading birds, ducks, reptiles, amphibians and fish.

FLUCCS Code 524 Lakes Less than 10 Acres

Vegetation: There are four excavated ponds less than 10 acres on the subject property. These ponds contain some littoral vegetation dominated nuisance/exotic species.

Impacts: These are excavated ponds.

Hydrology: The ponds have a permanent hydrology.

Wildlife: The ponds may support a small population of reptiles, amphibians and fish.

FLUCCS Code: 641 Freshwater Marsh

Vegetation: Freshwater marshes within the Trevesta property are limited, with Wetlands A and X being the only freshwater marshes that are not interior cores to forested or shrub wetlands. Freshwater marshes are mostly vegetated with maidencane (*Panicum hemitomon*), primrose willow (*Ludwigia peruviana*), dotted smartweed, dollarweed (*Centella asiatica*), pickerelweed (*Pontederia cordata*), and few arrowhead (*Sagittaria lancifolia*), softtrush (*Juncus effusus*) and cord grass (*Spartina bakeri*). Wetland X is also dominated by paragrass (*Urochloa mutica*).

Impacts: Wetlands A and X onsite have been significantly impacted by the surrounding agricultural activity, including cattle grazing, farming, and ditching. Marshes interior to forested wetlands vary in quality depending on their proximity to agricultural field and Interstate 75.

Hydrology: Freshwater marshes on the subject parcel exhibit semi-permanent and seasonal hydroperiods.

Wildlife: The freshwater marsh areas most likely support wading birds and a small population of common amphibians, reptiles and fish during the wet season.

FLUCCS Code: 630 Wetland Forested Mixed

- Vegetation: Areas of forested wetland are present on the subject parcel, especially on the southern half. The canopies of these systems are comprised of mostly laurel oak (*Quercus laurifolia*), American elm (*Ulmus americana*), red maple (*Acer rubrum*), Carolina willow (*Salix caroliniana*), popash (*Fraxinus caroliniana*), and cabbage palm (*Sabal palmetto*). Brazilian pepper (*Schinus teribinthifolius*) is also present around the perimeter of these areas. Interior to several of these wetlands are moderate to significant coverage of primrose willow, as well as areas of cattails (*Typha* sp.). Portions of the forested wetlands onsite site have cores that are dominated by shrub species including Carolina willow and buttonbush. Additional areas have freshwater marsh and open water cores.
- Impacts: The forested wetland areas onsite have been impacted to varying degrees by surrounding agricultural activity, including cattle grazing, farming, and ditching, which has altered their hydroperiods.
- Hydrology: These wetlands also have varying degrees of impact to their historical hydroperiod that have resulted from historical agricultural and ditching activities. Wetlands close to pastures, row crops and Interstate 75 are typically the wetlands with the most edge effect or hydrologic stress.
- Wildlife: The forested wetland systems onsite most likely provide cover for medium and small mammals and may support a small population of reptiles, amphibians, and fish during the wet season. Open areas and shrub dominated wetland cores are also suitable for regionally common wading birds including white ibis (*Eudocimus albus*), glossy ibis (*Plegadis falcinellus*) and various species of heron.

FLUCCS Code: 631 Wetland Shrub

- Vegetation: Wetland W is the single wetland that is dominated by shrub species, particularly Brazilian pepper. There are small areas of Carolina willow and buttonbush, as well as few laurel oaks.
- Impacts: This wetland has been significantly altered from historical and ongoing agricultural activities, the construction of 69th Street East, and powerline utilities. There is very limited areas of native vegetation in this wetland.
- Hydrology: The hydroperiod of this wetland has been significantly altered from historical agricultural activities. The result is a significant reduction in native plant species, and the establishment of Brazilian pepper throughout the wetland.
- Wildlife: The dominance of Brazilian pepper in this wetland has significantly reduced the potential utilization of wildlife.

Wetland ID	Acreage
A	1.76
B	1.2
C	1.9
D	0.68
E	3.33
F	8.83
G	0.8
H	1.39
I	6.34
J	4.31
K	1.06
L	1.39
M	1.39
N	9.97
O	0.22
P	0.77
Q	2.33
R	1.96
S	0.45
T	11.34
U	9.98
V	2.87
W	0.42
X	0.87
Total	75.52

OSW ID	Acreage
OSW-1	0.65
OSW-2	1.33
OSW-3	0.04
OSW-4	0.11
OSW-5	0.17
OSW-6	0.03
OSW-7	0.04
OSW-8	50.97
OSW-9	0.04
OSW-10	0.13
OSW-11	1.14
OSW -12	0.28
OSW-13	0.2
OSW-14	0.09
OSW-15	0.22
OSW-16	0.24
OSW-17	0.04
Total	56.06

Upland Habitats

FLUCCS Code 110 Low Density Residential

There is one single family home in the northeast portion of the subject parcel.

