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Environmental Features Inventory
Policy Manual
Significant Ecological Communities Overlay District

This manual contains guidelines and requirements for preparation of an Environmental Features Report to be submitted to the City of Gainesville as part of the review process for projects located within the Significant Ecological Communities Overlay District. The Report must be prepared for all developments within this district and shall be completed by a qualified environmental professional. City or County environmental staff, or both, shall review the Report for sufficiency.

General Site Information

A development project proposal within the Significant Ecological Communities Overlay District shall provide the following:

A. Project boundaries clearly depicted on USGS 7.5-minute quadrangle maps and on recent aerial photographs, at a scale of one inch = 400 feet, or greater detail.

B. A map showing adjacency to public or private conservation areas if applicable. This information can be obtained from the City of Gainesville.

C. Boundary Survey and legal description.

D. Text description of project location including physical address, tax parcel number, and section/township/range.

E. Topographic map at the one-foot contour interval, extending at least 100 feet off the project area, including onsite and adjacent wetlands and surface waters, as well as required surface water and wetland setbacks as described in the City of Gainesville Land Development Code.

F. Alachua County Soil Survey map clearly depicting project boundaries.

G. Text description of project goals and activities.

H. Other permits or development plans anticipated, pending, issued or denied for projects at the location (e.g. ACOE/ERP/Wetland Resource/MSSW). In other words, include a text discussion of the development history of the project area.

Environmental Inventory

General Environmental Site Assessment

The Environmental Features Report will identify all significant environmental features on the site, and identify expected post-construction impacts to and protection plans for significant environmental features. This report shall consist of a combination of maps, figures and

descriptions of the features as indicated below. To facilitate interpretation, site plan sheets and aerial photographs shall be of the same scale.

PRE-CONSTRUCTION CONDITIONS:

Natural Communities, Wetlands, and Surface Waters

With respect to natural communities, wetlands, and surface waters, the applicant must provide:

A. Delineation of existing natural communities and land use/land cover types, displayed clearly on site plan sheets and aerial photographs. Community types shall be identified according to the Florida Natural Areas Inventory (FNAI) Guide to the Natural Communities of Florida (FNAI/FDNR 1990[i]). Areas not categorizable under the FNAI system shall be identified using the Florida Land Use, Cover and Forms Classification System (FLUCFCS; FDOT 1999[ii]) at a minimum of Level 3. Each community type or land use/land cover shall be designated using the identification number associated with the FLUCFCS system and/or the FNAI community name. Include a table identifying the total acreage of each community or land use/land cover type within the project area, as well as a calculation of that acreage as a percentage of the total project area.

B. Text description of each community or land use/land cover including dominant species, special features, conditions, presence and location of listed plant and animal species, and onsite and offsite existing and proposed impacts. Also include documentation of invasive non-native plants using the most recent Florida Exotic Pest Plant Council "List of Invasive Species[iii]." Identify on relevant plan sheets and aerial photographs the general location and extent of invasive non-native plant populations.

C. Floodplain boundary map indicating the 100-year flood elevation boundary based upon Federal Emergency Management Agency Flood Insurance Rate Maps, USGS maps of flood-prone areas, Regional Planning Council flood plain maps, or other appropriate sources.

D. The boundaries of wetlands, surface waters and natural open water systems within the project boundary delineated on a map (i.e. aerial, natural communities map, etc.). State whether the delineation is approved by the appropriate governmental agency.

E. Delineation of all rare, vulnerable, or exemplary natural communities on the project site. A rare community is defined as either globally rare or rare within the State, based on FNAI's *Tracking List of Rare, Threatened and Endangered Plants, Animals, and Natural Communities of Florida*[iv]. All natural communities with the following ranks shall be noted:

- **G1/S1** Critically imperiled globally or statewide because of extreme rarity (5 or fewer occurrences) or because of extreme vulnerability to extinction due to some natural or human factor
- **G2/S2** Imperiled globally/statewide because of rarity (6 to 20 occurrences) or because of vulnerability to extinction due to some natural or human factor
- **G3/S3** Either very rare and local throughout its range (21-100 occurrences) or found locally in a restricted range, or vulnerable to extinction from other factors.

Natural communities present in the City of Gainesville that conform to these rankings include, but are not limited to: sandhill, sinkhole, floodplain forest, floodplain marsh, depression marsh, dome swamp, clastic upland lake, flatwoods lake, sandhill upland lake, sinkhole lake, seepage stream, spring-run stream, and seepage slope.

