

**Levy Nuclear Plant Units 1 and 2**  
**COL Application**  
**Part 3, Environmental Report**  
**Appendix 2.2-1**  
**Corridor Habitat Descriptions**

TRANSPORTATION, COMMUNICATIONS, AND UTILITIES (USGS 14)

These habitats are typically mowed and/or treated with herbicides on a regular basis. Vegetation encountered along these areas include bluestem (*Andropogon virginicus*), dogfennel (*Eupatorium capillifolium*), purple lovegrass (*Eragrostis spectabilis*), common ragweed (*Ambrosia artemisiifolia*), Spanish needle (*Bidens pilosa*), camphorweed (*Pluchea* spp.), partridge pea (*Chamaecrista fasciculata*), dwarf pawpaw (*Asimina pygmea*), saw palmetto (*Serenoa repens*), bahiagrass (*Paspalum notatum*), sawtooth blackberry (*Rubus argutus*), winged sumac (*Rhus copallinum*), persimmon (*Diospyros virginiana*), live oak (*Quercus virginiana*), sand live oak (*Quercus geminata*), cabbage palm (*Sabal palmetto*), hairy indigo (*Indigofera hirsuta*), and prickly pear cactus (*Opuntia* spp.).

OTHER URBAN OR BUILT-UP LAND/CROPLAND AND PASTURE/OTHER AGRICULTURAL LAND (USGS 17/21/24)

These habitats are discussed together due to their similarity in species composition and function. These areas are typically utilized for cattle grazing and have been cleared, tilled, and reseeded with specific grass types and improved with brush control and fertilizers; or these areas are undeveloped land within urban areas and inactive land with street patterns but no structures. Dominant vegetative species observed include grasses, such as bahiagrass, crab grass (*Digitaria* spp.), and bluestem, shrubs such as saw palmetto and wax myrtle (*Myrica cerifera*), and occasional trees such as longleaf pine (*Pinus palustris*), loblolly pine (*Pinus taeda*), water oak (*Quercus nigra*), and live oak.

SHRUB AND BRUSH RANGELAND/MIXED RANGELAND (USGS 32/33)

These habitats are discussed together due to their similarity in species composition and function. Shrub and brush rangeland and mixed rangeland areas are mostly dominated by saw palmetto intermixed with a wide variety of other woody scrub plant species, as well as various types of short herbs and grasses. The canopy component is typically sparse. In addition to the saw palmetto understory, other common species observed within shrub and brushland areas include sparse areas of slash pine (*Pinus elliotii*), Chapman's oak (*Quercus chapmanii*), sand live oak, laurel oak (*Quercus laurifolia*), persimmon, cabbage palm, water oak, live oak, winged sumac, gallberry (*Ilex glabra*), common ragweed, and muscadine grape (*Vitis rotundifolia*).

DECIDUOUS FOREST LAND (USGS 41)

These habitats can vary from scrubby oak habitat found on high sandy soils to more mesic environments. Some of the areas of deciduous forest lands found along the corridor are dominated by a mixture of loblolly pine, longleaf pine, laurel oak, live oak, sand live oak, and black cherry (*Prunus serotina*). Common shrub species include saw palmetto, gallberry, and wax myrtle, while

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groundcover plants and vines include wiregrass (*Aristida stricta* var. *beyrichiana*) and greenbrier (*Smilax* spp.). Other areas within this habitat may have historically been evergreen forest lands, but due to heavy silvicultural operations, longleaf pines have since been reduced, if not removed altogether. In these areas, longleaf pine is present but not dominant. Other species include the oaks previously listed, plus bluejack oak (*Quercus incana*) and post oak (*Quercus stellata*). Shrub and ground cover are characterized by saw palmetto, runner oak (*Quercus margarettiae*), wiregrass, and deerberry (*Vaccinium stamineum*).

**EVERGREEN FOREST LAND (USGS 42)**

Evergreen forest lands are common throughout central Florida, typically occurring on flat, well-drained soils. These habitats along the preferred corridors can vary from being dominated by a canopy of slash pine and/or longleaf pine with an understory of saw palmetto. A variety of subdominant canopy species are present, including water oak, live oak, cabbage palm, loblolly pine, laurel oak, sand live oak, and bluejack oak, while shrub and groundcover species may include gallberry, wax myrtle, winged sumac, American beautyberry (*Callicarpa americana*), muscadine grape, and Virginia creeper (*Parthenocissus quinquefolia*).

**MIXED FOREST LAND (USGS 43)**

These areas are characterized by monocultures of planted loblolly pine or sand pine (*Pinus clausa*) in uniform age classes and in rows. Some areas of planted pines in the lower wetter areas of the corridor also may contain volunteer red maple (*Acer rubrum*), swamp bay (*Persea palustris*), slash pine, water oak, and laurel oak.

**STREAMS AND CANALS (USGS 51)**

The Withlacoochee River originates in the Green Swamp, east of Polk City, and empties into the Gulf of Mexico near Yankeetown. The river is 86 miles long and has a drainage basin of 1170 square miles. The Withlacoochee River is intersected by the 500-kV transmission line corridor from the LNP to the proposed Central Florida South Substation and the 500-kV transmission line corridor from the LNP to the proposed Citrus Substation. Vegetation observed within and on the banks of the Withlacoochee River include cattail (*Typha* spp.), hydrilla (*Hydrilla verticillata*), tapegrass (*Vallisneria americana*), bald cypress (*Taxodium distichum*), red maple, and common buttonbush (*Cephalanthus occidentalis*).