FLUCCS Code 211 Improved Pasture

There are areas of improved pasture vegetated with bahia grass (*Paspalum notatum*) throughout the subject parcel.

FLUCCS Code 214 Row Crops

Areas of row crops are present in the north central portion of the project area.

FLUCCS Code 240 Nurseries and Vineyards

Green houses are located in the north central portion of the project area.

FLUCCS Code 438 Mixed Hardwoods

Areas of mixed hardwoods are present in the southern portion of the subject parcel. These areas contain a mixture of Live oak (*Quercus virginiana*), laurel oak, and cabbage palm. Understory vegetation in these areas is comprised of saw palmetto (*Serenoa repens*), small cabbage palm, wild coffee (*Psychotria nervosa*), and beautyberry (*Callicarpa americana*).

FLUCCS Code 821 Transmission Towers

There is a transmission tower in the west central portion of the project area.

PROPOSED WETLAND IMPACTS

The applicant is proposing a slight increase in overall wetland acreage with the proposed amended PSP. The amended PSP proposes to eliminate the previously approved impact to Wetland W (0.42 ac), while increasing impacts to Wetlands N, I, and F. There is an overall increase of proposed wetland impact acreage of 0.074 acres. It is important to note that approximately 1.02 acres the previously approved/proposed wetland impacts are associated with the right of way for Buffalo Road Extension. A County thoroughfare roadway which traverses the site. Impacts associated with Buffalo Road Extension were included and approved with the previously approved PSP. The table below identifies the previously approved and proposed wetland impacts:

Wetland ID	Previously Approved Wetland Impact Acreage	Proposed Wetland Impact Acreage
J	0.15	0.15
K	0.02	0.02
N	0.006	0.11
O	0.12	0.12
R	1.06	1.06

R/T	0.59	0.59
S	0.26	0.26
W	0.42	0.00
U	1.02	1.02
V	2.87	2.87
X	0.88	0.88
G	0.02	0.02
I	0.01	0.04
F	0.51	0.87
TOTAL	7.936	8.01

PROPOSED WETLAND MITIGATION PLAN (minimum requirements)

In order to replace the wetland functions from the proposed wetland impacts, the applicant intends on utilizing credits from an approved wetland mitigation bank. The final wetland mitigation requirements will be determined with the Environmental Resource Permit approved by the Southwest Florida Water Management District. The applicant must demonstrate that the proposed wetland impacts and wetland mitigation will result in no net loss of wetland functions in order to obtain an ERP approval.

PROPOSED WETLAND BUFFER IMPACTS

Wetland buffer impacts are being proposed PSP. These proposed wetland buffer impacts are all located within Phase 3 of the project. The previously approved PSP did not depict lot lines and configurations within Phase 3 because. At the time of final design for the FSP within Phase 3, it was determined that many of the areas labeled as Single Family Detached (SFD) Lots were unable to be configured in a manner that would be considered reasonably developable without some level of encroachment into the required 30' wetland buffers.

The proposed PSP lot layout and associated wetland buffer encroachments was determined based on FSP level design and include fill slopes associated with fill necessary to elevate the lots to the FEMA Base Flood Elevation. The proposed PSP identifies two types of wetland buffer encroachments. Permanent wetland buffer impacts (0.72 ac) are those associated with lot/width encroachment necessary to achieve a lot dept sufficient to reasonable construct a single family home with associated minimum front/side/rear yard setbacks. Wetland buffer fill slope impacts (0.94 ac) are encroachments that are limited to fill slopes and are not included within the boundary of any SFD lots or right of way. Wetland buffer fill slope impact areas will be considered post-development wetlands buffers and will be planted with desirable native vegetation as approved with the Wetland Buffer Restoration Plan approved with the FSP.