Listed Plant and Animal Species

The area shall be thoroughly surveyed by qualified biologists for listed plant and wildlife species. This includes a physical survey as well as an Element Occurrence Record available from FNAI. Listed species are defined here as species listed as endangered, threatened, or species of special concern by the Florida Fish and Wildlife Conservation Commission[v], Florida Department of Agriculture and Consumer Services[vi], or the US Fish and Wildlife Service; and S1/S2/S3 ranked species tracked by FNAI.

Information regarding listed species to be provided includes:

A. Common and scientific name of each listed species;

B. Number of individuals, density estimate/acreage occupied, or both;

C. Location of species (i.e. nests, burrows, actual sightings) of individuals or population areas. Location data must be adequate to allow for field verification (i.e. GPS data, distance from landmarks, detailed map etc.);

D. Description of habitat in which listed species was found.

Regulated Trees

According to the City of Gainesville Land Development Code, trees larger than 8-inch in diameter at 4.5 feet above ground level (DBH), except for slash and loblolly pines, which are regulated when 12-inch or larger in diameter, require a permit for removal. These regulations pertain to commercial, government, multi-family housing, and planned developments. On detached single-family homes only Heritage trees are regulated. Heritage trees are defined as native tree species that are larger than 20-inch in diameter, except for water oaks, laurel oaks, sweetgums, and loblolly pines, which become Heritage trees at 30 inches.

In reference to these provisions for significant environmental communities, the applicant must submit a map showing the location of all trees greater than 8-inch DBH (12-inch for slash or loblolly pine) must be surveyed and documented for proposed commercial, governmental, multi-family, single-family and planned developments. For single-family developments, an alternative to this survey of every regulated tree is a report, executed by a certified arborist with current credentials from the International Society of Arboriculture. The report must show the surveyed location, diameter, genus and species of all Heritage trees, significant trees, or tree groupings worthy of protection.

SITE PLAN AND POST-CONSTRUCTION CONDITIONS:

The site plan shall consist of a map or a series of maps[vii] that indicates, at a minimum, the following basic information regarding the development project, in addition to that information already required under Gainesville Land Development Code Sec. 30-160. All relevant final site plan, development plan, or plat sheets shall be signed and sealed by a professional land surveyor,

professional engineer, professional landscape architect, or environmental professional licensed in the state of Florida, as appropriate.

A. Geotechnical report based upon soil borings, land cover type, or soil map unit type. The report shall identify the observed groundwater elevation and an estimate of seasonal high groundwater elevation for the property. All information shall be depicted on the site plan.

B. Identification of floodways, sheet flows, erosional gullies, and other predevelopment surface water or storm event conveyances.

C. Location of permanent and temporary erosion, sediment and turbidity controls (Note: in certain cases a detailed erosion and sedimentation control plan, including text, map, calculations, and details may be required).

Protection of Listed Plant and Animal Species

The site plan shall include:

A. A description of potential impacts to listed species;

B. A protection plan that identifies measures to avoid and minimize impacts to the documented species or its habitat. These measures can include, but are not limited to: locating construction away from listed species and their habitat, preservation of the listed species habitat, conservation easements, enhancement or restoration of degraded or former habitat, creation of new habitats, removal of invasive species, establishment of buffer areas around existing habitats, modifications of land management practices, and relocation potential and strategy if applicable. At least 50% of listed species must be preserved *in situ;*

C. Permits applied for or that will be required in regard to impacts to the species (e.g., gopher tortoise permit from the Florida Fish and Wildlife Conservation Commission; endangered plant harvesting permit from the Division of Plant Industry).

Protection of Natural Communities, Wetlands, and Surface Waters

In reference to rare, vulnerable, or exemplary natural communities, surface waters, and wetlands, the applicant shall provide:

A. A map of proposed (post-construction) land use/land cover and natural communities (including acreage and percentages). Use the FLUCFCS or FNAI system as described above.

B. A protection plan for rare, vulnerable, or exemplary natural communities. Strategies for protection can include, for example, delineation of the construction site away from sensitive habitat, preservation of the most sensitive habitats, enhancement or restoration of degraded natural communities onsite, removal of invasive species, establishment of buffer areas around sensitive or rare habitats, and modifications of land management practices that will minimize impacts to natural communities. This plan shall also contain a description of how these natural communities will be protected in perpetuity (e.g. conservation easements and maintenance activities).

C. For wetland and surface waters, a description of how water quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters, including areas in the required setbacks, will be preserved or will remain undisturbed.

D. A plan to monitor water quality and quantity going into and exiting the designated significant environmental community. Such monitoring will include levels of dissolved ions of nutrients found in commercial fertilizers, heavy metals, and common pollutants. Dissolved particulates shall also be documented. Such monitoring must be initiated at least one year pre-development and continues one year post-development. The developer must provide the City with assurance that if post-development levels reveal increased contamination or turbidity, the developer will undertake mitigation at his own expense until pre-development quality is restored.

