

APPENDIX C

Existing Land Use Map & Code Descriptions

LEGEND

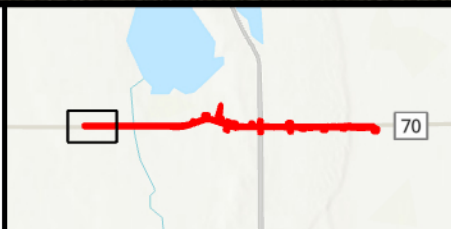
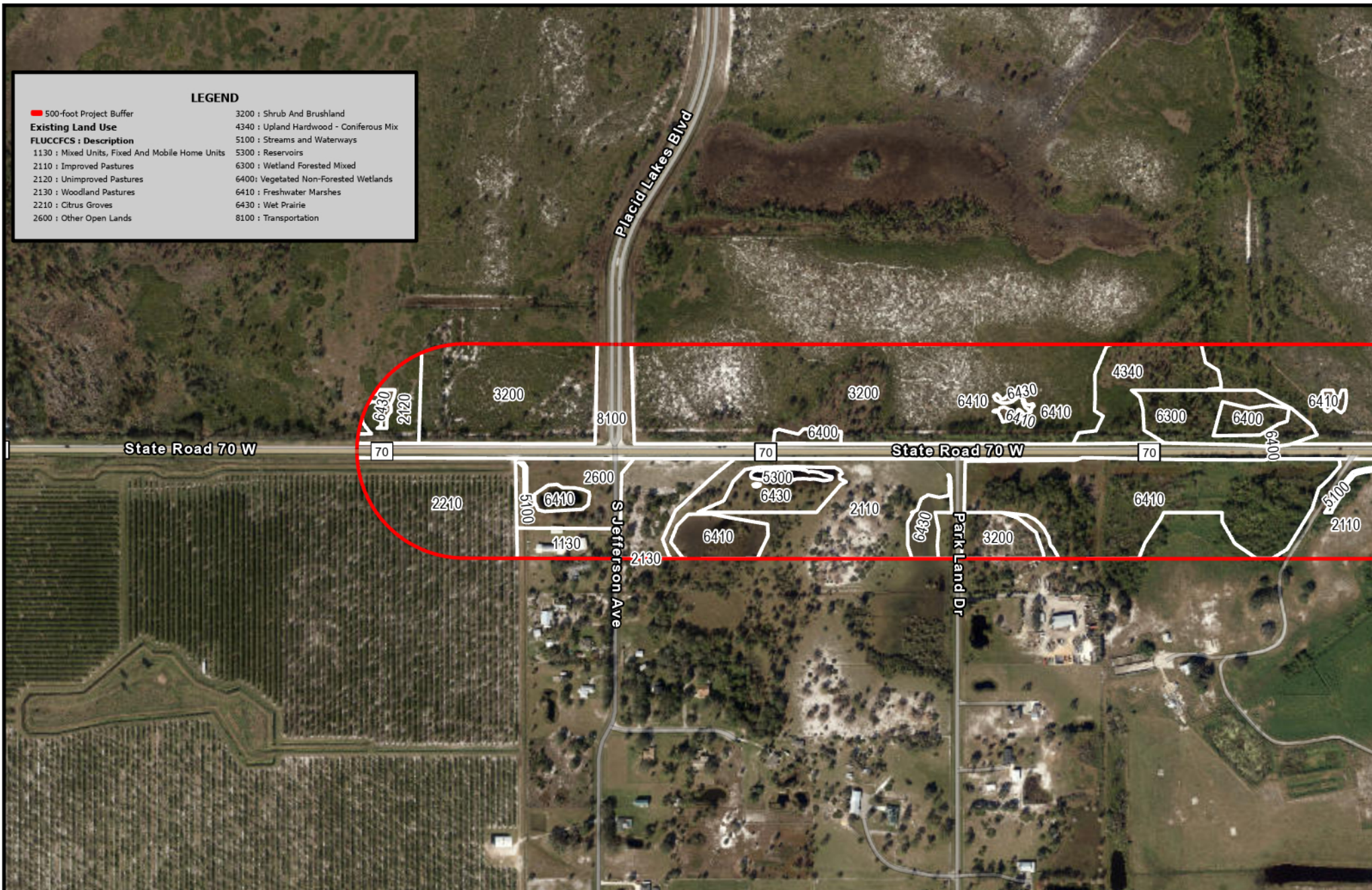
500-foot Project Buffer

Existing Land Use

FLUCFCS : Description

1130 : Mixed Units, Fixed And Mobile Home Units
2110 : Improved Pastures
2120 : Unimproved Pastures
2130 : Woodland Pastures
2210 : Citrus Groves
2600 : Other Open Lands

3200 : Shrub And Brushland
4340 : Upland Hardwood - Coniferous Mix
5100 : Streams and Waterways
5300 : Reservoirs
6300 : Wetland Forested Mixed
6400 : Vegetated Non-Forested Wetlands
6410 : Freshwater Marshes
6430 : Wet Prairie
8100 : Transportation