Ditches were commonly observed within the proposed transmission corridor, primarily associated with roadways. The drainage features vary in hydroperiod from only occasional inundation to others typically containing water year-round. Common vegetation within these ditches include a mixture of woody, herbaceous, and vine species, such as cattail, coastal plain willow (*Salix*

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*caroliniana*), common buttonbush, Peruvian primrose willow (*Ludwigia peruviana*), pickerelweed (*Pontederia cordata*), maidencane (*Panicum hemitomon*), bushy bluestem (*Andropogon glomeratus*), and musky mint (*Hyptis alata*).

**LAKES/RESERVOIRS (USGS 52/53)**

These habitats are discussed together due to their similarity in species composition and function. Several lakes and reservoirs were observed along the proposed corridor. Dominant vegetation observed within or adjacent to these surface water bodies include red maple, swamp bay, pond cypress (*Taxodium ascendans*), coastal plain willow, cattail, common buttonbush, false-willow (*Baccharis angustifolia*), Peruvian primrose willow, dog fennel, hairy indigo, red ludwigia, bahiagrass, eastern false-willow, sawtooth blackberry, goldenrod (*Solidago* spp.), winged sumac (*Rhus copallinum*), bushy bluestem, bluestem, maidencane, smartweed (*Polygonum hydropiperoides*), and lance-leaved arrowhead (*Sagittaria lancifolia*).

**BAYS AND ESTUARIES (USGS 54)**

Bays and estuaries are coastal areas where seawater is significantly diluted with freshwater inflow from the land. Salinity levels range between 0.5 and 30 parts per thousand. Bays and estuaries typically lack dense populations of sessile plant and animal species. Crystal Bay is directly west of the corridor, and portions of the Bay are located in areas adjacent to the Crystal River Energy Complex.

**FORESTED WETLANDS (FLUCFCS 61)**

This habitat type can vary widely from deciduous wetland forests to evergreen wetland forests or an ill defined mixture of both. The dominant species in the habitats found along the preferred corridors include the following:

Canopy species observed throughout these habitats include pond cypress, bald cypress, laurel oak, red maple, swamp bay, sweetgum (*Liquidambar styraciflua*), slash pine, cabbage palm, red cedar (*Juniperus virginiana*), coastal plain willow, dahoon holly (*Ilex cassine*), common buttonbush, with occasional Carolina ash (*Fraxinus caroliniana*), loblolly bay (*Gordonia lasianthus*), sweetbay (*Magnolia virginiana*), ironwood (*Carpinus caroliniana*), pignut hickory (*Carya glabra*), southern magnolia (*Magnolia grandiflora*), and live oak. Shrub species include yaupon holly (*Ilex vomitoria*), elderberry (*Sambucus canadensis*), wax myrtle, Peruvian primrose willow, saw palmetto, and eastern false-willow (*Baccharis halimifolia*), while herbaceous species within the typically sparse understory include sawgrass (*Cladium jamaicense*), maidencane, a variety of sedges (*Cyperus* spp.), lizard's tail (*Saururus cernuus*), shield fern (*Thelypteris hispida*), marsh pennywort (*Hydrocotyle umbellata*), coinwort (*Centella asiatica*), smartweed, soft rush (*Juncus effusus*), lance-leaved arrowhead (*Sagittaria lancifolia*), cinnamon fern (*Osmunda cinnamomea*), royal fern

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(*Osmunda regalis*), Virginia chain fern (*Woodwardia virginica*), greenbrier, and red ludwigia (*Ludwigia repens*).

**NONFORESTED WETLANDS (USGS 62)**

Several areas of nonforested wetlands are located within the proposed corridor. These habitats can vary from floating, partially submerged, or emergent herbaceous vegetation to low growing grasses and other herbaceous species to areas dominated by a combination of shrubs and herbaceous species.

Vegetation may include water lettuce (*Pistia stratiotes*), spatterdock (*Nuphar* spp.), water hyacinth (*Eichhornia crassipes*), duckweed (*Lemna* spp.), water lily (*Nymphaea* spp), maidencane, redroot (*Lachnanthes caroliniana*), buttonweed (*Diodia virginiana*), marsh fern (*Thelypteris palustris*), Virginia chain fern, smartweed, lance-leaved arrowhead, soft rush, marsh pennywort, pickerelweed (*Pontederia cordata*), bushy bluestem, soft rush, dog fennel (*Eupatorium capillifolium*), coinwort, torpedo grass (*Panicum repens*), meadow beauty (*Rhexia* spp.), common buttonbush, St. John's-wort (*Hypericum* sp.), camphorweed, bog button (*Lachnocaulon* spp.), wiregrass, flat sedges (*Cyperus* spp.), and caric sedges (*Carex* spp.).

**TRANSITIONAL AREAS (USGS 76)**

Transitional areas are those areas which have been changed due primarily to human activities other than mining. Common plants observed include dog fennel, hairy indigo, persimmon, bahiagrass, American pokeweed (*Phytolacca americana*), Virginia creeper, American beautyberry, and winged sumac.