Protection of Regulated Trees

A generalized landscape plan shall be developed that demonstrates:

A. Trees to be saved and removed;
B. Tree protection zones as required under this ordinance
C. No sod is to be planted within preserved significant environmental features or the associated set-asides and/or buffers. If fast-establishing grass is required, rye grass shall be used;
D. Only species native to Alachua County are to be planted in preserved significant environmental features or the associated buffers and set-asides;
E. No invasive species are to be planted on the site.

Other tree and landscape requirements detailed in Article VIII, Subdivision 1 of the City of Gainesville Land Development Code shall be enforced. Compliance shall be indicated in additional landscape and tree management plans as addressed in the Code.

Conservation Area Buffers

If the site is adjacent to existing public or private conservation areas, the site plan shall demonstrate and describe how impacts to surrounding natural areas will be minimized so that development activities do not negatively affect the features on the surrounding sites. Measures such as vegetated buffers, site design, removal of invasive species, height limitations etc. shall be included in the plan to ensure that surrounding natural areas are not impacted by the proposed project. The site plan shall indicate a 50-foot natural buffer on land adjacent to any local, state, or national nature parks. Such buffers shall be clearly and permanently delineated.

Other Required Elements
Landscape and Tree Management, Stormwater, Wastewater and other relevant environmental plans shall be provided for review and be in compliance as described in Article VIII (Environmental Management) of the City of Gainesville Land Development Code.

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[i] FNAI/FDNR. 1990. *Guide To the Natural Communities of Florida.* Florida Natural Areas Inventory and Florida Department of Natural Resources. Tallahassee.

[ii] FDOT, 1999. *Florida Land Use, Cover and Forms Classification System.* Florida Department of Transportation. Tallahassee.

[iii] FEPPC, 2003. List of Invasive Species. Florida Exotic Pest Plant Council.

[iv] FNAI, 2000. *Tracking List of Rare, Threatened, and Endangered Plants and Animals and Natural Communities in Florida.* Tallahassee.

[v] FFWCC. 1997. *Florida's Endangered Species, Threatened Species, and Species of Special Concern.* Tallahassee.

[vi] *Notes on Florida's Endangered Plants*. Florida Department of Agriculture and Consumer Services, Bureau of Entomology and Plant Pathology - Botany Section, Contribution No. 38, 4th Ed. (Digital version) 2003.

[vii] The above information can be assembled in a way that best presents the natural resource information, the project site and the proposed development. Information can be combined into a few detailed figures (i.e. an single map showing the proposed development, vegetation communities, wetland and surface water boundaries and required setbacks, and listed species occurrences) or separated into different maps/figures. This is up to the discretion of the applicant as long as all required information is provided.

Little Hatchet Creek Flatwoods Environmental Site Evaluation

Nature Operations Division
City of Gainesville
April 12, 1999

Property Location

The Little Hatchet Creek Flatwoods property surrounds the majority of Ironwood Golf Course. Ironwood Golf Course, located at 2100 NE 39th Avenue, is owned by the City of Gainesville. The property is approximately 448 acres encompassed in Section 22, Township 9 south, and Range 20 east. Gainesville Regional Utilities' Murphree Wellfield and NE 53rd Avenue border the property to the north. NE 15th Street and NE 39th Avenue border the property to the east and south.

An additional 139 acres of undeveloped land south of NE 39th Avenue and approximately 550 acres of undeveloped land west of NE 15th Street could potentially be included in Little Hatchet Creek Flatwoods project.

Natural Communities, Ecological Processes, and Listed Species

The Little Hatchet Creek Flatwoods property is a mosaic of wet flatwoods, basin swamp, mesic flatwoods, dome swamp, and blackwater stream natural communities. The canopy of wet flatwoods and mesic flatwoods contains young, uneven-aged stands of naturally regenerated slash pine (*Pinus elliottii* var. *elliottii*), occasional loblolly pine (*P. taeda*), and very infrequent longleaf pine (*P. palustris*). The thick shrubby understory of the flatwoods includes gallberry (*Ilex glabra*), saw palmetto (*Serenoa repens*), wax myrtle (*Myrica cerifera*), dwarf huckleberry (*Gaylussacia dumosa*), water oak (*Quercus nigra*), and numerous other species. Bluestem (*Andropogon* sp.) and other herbaceous species dominate the ground cover of the flatwoods. Wiregrass (*Aristida* sp.) and several species of dropseed (*Sporobolus* spp.) occur infrequently. Basin wetlands (basin swamp and dome swamp) contain typical species such as pond cypress (*Taxodium ascendens*), slash pine, swamp bay (*Persea palustris*), and fetterbush (*Lyonia lucida*). Animal species observed include rufous-sided towhee, pine warbler, common yellowthroat, Carolina wren, white-tailed deer, raccoon, and on contiguous property, bobcat and turkey.