FLUCFCS Land Use Map

1 inch = 600 feet

Sources: SWFWMD 2020; SFWMD 2019

SR 70 from Jefferson Ave to CR 29
FPID: 414506-1-22-01
Highlands County, Florida

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LEGEND

500-foot Project Buffer

Existing Land Use

FLUCFCS : Description

1100 : Residential Low Density Less Than 2 Dwells*

2110 : Improved Pastures

2210 : Citrus Groves

3200 : Shrub And Brushland

4340 : Upland Hardwood - Coniferous Mix

5100 : Streams and Waterways

5300 : Reservoirs

6170 : Mixed Wetland Hardwoods

6300 : Wetland Forested Mixed

6400 : Vegetated Non-Forested Wetlands

6410 : Freshwater Marshes

8100 : Transportation



FLUCFCS Land Use Map

1 inch = 600 feet

Sources: SWFWMD 2020; SFWMD 2019

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LEGEND

 500-foot Project Buffer

Existing Land Use

FLUCFCS : Description

1100 : Residential Low Density Less Than 2 Dwells*

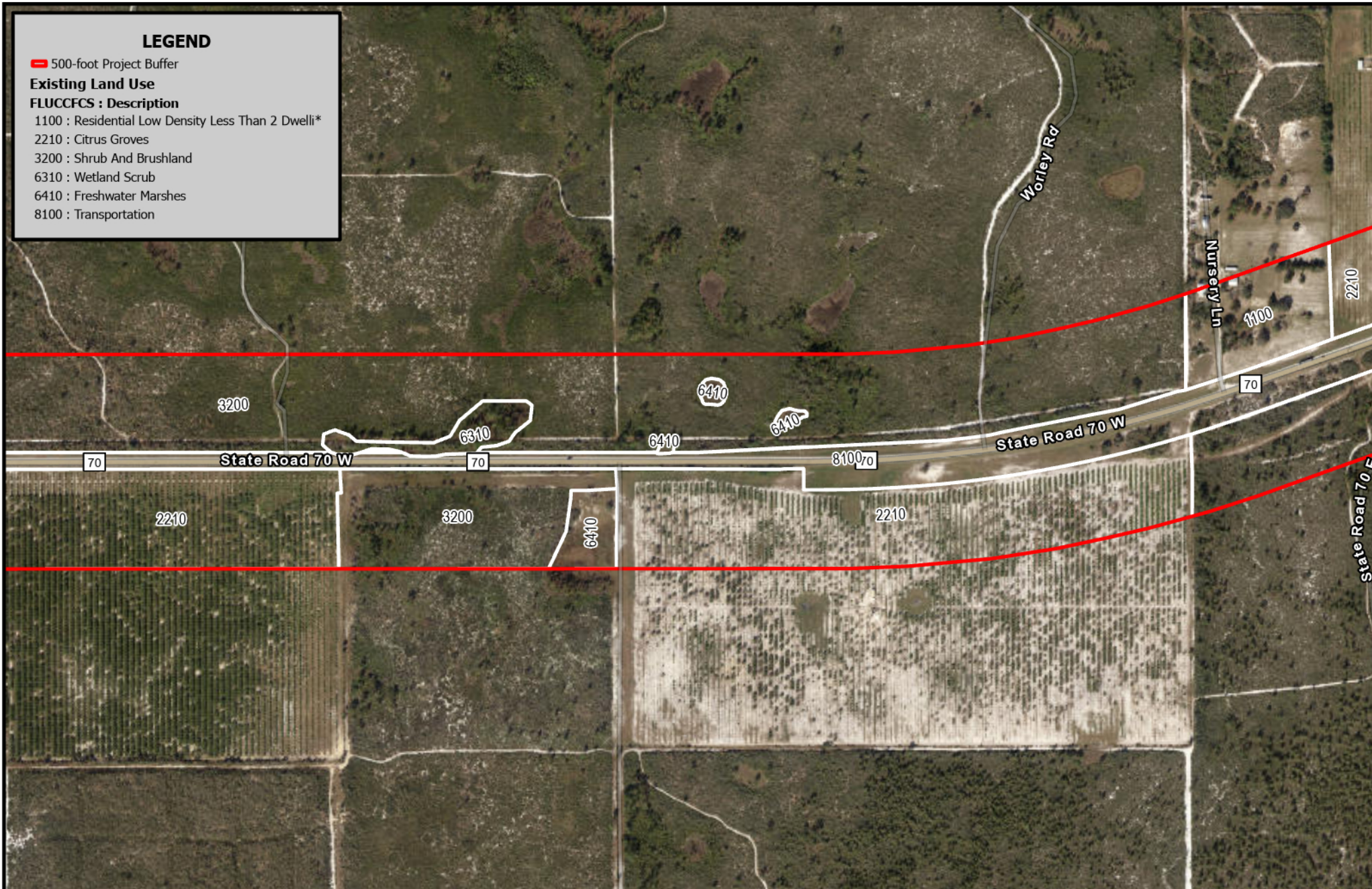
2210 : Citrus Groves

3200 : Shrub And Brushland

6310 : Wetland Scrub

6410 : Freshwater Marshes

8100 : Transportation



FLUCFCS Land Use Map

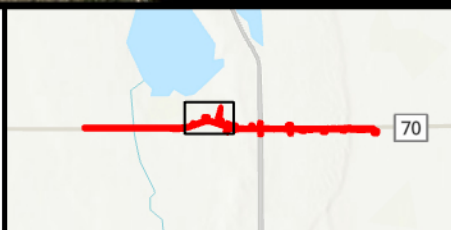
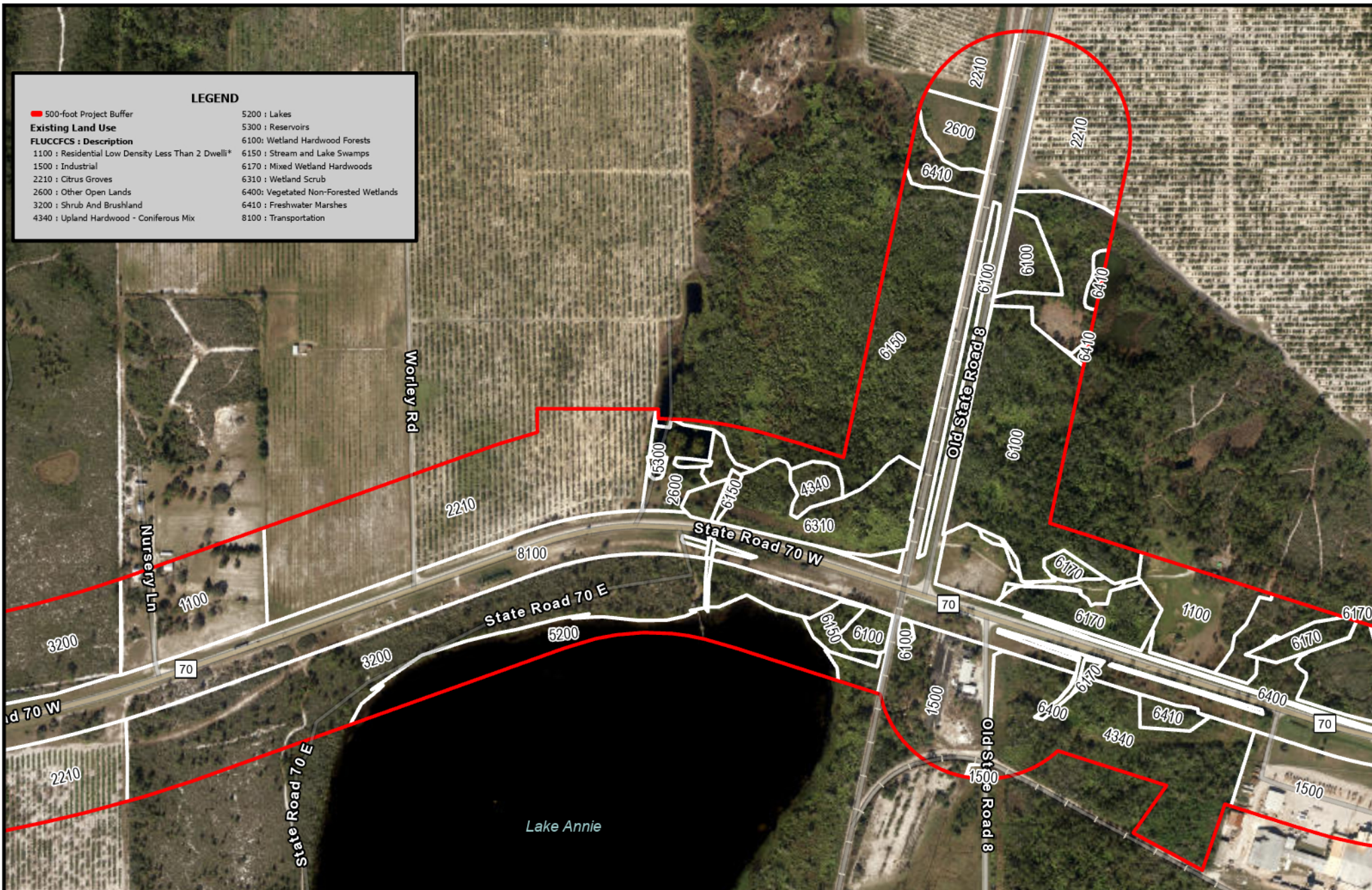
1 inch = 600 feet

