## APPENDIX 2. ALTERED LANDCOVER TYPES

FNAI recognizes that not all habitats and landscapes in Florida are in natural condition. Some have been completely converted from their historic natural community (e.g., agriculture, pasture) while others have been severely altered by human impacts such as fire suppression or silvicultural activities. These altered habitats do not fit into FNAI's Natural Community Classification. For these reasons FNAI recognizes the following altered landcover types to describe the most common non-natural habitats observed on conservation lands in Florida.

**Abandoned field/abandoned pasture** – Old fields, fallow pastures, early successional areas formerly grazed or in agriculture without recent activity to maintain the area as pasture or planted field. These areas are often dominated by weedy native (e.g., *Rubus* spp., *Myrica cerifera*) and non-native species (e.g., *Indigofera hirsuta*). In old pastures, generally designated when weedy cover from woody species (*Rubus* spp., *Myrica cerifera*, etc) is greater than 20 percent.

**Agriculture** – Row crops, citrus groves, and sod fields that are generally being maintained to grow products for human or domesticated animal use.

**Artificial pond** – water retention ponds, cattle ponds, etc.

**Borrow area** – dry or wet depression resulting from past or present mining operation. Phosphate pits and upland borrow pits (sand pits, clay pits, etc.).

**Canal/ditch** – Artificial drainage way.

**Clearcut pine plantation** – Areas of pine plantation that have undergone clearcutting of the pine canopy but have not yet been replanted with pine trees. These areas are often dominated by weedy native and non-native species. Natural pine dominated communities that have been clearcut but not further altered should be classified as the natural community.

**Clearing/regeneration** – Dove fields, wildlife food plots, recent or historic clearings that have significantly altered the groundcover and/or overstory of the original natural community (old homesites, etc.).

**Developed** – Check stations, ORV use areas, parking lots, buildings, maintained lawns (as part of recreational, business, or residential areas), botanical or ornamental gardens, campgrounds, recreational, industrial, and residential areas.

**Invasive exotic monoculture** – Stand of invasive exotic plant species that have eliminated the native vegetation, or nearly so.

**Impoundment** – Stream or watershed impoundment.

**Pasture - improved** – Dominated by planted non-native or domesticated native forage species and evidence of current or recent pasture activity and/or cultural treatments (mowing, grazing, burning, fertilizing; Agro-Ecology Grazing Issues Working Group 2009). Improved pastures have been cleared of their native vegetation. Most improved pastures in Florida are planted with bahiagrass (*Paspalum notatum*) and to a lesser extent with Bermudagrass (*Cynodon dactylon*) or pangolagrass (*Digitaria eriantha*). Weedy

native species are often common in improved pastures in Florida and include dogfennel (*Eupatorium capillifolium*), many species of flatsedge (*Cyperus* spp.), carpetgrasses (*Axonopus* spp.), crabgrasses (*Digitaria* spp.), and rustweed (*Polypremum procumbens*) among many others. Lawns or turf areas that are being maintained by mowing for human/recreational-use should be classified as developed (see above).

**Pasture - semi-improved** – Dominated by a mix of planted non-native or domesticated native forage species and native groundcover, due to an incomplete conversion to pasture, not regeneration. Semi-improved pastures have been cleared of a significant percentage of their native vegetation and planted in non-native or domesticated native forage species, but still retain scattered patches of native vegetation with natural species composition and structure (most often small areas of mesic flatwoods) among the pastured areas. The planted areas are usually dominated by bahiagrass (*Paspalum notatum*) and can resemble improved pastures. Seeding of bahiagrass can also occur within areas of native groundcover. This category should apply regardless of recent pasture maintenance.

**Pine plantation** – Areas altered by silvicultural activities. These include lands where either 1) planted pines are having or will have an ongoing detrimental effect on native groundcover, 2) the history of planted pines has damaged ground cover to the point where further restoration beyond thinning and burning is required, and/or 3) the method of planting (e.g. bedding) has severely impacted groundcover. Pine plantations in Florida are often dominated by even-aged loblolly, sand, or slash pine (*Pinus taeda*, *P. clausa*, or *P. elliottii*, respectively). Dense pine plantations typically have sparse to absent herbaceous vegetation as a result of shading or a cover of deep pine needle duff. These plantations may be very shrubby or vine-dominated or open at ground level. The groundcover in most cases has been severely impacted by mechanical site preparation, such as roller chopping and bedding. However, while perennial grasses such as wiregrass (*Aristida stricta* var. *beyrichiana*) may be greatly reduced, many components of the native groundcover persist even though the relative abundance is altered. Groundcover can be partially restored by thinning and/or frequent burning, although some planting of perennial grasses such as wiregrass may be required. With activities such as thinning and burning, plantations with intact native groundcover can be restored to the former natural community.

**Restoration natural community** – Former altered landcover type or successional natural community (pine plantation, xeric hammock, etc.) where active restoration is ongoing to return the community to its historic state. Examples of restoration activities include pine thinning, longleaf pine planting, groundcover restoration, hydrology restoration, and removal of exotics and other undesirable vegetation. In historically pyrogenic restoration natural communities, restoration activities are accompanied by the application of prescribed fire.

**Road** – Paved or unpaved

**Spoil area** – Area where dredge or spoil material is deposited, may be re-colonized by plants

**Successional hardwood forest** – Closed-canopied forest dominated by fast growing hardwoods such as laurel oak (*Quercus hemisphaerica*), water oak (*Quercus nigra*), and/or sweetgum (*Liquidambar styraciflua*), often with remnant pines. These forests are

either invaded natural habitat (i.e., mesic flatwoods, sandhill, upland pine, upland mixed woodland) due to lengthy fire-suppression or old fields that have succeeded to forest. The subcanopy and shrub layers of these forests are often dense and dominated by smaller individuals of the canopy species. Successional hardwood forests can contain remnant species of the former natural community such as turkey oak (*Quercus laevis*), saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), and infrequently wiregrass (*Aristida stricta* var. *beyrichiana*). Additionally, species such as beautyberry (*Callicarpa americana*), muscadine (*Vitis rotundifolia*), and sparkleberry (*Vaccinium arboreum*) are common. Restoration of these forests includes mechanical tree removal and reintroduction of fire. Where characteristic herbaceous species (e.g., wiregrass) have been lost, reintroduction via seed or plants may be necessary to restore natural species composition and community function.

**Utility corridor** – Electric, gas, telephone right-of-ways

**References:**

Agro-Ecology Grazing Issues Working Group. 2009. Florida Land Terms. The Florida Center for Environmental Studies. Florida Atlantic University. URL: www.ces.fau.edu/agro/dl/Florida_Land_Terms%20.pdf