WETLAND BUFFER COMPENSATION

In addition to restoring the wetland buffer fill slope impact areas, the applicant is proposing to provide 2.72 acres of wetland buffer compensation areas. Wetland buffer compensation areas are located adjacent to required 30' wetland buffers and are not included in either existing or proposed Native Upland Habitat Preserves. In many cases the wetland buffer compensation areas will create post development wetland buffers areas which exceed the minimum required 30' wetland buffers. All wetland buffer compensation

areas will be included within the required Wetland Buffer Restoration Plan required the LDC and approved with the FSP. The proposed wetland buffer compensation areas are provided at 3.78:1 ratio for the proposed permanent wetland buffer impacts. The proposed wetland buffer compensation areas are provided at a 1.63:1 ratio for all proposed wetland buffer encroachments (Permanent and Fill Slope). Both ratios far exceed the minimum 1:1 compensation to impact ratio required by the LDC.

NET ENVIRONMENTAL BENEFIT

While the proposed amended PSP and revised Ecosystems Management Plan does not include large acreages, the environmental benefits associated with the revisions do provide significant benefits to the final build out and post-development conditions of the project. These benefits include additional upland preservation areas, increased wildlife connectivity within and projects and with preservation areas of adjacent projects, provides greater wetland buffers in many locations than the minimum requirements all while allowing the project to continue to develop consistently with the originally approved PSP.

The individual components of the proposed Ecosystems Management Plan are discussed in detail below:

Wetland Preservation and Enhancement

The applicant proposes to preserve the existing wetland areas that are not proposed for impact with this application. Almost 89% of onsite wetlands, totaling 67.526 acres, will be enhanced and preserved in perpetuity. There are no local, State or federal regulations that require the enhancement/restoration of existing wetlands. Wetland enhancement will consist of the eradication of nuisance exotic plant vegetation. Native wetland vegetation planting will take place if natural recruitment does not occur within 2 years.

Upland Habitat Preservation/Restoration

As part of the Phase 3 redesign, the applicant is proposing to preserve an additional 3.08 acres of Native Upland Habitat Preserve. These additional areas are located in areas that will promote utilization by wildlife. The upland habitats consist of mixed hardwoods which contain a mixture of Live oak (*Quercus virginiana*), laurel oak, and cabbage palm. Understory vegetation in these areas is comprised of saw palmetto (*Serenoa repens*), small cabbage palm, wild coffee (*Psychotria nervosa*), and beautyberry (*Callicarpa americana*). Nuisance exotic vegetation coverage within these preserve areas is approximately 15%. As required, all nuisance exotic vegetation will be eradicated within upland habitat preservation areas. These areas will be replanted with desirable native vegetation, as needed. Plant material to be planted will be determined by the palate of existing native vegetation of the upland habitat preservation areas.

Wildlife Connectivity

As part of the redesign for Phase 3, the need for wildlife connectivity was evaluated. In order to enhance the wildlife connectivity within and through the project, the applicant eliminated potential lot development to allow for a natural area wildlife connection between the Wetland T and Wetland N preserve areas. Wetland T and Wetland N preserve areas consist of large wetlands and contiguous native upland preserve areas. The proposed wildlife connection area will provide a gap within the lots at a sufficient size that will encourage wildlife to utilize the area to facilitate movement throughout the project area. The natural area wildlife connections areas total 0.27 acres and will likely be filled during construction. Filling the areas provides a consistent elevation to adjacent home sites. These areas will be planted with native upland vegetation which will be detailed at the

time of FSP approval. The applicant proposes to conduct maintenance activities, including mowing within specific areas, within these areas a minimum of twice a year in order to control nuisance exotic vegetation and to keep the areas consistent with the aesthetics of the project due to the adjacent homesites.

Although not within the project limits, the entire southern portion of the project abuts the FPL railroad right of way which, due to limited use, serves as an existing wildlife corridor. Phase 3 has been designed in a manner that not only allows for wildlife connectivity within the project but also provides connectivity to this larger regional corridor.

Maintenance

Initial removal of Brazilian pepper and other nuisance exotic vegetation from wetland enhancement areas and upland restoration areas will include both mechanical and manual methods. All cut stumps will be treated with a systemic herbicide to prevent regrowth. Future upland preserve management will be primarily accomplished utilizing manual methods, but may also include roller chopping, mulching, and mowing. These management methods may be necessary to restore habitat functions and reduce the potential for catastrophic wildfire. The need for management will be determined during the annual inspections.

Manual removal methods within freshwater wetland enhancement areas will be utilized to avoid disturbance to the remnant areas of native wetland plants and soils. Manual removal methods will include hand removal and herbicide treatments where appropriate and cut stumps will be treated with an approved herbicide to prevent regrowth.