Sources: SWFWMD 2020; SFWMD 2019

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FLUCFCS Land Use Map

1 inch = 600 feet

Sources: SWFWMD 2020; SFWMD 2019

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6410

LEGEND

500-foot Project Buffer

Existing Land Use

FLUCFCS : Description

1100 : Residential Low Density Less Than 2 Dwells*

1300 : Residential High Density

1400 : Commercial And Services

1500 : Industrial

2210 : Citrus Groves

2400 : Nurseries And Vineyards

3200 : Shrub And Brushland

4340 : Upland Hardwood - Coniferous Mix

5100 : Streams and Waterways

6100 : Wetland Hardwood Forests

6170 : Mixed Wetland Hardwoods

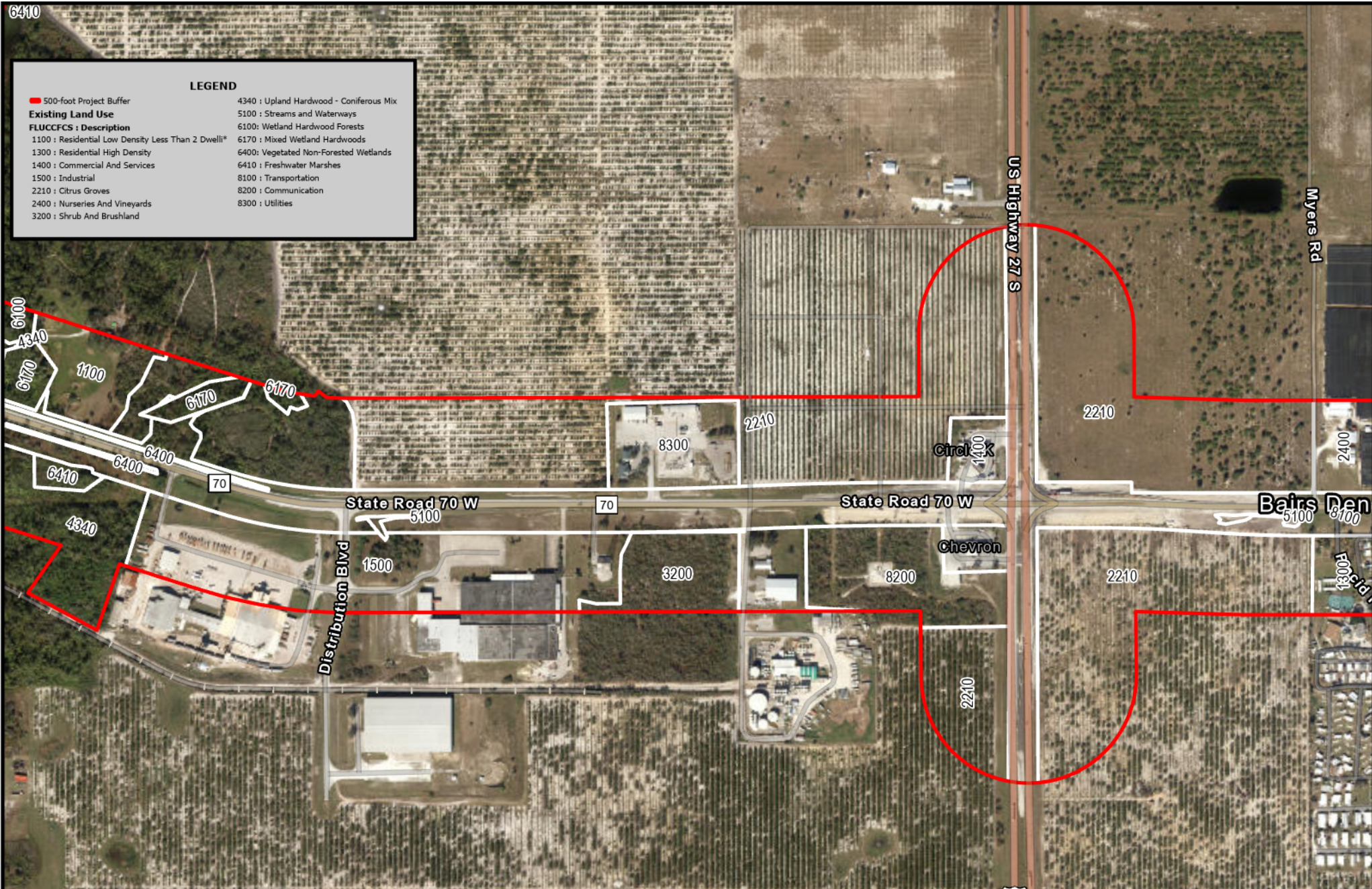
6400 : Vegetated Non-Forested Wetlands

6410 : Freshwater Marshes

8100 : Transportation

8200 : Communication

8300 : Utilities



FLUCFCS Land Use Map

1 inch = 600 feet

Sources: SWFWMD 2020; SFWMD 2019

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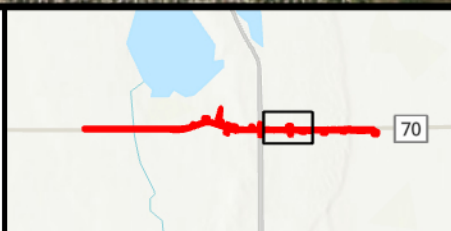