Historically the property's appearance and ecological processes, such as natural fire regime and hydrology, have been significantly altered. Cat-faced longleaf pine stumps, bluestem dominated ground cover, skid trails, and naturally regenerated slash pine, loblolly pine, and pond cypress all indicate a century of selective logging activity. There is no evidence of prescribed fire, and wildfires on the property have been aggressively suppressed. Geological Survey Quadrangle maps from 1966 and 1988

reveal that basin swamp and blackwater stream natural communities on and adjacent to the property were extensively ditched in the past 30 years. These long-term activities have changed both plant and animal species composition and structure. For example, slash pine, saw palmetto, and gallberry dominate the flatwoods flora rather than longleaf pine and wiregrass. Shrub dependant birds are more common that herbaceous dependant birds.

Extensive surveys for federal, state, and FNAI listed plant and animal species were not conducted, however, several listed species were observed on the property. These include hooded pitcherplant (*Sarracenia minor*), state listed as threatened, and nodding clubmoss (*Lycopodium cernuum*), state listed as commercially exploited. With the application of lightning season prescribed fire, it is highly probable that other listed species would be observed.

Management and Restoration Potential

Management and restoration potential for the Little Hatchet Creek Flatwoods is moderate. Hydrologic restoration would be difficult if not impossible. As mentioned in the previous section, extensive on-site ditching continues off the property to the west and south, connecting with several retention basins as part of a regional stormwater management project. In addition, several retention basins and a former sandpit are located on the south side of the property. Conversely, restoration of a natural fire regime through the application of lightning season prescribed fire that varies in intensity and return interval would be relatively easy. Prescribed fire, natural regeneration, and selective planting of longleaf pine and native herbaceous species would help restore and maintain appropriate species composition and structure of the property's natural communities.

Ironwood Golf Course has recently obtained Audubon Cooperative Sanctuary Certification. The probability for passive recreation, rail-trail connections, and environmental education in association with sustainable golf course management practices and other cooperative management agreements is high.

Management and restoration of the property would help protect the primary zone of Gainesville Regional Utilities' Murphree Wellfield and the proposed Murphree Wellfield Conservation Easement located adjacent to the property. The proposed Murphree Wellfield Conservation Easement is 7,800 acres of commercial timberlands owned by Georgia Pacific to be acquired through a cooperative effort by Gainesville Regional Utilities, St. Johns River Water Management District, Suwannee River Water Management District, Alachua County, and the City of Gainesville.

4. **Petition 109ZON-05 PB** City of Gainesville. Amend the City of Gainesville Land Development Code by overlaying the Significant Ecological Communities District on property zoned RSF-1 (3.5 units/acre single-family residential district) and I-1 (Limited industrial district) on approximately 358 acres. Located at 2100 Northeast 39th Avenue.

Mr. Dom Nozzi was recognized. Mr. Nozzi presented a map of the site and explained that the purpose of the petition was to apply the Ecological Communities District on properties near Ironwood Golf Course. He explained that the City Commission adopted the Ecological Communities ordinance in November of 2004. He noted that the property had important wet flat woods, basin swamp, dome swamp, black water stream and was in a high recharge area near the Murphree wellfield. He further noted that it was in the Little Hatchet Creek headwaters. He presented a map and aerial photo of the site and noted the zoning. Mr. Nozzi explained that a development plan for the property submitted to the City would require a report describing the important environmental features and how they would be protected. He discussed the requirements of the overlay for protection. He offered to answer any questions from the board.

Mr. Reiskind asked who owned the property.

Mr. Nozzi indicated that Mr. Henderson owned it, but he believed it had been sold.

Mr. Reiskind asked about the concern if the Limited Industrial District was developed as was allowed by right.

Mr. Nozzi explained that the Industrial Zoning was an artifact of the property originally being in Alachua County. He agreed that industrial development might reduce the management potential of the remainder of the site.

Mr. Gold asked why the south side of NW 39th Avenue was not included in the overlay.

Mr. Jeff Parks, representing City Nature Operations, was recognized. Mr. Parks explained that approximately 74 acres of the property on the south side of NE 39th Avenue was purchased for conservation.

Mr. Nozzi noted that the overlay would allow development to cluster and protect environmental features.

There was no public comment on the petition.

Motion By: Mr. Reiskind	Seconded By: Mr. Gold
Moved to: Approve Petition 109ZON-05 PB.	Upon Vote: Motion Carried 5 – 0 Ayes: Cohen, Gold, Reiskind, Tecler, Cole

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