All herbicide treatments will be supervised by a licensed pesticide applicator. All material cut or pulled from upland and wetland enhancement area will be piled in upland development areas for the site contractor to burn or dispose of properly offsite. All excavated material from the construction of the wetland creation area will be deposited in future upland development areas and utilized where feasible or disposed of in a landfill or other proper means.

Annual inspections of wetland/upland enhancement and preservation areas will be conducted to evaluate their current condition. If nuisance/exotic species are observed during the annual inspection exceeding 5% of the total vegetative cover, maintenance using the same manual methods described above will be prescribed to remove them. Enhancement and creation planting areas will ultimately reach a success criteria of 85% desirable species coverage whether through enhancement planting or natural recruitment from surrounding seed sources.

Due to the proximity of the wetland and upland conservation areas to developed features, there is potential for garbage/debris to accumulate. Quarterly inspections to address this concern are proposed. Any garbage/debris observed during the inspections will be removed from the areas and disposed of at an approved facility.

Inspections and management will continue in perpetuity and will be responsibility of the CDD/Homeowners Association.

SUMMARY

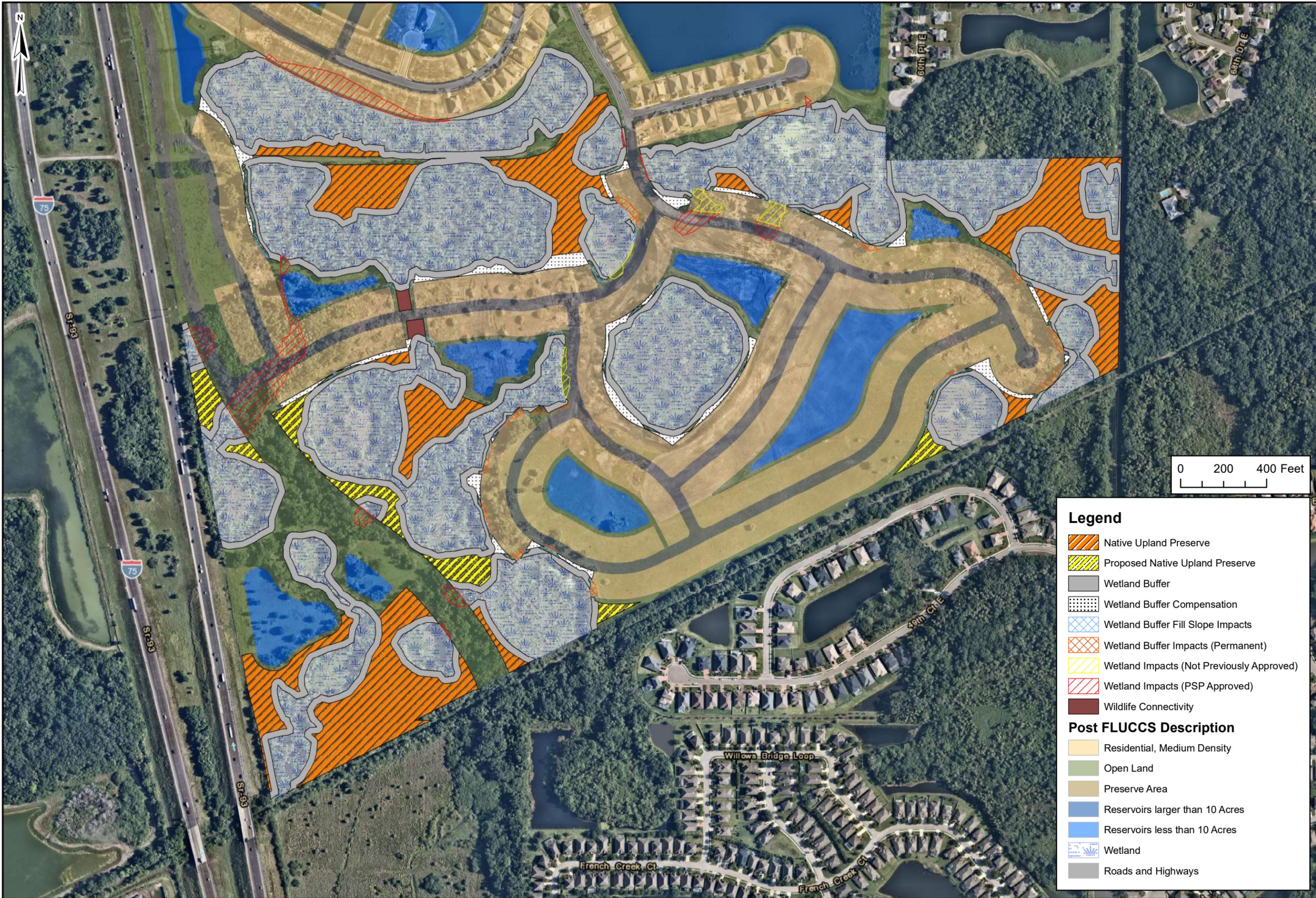
The application for the amended PSP includes the following revisions to the previously approved Ecosystems Management Plan:

- Increase wetland impacts by approximately 0.074 acres
- Reduce wetland enhancement by -0.074 acres
- Authorize 0.72 acres permanent wetland buffer impacts,
- Authorize 0.94 acres of wetland buffer fill slope encroachment
- Provide 2.72 acres of wetland buffer compensation,
- Provide 3.08 acres of additional native habitat preservation
- Utilize approximately ± 1.5 credits from an approved Mitigation Bank as wetland mitigation

The applicant proposes that all areas utilized for wetland mitigation and all components of the Ecosystems Management Plan be placed in a Conservation Easement dedicated to Manatee County.

Attachments:

- Ecosystems Management Plan Map



Legend

- Native Upland Preserve
- Proposed Native Upland Preserve
- Wetland Buffer
- Wetland Buffer Compensation
- Wetland Buffer Fill Slope Impacts
- Wetland Buffer Impacts (Permanent)
- Wetland Impacts (Not Previously Approved)
- Wetland Impacts (PSP Approved)
- Wildlife Connectivity

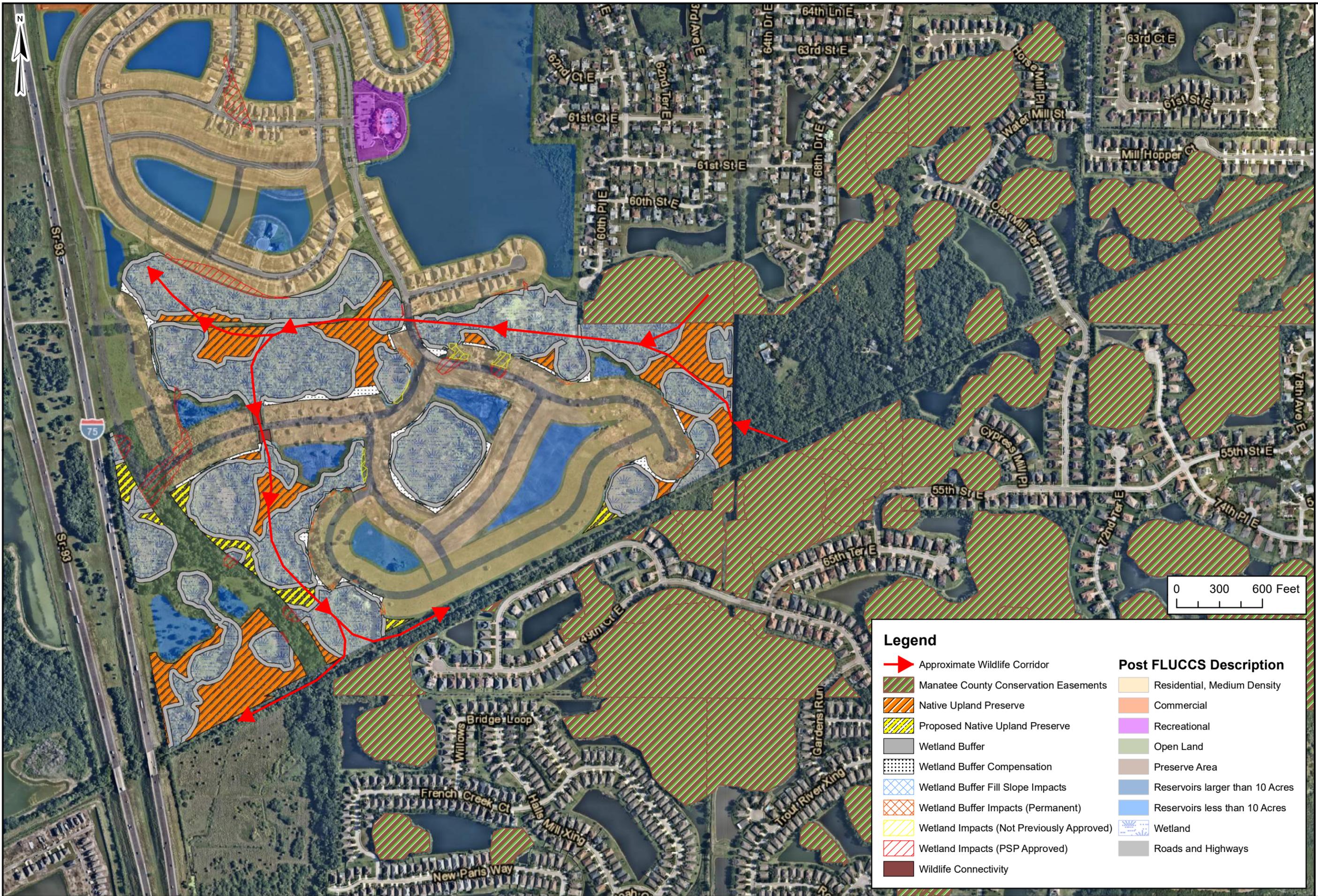
Post FLUCCS Description

- Residential, Medium Density
- Open Land
- Preserve Area
- Reservoirs larger than 10 Acres
- Reservoirs less than 10 Acres
- Wetland
- Roads and Highways



TRRS: 33S18E33
Scale: 1" = 400'
Date: 9/24/2019
Drawn By: KS
Source: Manatee County Imagery (2019)

Client: Kolter Land Partners
Project: OK Travesta LLC
Location: Manatee County, Florida
Title: Ecosystem Management Plan Exhibit
Sheet: 1



Legend

- Approximate Wildlife Corridor
- Manatee County Conservation Easements
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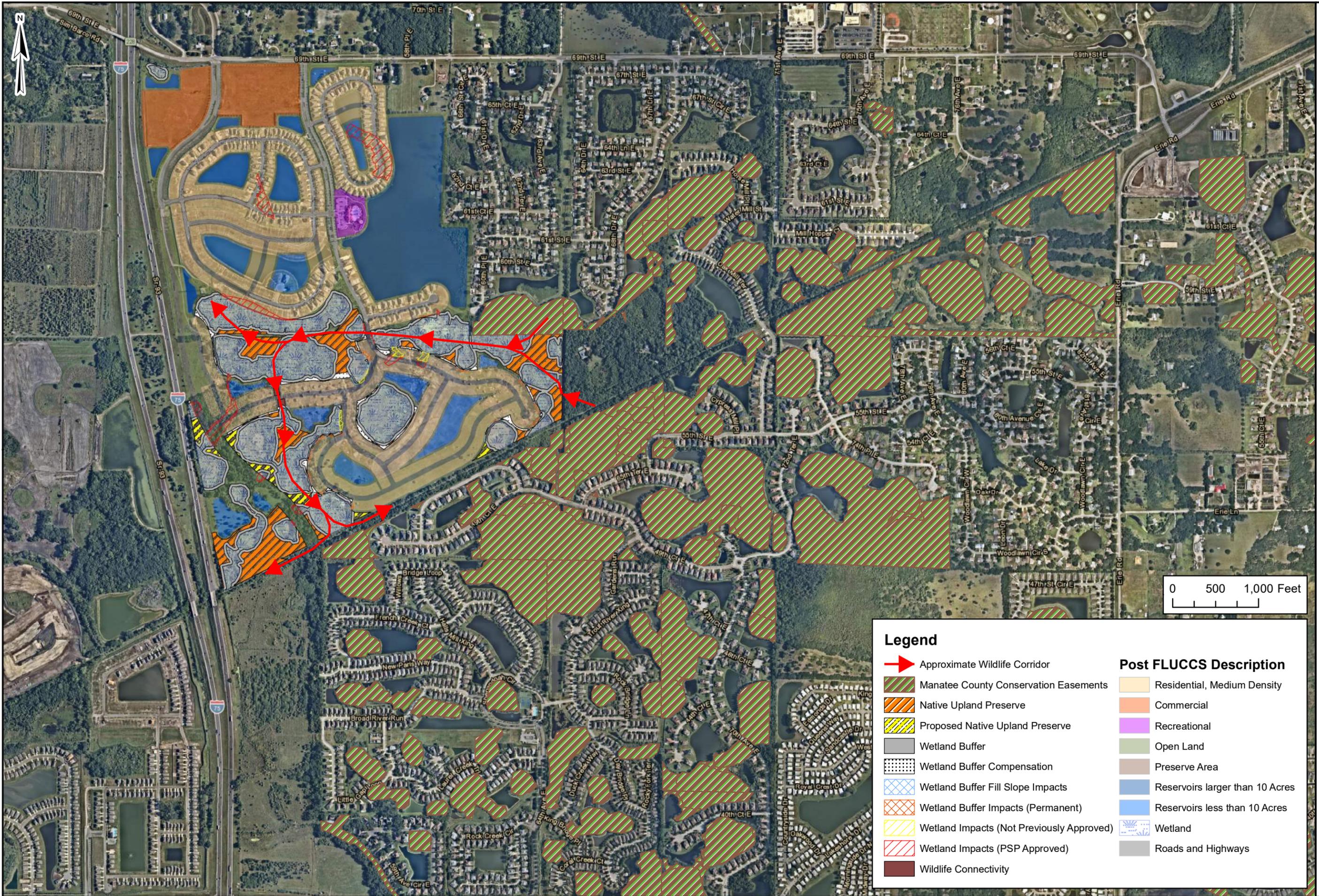
Post FLUCCS Description