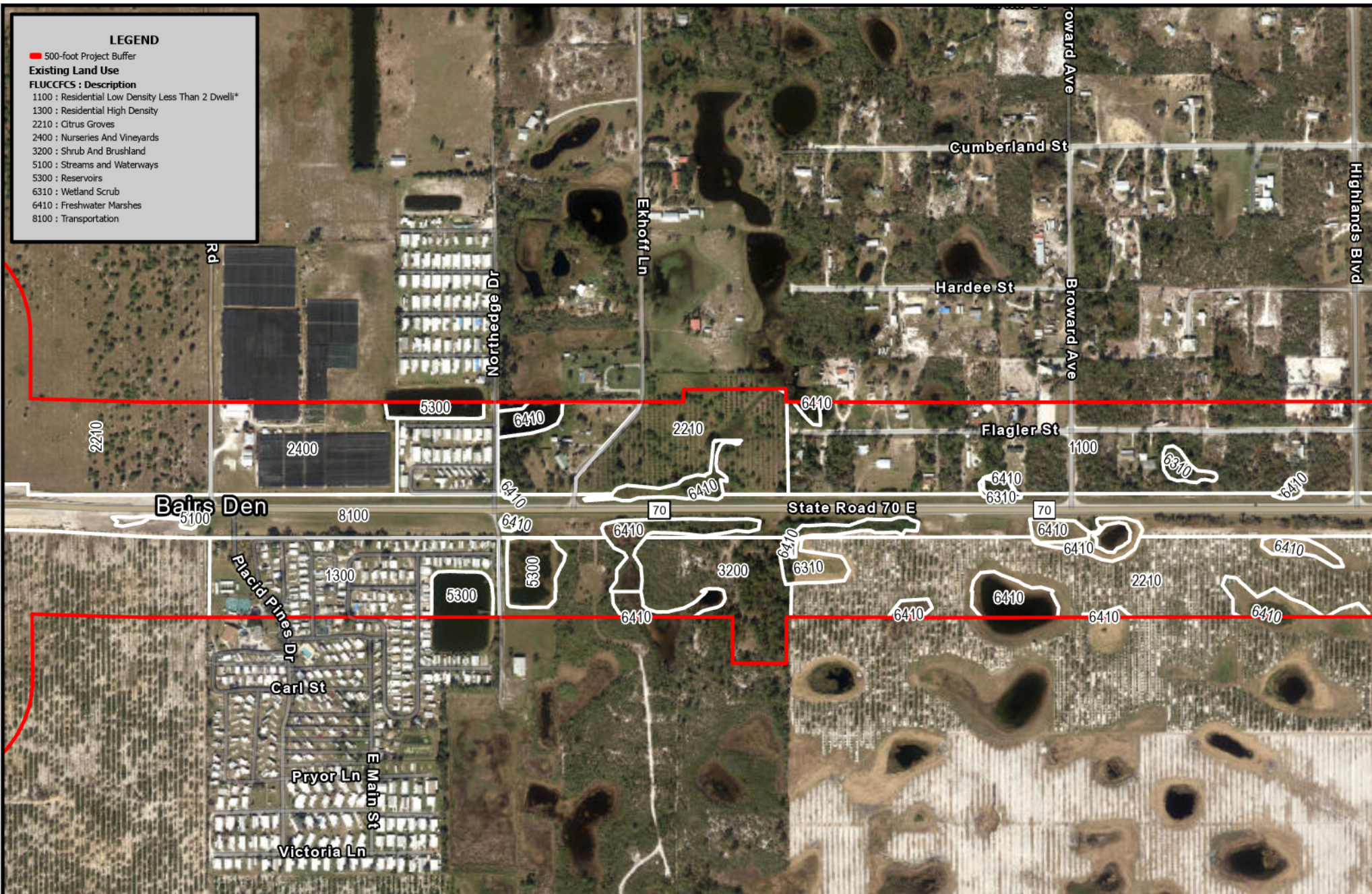
LEGEND

500-foot Project Buffer

Existing Land Use

FLUCFCS : Description

- 1100 : Residential Low Density Less Than 2 Dwelling*
- 1300 : Residential High Density
- 2210 : Citrus Groves
- 2400 : Nurseries And Vineyards
- 3200 : Shrub And Brushland
- 5100 : Streams and Waterways
- 5300 : Reservoirs
- 6310 : Wetland Scrub
- 6410 : Freshwater Marshes
- 8100 : Transportation



FLUCFCS Land Use Map

1 inch = 600 feet

Sources: SWFWMD 2020; SFWMD 2019

SR 70 from Jefferson Ave to CR 29
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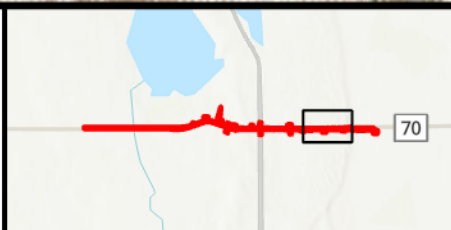
LEGEND

500-foot Project Buffer

Existing Land Use

FLUCFCS : Description

- 1100 : Residential Low Density Less Than 2 Dwelling*
- 1180 : Rural Residential
- 2130 : Woodland Pastures
- 2210 : Citrus Groves
- 4220 : Brazilian Pepper
- 6300 : Wetland Forested Mixed
- 6310 : Wetland Scrub
- 6400 : Vegetated Non-Forested Wetlands
- 6410 : Freshwater Marshes
- 8100 : Transportation



FLUCFCS Land Use Map

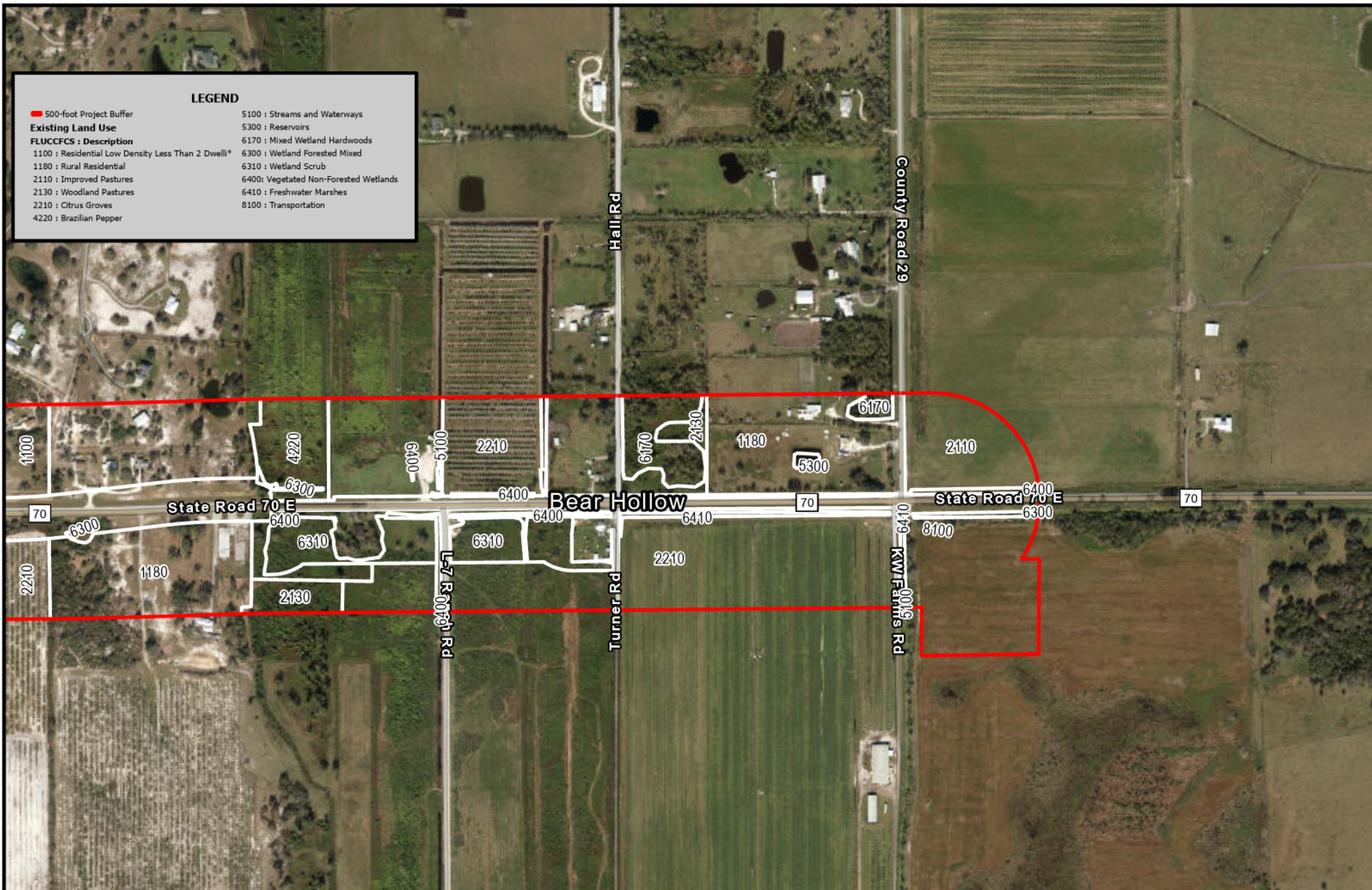
1 inch = 600 feet

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FLUCFCS Land Use Map

1 inch = 600 feet

Sources: SWFWMD 2020; SFWMD 2019

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Urban and Built-Up Lands (FLUCFCS 1000 Series)

The study area includes a total of 181.88 acres of urban and built-up lands which consist of Residential Low Density <2 Dwelling Units (FLUCFCS 1100), Mixed Units, Fixed and Mobile Home Units (FLUCFCS 1130), Rural Residential (FLUCFCS 1180), Residential High Density (FLUCFCS 1300), Commercial and Services (FLUCFCS 1400), and Industrial (FLUCFCS 1500). Within the study area, Residential Low Density account for 93.42 acres (approximately 9.53% of the study area), Mixed Units, Fixed and Mobile Home Units account for 1.77 acres (approximately 0.18% of the study area), Rural Residential account for 43.43 acres (approximately 4.43% of the study area), Residential High Density account for 13.91 acres (approximately 1.42% of the study area), Commercial and Services account for 3.39 acres (approximately 0.35% of the study area), and Industrial account for 25.93 acres (approximately 2.65% of the study area).

Agriculture (FLUCFCS 2000 Series)

Within the study area, this habitat type includes pastureland and cropland. Agriculture land uses within the study area (totaling 288.15 acres) consist of Improved Pastures (FLUCFCS 2110), Unimproved Pastures (FLUCFCS 2120), Woodland Pastures (FLUCFCS 2130), Citrus Groves (FLUCFCS 2210), Nurseries and Vineyards (FLUCFCS 2400), and Other Open Lands (Rural) (FLUCFCS 2600). Within the study area, Improved Pastures account for 26.88 acres (approximately 2.74% of the study area), Unimproved Pastures account for 1.69 acres (approximately 0.17% of the study area), Woodland Pastures account for 3.07 acres (approximately 0.31% of the study area), and Other Open Lands (Rural) accounts for 7.70 acres (approximately 0.79% of the study area). Pastures predominately consist of groundcover such as bahia grass and beggarticks with sparse slash pine (*Pinus elliotti*), live oak (*Quercus virginiana*), and cabbage palm (*Sabal palmetto*). Citrus Groves account for 240.36 acres (approximately 24.52% of the study area) and Nurseries and Vineyards account for 8.45 acres (approximately 0.86% of the study area). These areas are mostly maintained with crops but provide open areas for birds to forage and perch.

Rangeland (FLUCFCS 3000 series)

Rangeland is defined as land where the potential natural vegetation is predominantly grasses, grass-like plants, forbs or shrubs and is capable of being grazed. Rangeland land uses within the study area consist of Shrub and Brushland (FLUCFCS 3200). Shrub and Brushland account for 181.72 acres (approximately 18.54% of the study area). This habitat has exposed, sandy soil with intermittently occurring sand live oak (*Quercus geminata*), Chapman's oak (*Q. chapmanii*), wax myrtle (*Morella cerifera*), cabbage palm, and saw palmetto (*Serenoa repens*).