- Residential, Medium Density
- Commercial
- Recreational
- Open Land
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- Reservoirs less than 10 Acres
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TRS: 33S18E33
 Scale: 1" = 600'
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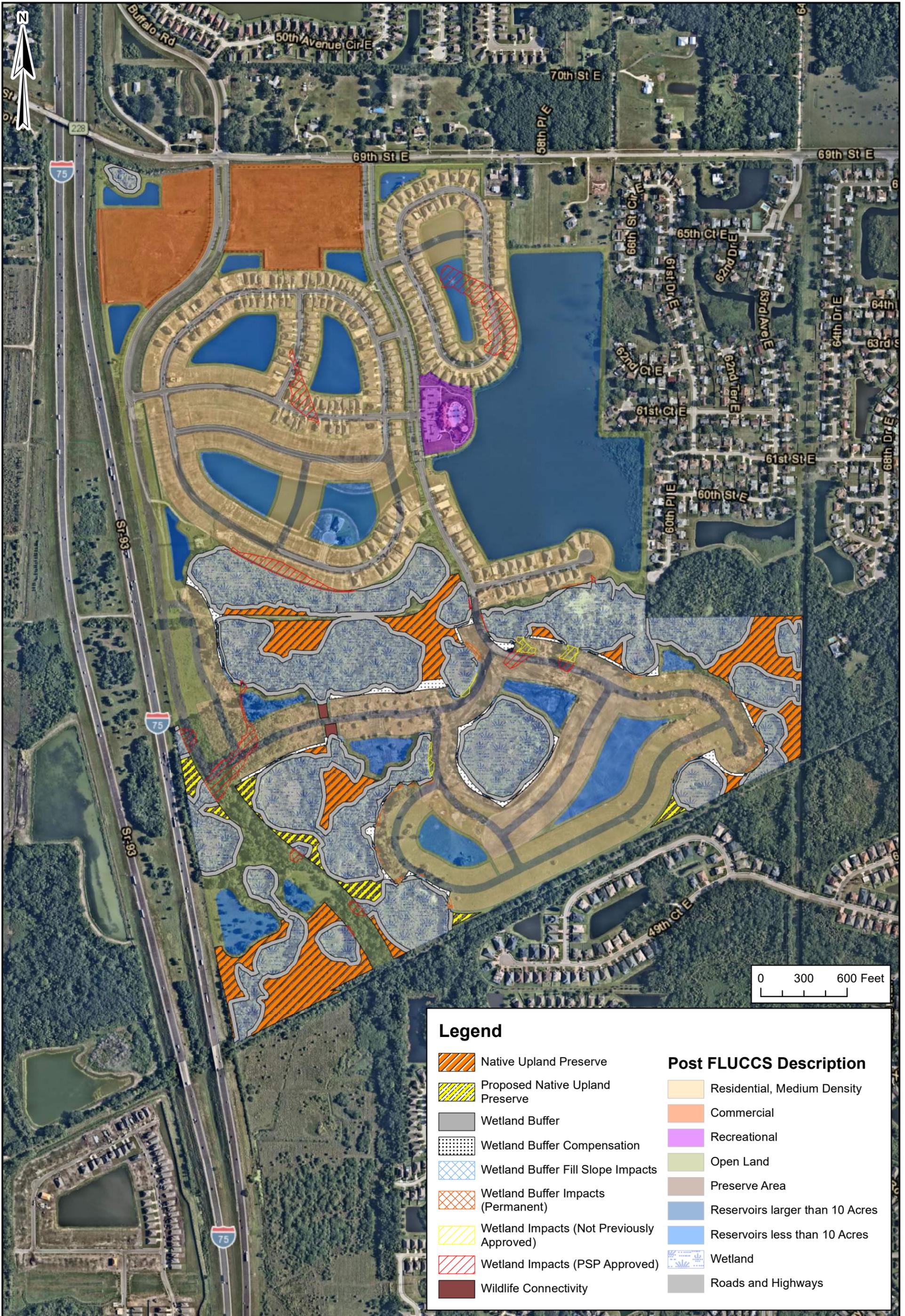
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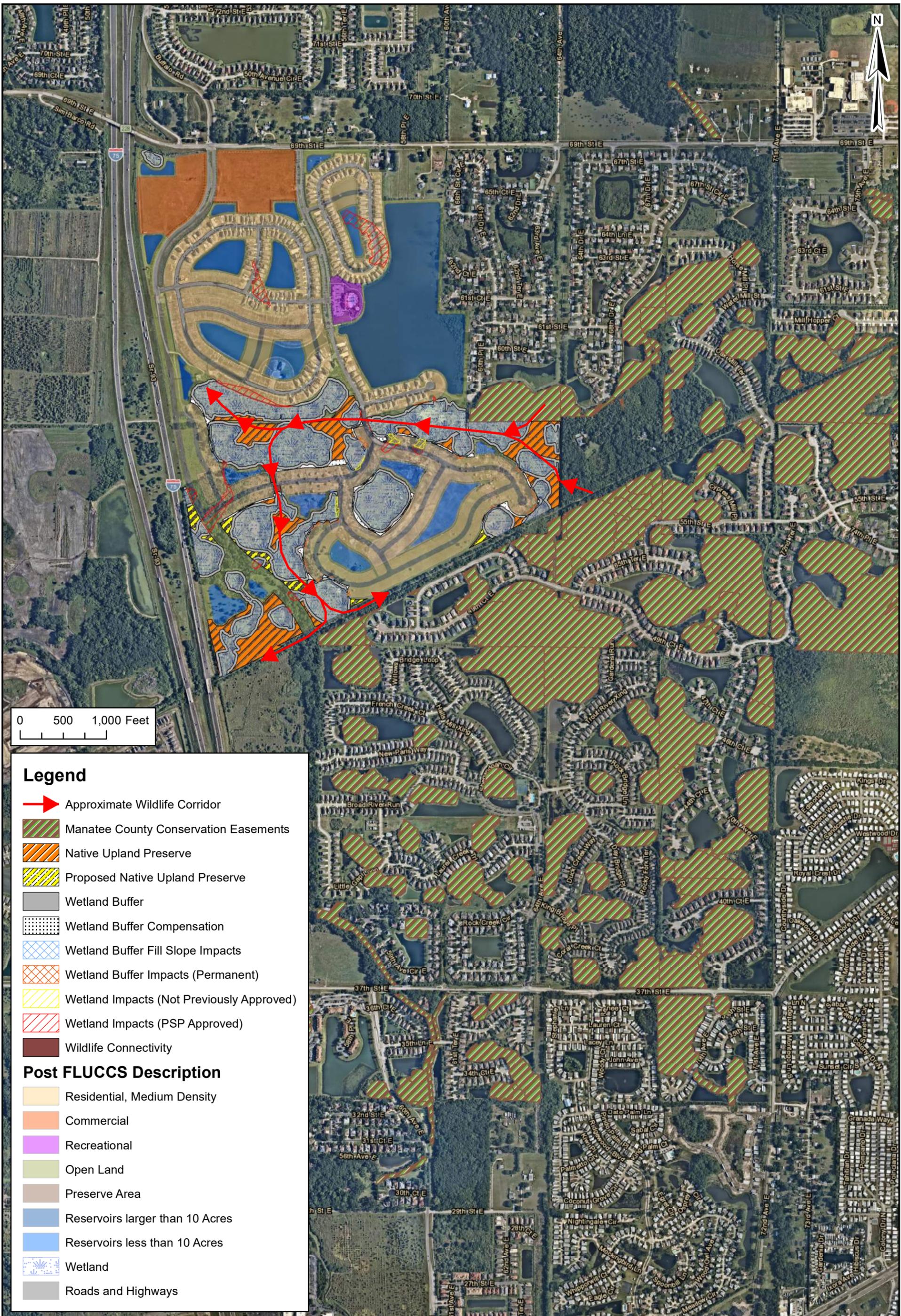
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0 500 1,000 Feet

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