Upland Forest (FLUCFCS 4000 Series)

Upland Forests within the study area (totaling 37.12 acres) consist of Brazilian Pepper (FLUCFCS 4220) and Upland Hardwood – Coniferous Mix (FLUCFCS 4340). Within the study area, Brazilian Pepper forests account for 6.18 acres (approximately 0.63% of the study area). Brazilian pepper

(*Schinus terebinthifolia*) is an invasive species and mostly occur near wetlands and waterbodies in the study area. Upland Hardwood – Coniferous Mix forests account for 30.94 acres (approximately 3.16% of the study area). These forested areas occur in undeveloped upland areas throughout the entirety of the study area. These forested areas typically contain a canopy dominated by slash pine, live oak, and cabbage palm with understories containing saw palmetto, Brazilian pepper, caesarweed (*Urena lobata*), and groundcover such as bahia grass and beggarticks.

Eleven wetland and other surface water habitat types were found within the project study area. A total of 121.41 acres (12.38%) of wetland and other surface water habitat is located within the project study area.

FLUCFCS: 5100 Streams and Waterways
NWI: PEM1E Palustrine, Emergent, Persistent, Seasonally Flooded/ Saturated
PSS1C Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

This habitat type includes rivers, creeks, canals, and other linear water bodies. Streams and waterways are present throughout the project study area and consists of excavated drainage ditches and canals dredged in hydric and non-hydric soils and natural creek systems. Throughout the project study area, ditches and canals are located parallel to both sides of SR 70 and are often connected under SR 70 and residential driveways through pipes, culverts, and bridges. When present, dominant vegetation within the streams and waterways consists of smartweed (*Persicaria* spp.), marsh pennywort (*Hydrocotyle umbellata*), cattail (*Typha* spp.), beggarticks, various sedges (*Cyperus* spp.), frog's bit (*Phyla nodiflora*), Peruvian primrose willow, Mexican primrose willow, Carolina willow, and salt bush (*Baccharis halimifolia*). Streams and waterways comprise 1.10 acres (0.11%) of the project study area.

FLUCFCS: 5200 Lakes
NWI: L1UBH Lacustrine, Limnetic, Unconsolidated Bottom, Permanently Flooded

Lake Annie is located on the south side of SR 70 near the eastern segment of the project study area. The lake is described as oligotrophic and monomictic, with clear, groundwater-fed open water dominating its basin. Surrounding uplands contain a mix of sandhill and scrub communities, while bayhead vegetation occurs along the southern shoreline. Littoral vegetation may be present where slopes allow, with denser macrophytes occurring along areas of groundwater seepage. Lake Annie comprises a significant open-water feature within the regional landscape. Vegetation includes species such as Florida bladderwort (*Utricularia floridana*), Peruvian primrose willow, fragrant water lily (*Nymphaea odorata*), and cattail. Lakes comprise 8.00 acres (0.82%) of the project study area.

FLUCFCS: 5300 Reservoirs
NWI: PEM1C Palustrine, Emergent, Persistent, Seasonally Flooded

PEM1E Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated
PUB2F Palustrine, Unconsolidated Bottom, Sand, Semipermanently Flooded

This water body type is defined as an artificial impoundment of water less than 10 acres in size. A reservoir is located on the south side of SR 70 near the eastern segment of the project study area. This reservoir is comprised of open water. Landscaping and sod grasses are maintained up to the reservoir edge. When present, littoral vegetation consists of Peruvian primrose willow, wax myrtle, fragrant water lily (*Nymphaea odorata*), and cattail. Reservoirs comprise 4.95 acres (0.50%) of the project study area.

FLUCFCS: 6100 Wetland Hardwood Forests
NWI: PFO1C Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
PFO1/3C Palustrine, Forested, Broad-Leaved Deciduous, Broad-Leaved Evergreen, Seasonally Flooded
PSS1/3C Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Broad-Leaved Evergreen, Seasonally Flooded

This habitat type is characterized as a forested wetland community dominated by hydrophytic hardwood species occurring on poorly drained soils with extended periods of seasonal flooding. Typical canopy species include red maple (*Acer rubrum*), swamp tupelo (*Nyssa biflora*), and sweetbay magnolia (*Magnolia virginiana*), which are all commonly associated with Florida's forested wetlands. Subcanopy and shrub layers may contain swamp bay (*Persea palustris*), wax myrtle (*Morella cerifera*), and buttonbush (*Cephalanthus occidentalis*), all of which favor saturated soils and wetland margins. Herbaceous vegetation, when present, may include wetland-adapted species associated with shallow inundation zones. Wetland hardwood forests comprise 16.96 acres (1.73%) of the project study area.

FLUCFCS: 6150 Stream and Lake Swamps – Bottomland
NWI: PFO1C Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

This habitat type is usually found on but not restricted to river, creek and lake flood plains or overflow areas. This land use has a wide variety of predominantly hardwood species of which some of the more common components include red maple, water oak, sweetgum (*Liquidambar styraciflua*), willows, tupelos (*Nyssa spp.*), water hickory (*Carya aquatica*), bays, and water ash (*Fraxinus caroliniana*) and buttonbush (*Cephalanthus occidentalis*). The dominant vegetation of this habitat type within the project study area consists of slash pine, swamp bay, dahoon holly (*Ilex cassine*), Carolina willow, and wax myrtle. Stream and lake swamps comprise 14.75 acres (1.50%) of the project study area.

FLUCFCS: 6170 Mixed Wetland Hardwoods

NWI: PFO1C Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

This habitat type includes those wetland hardwood communities which are composed of a large variety of hardwood species tolerant of hydric conditions yet exhibit an ill-defined mixture of species. The dominant vegetation of this habitat type within the project study area consists of slash pine, sweetbay magnolia, dahoon holly, laurel oak and swamp bay with a sparse shrub layer characterized by Brazilian pepper, Carolina willow, elderberry (*Sambucus nigra*), smartweed, shield fern, swamp fern and marsh pennywort. Mixed wetland hardwoods comprise 13.12 acres (1.34%) of the project study area.

FLUCFCS: 6300 Wetland Forested Mixed

NWI: PFO2/1Cd Palustrine, Forested, Needle-Leaved Deciduous, Broad-Leaved Deciduous, Seasonally Flooded, Partially Drained

R5UBFx Riverine, Unknown Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated

R5UBHx Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated

This habitat type includes mixed wetland forest communities in which neither hardwoods or conifers achieve a 66 percent dominance of the crown canopy composition. The dominant vegetation of this habitat type within the project study area consists of a canopy of slash pine, sweetbay magnolia, and swamp bay, a shrub layer of wax myrtle and dahoon holly, and an herbaceous layer of Peruvian primrose willow, thicket bean (*Phaseolus polystachyos*), Virginia chainfern and yellow-eyed grass (*Xyris elliottii*). Wetland forested mixed comprises 3.71 acres (0.38%) of the project study area.

FLUCFCS: 6400 Vegetated Non-Forested Wetlands

NWI: PEM1A Palustrine, Emergent, Persistent, Temporary Flooded

PEM1C Palustrine, Emergent, Persistent, Seasonally Flooded

PEM1F Palustrine, Emergent, Persistent, Semipermanently Flooded

R5UBFx Riverine, Unknown Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated

This habitat type is characterized as a herbaceous or shrubby wetland community occurring in depressional areas and low-lying zones with prolonged seasonal saturation or shallow inundation. Vegetation typically consists of emergent species adapted to persistent wet conditions, including softstem bulrush (*Schoenoplectus tabernaemontani*), pickerelweed (*Pontederia cordata*), and maidencane (*Panicum hemitomon*). Shrubby components may be present along slightly elevated margins and can include buttonbush (*Cephalanthus occidentalis*) and wax myrtle (*Morella cerifera*), both of which frequently occur at the edges of standing water and wetland basins. Vegetated non-forested wetlands comprise 3.36 acres (0.34%) of the project study area.

FLUCFCS: 6410 Freshwater Marshes

NWI:	PEM1A	Palustrine, Emergent, Persistent, Temporarily Flooded
	PEM1Ad	Palustrine, Emergent, Persistent, Temporarily Flooded, Partially Drained/Ditched
	PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded
	R5UBFx	Riverine, Unknown Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated

This habitat type includes communities that are characterized by have one or more of the follow species predominate: sawgrass (*Cladium jamaicensis*), cattail, arrowhead (*Sagittaria* spp.), maidencane (*Panicum hemitomom*), buttonbush, giant cutgrass (*Zizaniopsis miliacea*), switchgrass (*Panicum virgatum*), bulrush (*Scirpus* spp.), needlerush (*Juncus effusus*), common reed (*Phragmites* spp.), or arrowroot (*Thalia* spp.). The dominant vegetation of this habitat type within the project study area consists of Peruvian primrose willow, torpedo grass (*Panicum repens*), spikerush (*Eleocharis vivipara*), water spangles (*Salvinia minima*), bulrush, cattail, maidencane, slash pine, and Carolina willow. Freshwater marshes comprise 35.28 acres (3.60%) of the project study area.

FLUCFCS: 6430 Wet Prairies

NWI: PEM1C Palustrine, Emergent, Persistent, Seasonally Flooded

This habitat type is composed predominately of grassy vegetation on hydric soils and is usually distinguished from marshes by having less water and shorter herbage. These communities will be predominated by one or more of the following species: sawgrass, maidencane, cordgrasses (*Spartina* spp.), spike rushes (*Eleocharis* spp.), beach rushes (*Rhynchospora* spp.), spider lily (*Hymenocallis palmeri*), St. John's wort (*Hypericum* spp.), swamp lily (*Crinum americanum*), yellow-eyed grass, and whitetop sedge (*Dichromena colorata*). The dominant vegetation of this habitat type within the project study area consists of spikerush, torpedo grass, soft rush, yellow-eyed grass, flatsedge, marsh pennywort, water hyssop (*Bacopa monnieri*), and a few scattered wax myrtles. Wet prairies comprise 3.31 acres (0.34%) of the project study area.

Transportation, Communication, and Utilities (FLUCFCS 8000 Series)

The study area includes a total of 170.04 acres of transportation, communication, and utilities land uses which consist of Transportation (FLUCFCS 8100), Communication (FLUCFCS 8200), and Utilities (FLUCFCS 8300). Within the study area, Transportation accounts for 153.83 acres (approximately 15.69% of the study area), Communication accounts for 7.75 acres (approximately 0.79% of the study area), and Utilities account for 8.46 acres (approximately 0.86% of the study area).