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Environmental Review  
Eaglesrock land-use change and rezoning  
PB-09-177 LUC, PB-09-178 ZON

Mark A. Garland  
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The Eaglesrock petition covers a 2.4-acre parcel on the east side of Lake Kanapaha north of Archer Road and west of Interstate 75. The parcel is long east to west and narrow north to south. It extends westward from the north end of Southwest 50<sup>th</sup> Street, an unpaved private road, to the edge of Lake Kanapaha. An abandoned house is in the center of the site.

*Topography:* The site is nearly level on the east side, rising gently from about 74 feet above sea level at Southwest 50<sup>th</sup> Street to 83 feet just south of the house. Westward from the house, the land drops 30 feet to Lake Kanapaha, reaching 53 feet above sea level at the southwest corner of the property.

*Soils:* Soils on the high eastern half of the site are mapped as the non-hydric Candler sand, 0-5% slopes. This is a deep, sandy soil that usually supports longleaf-pine/turkey oak sandhill vegetation. The slope down to Lake Kanapaha is mapped as the non-hydric Millhopper sand, 0-5% slopes. This is also a sandy soil that has clay (derived from limestone) in its lower layers; it often supports live-oak hammocks. The level edge of Lake Kanapaha on the western edge of the parcel is mapped as the non-hydric, but poorly drained, Pomona sand. This is a sandy soil, usually in pine flatwoods, with a slowly-permeable layer in the subsoil that tends to "perch" water above it. The water table is within 10 inches of the surface for 1 to 3 months in the summer wet season.

*Ecological Communities:* The eastern half of the parcel probably once supported a longleaf-pine forest. By 1937, this area was cleared and most likely used for pasture, as shown by aerial photographs of the site. Today the area east of the house has a few large live oaks, one possibly planted red maple, and a few grapefruit and fig trees on the northern property line; the groundcover is mowed grass which gives way, closer to the house, to a mix of shrimp plant (*Justicia brandegeana*), invasive air-potato (*Dioscorea bulbifera*) and invasive ardisia (*Ardisia crenata*).

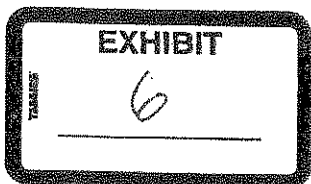
The slope down to Lake Kanapaha supported an oak hammock in 1937 and still does today. Today live oak (*Quercus virginiana*) is the dominant canopy tree on the slope, with a few large hackberry (*Celtis laevigata*). The groundcover is a dense stand of the invasive exotic Japanese arrow bamboo (*Pseudosasa japonica*) mixed with seedlings of hackberry and water oak (*Quercus nigra*) and laurel oak (*Quercus hemisphaerica*).

The level part of the property, at the base of the slope, has a canopy of small laurel and live oaks over a sparse groundcover of herbs and grasses. Toward the west, there is a treeless strip; west of this strip, small red maples (*Acer rubrum*) and planer elms (*Planera aquatica*) replace the oaks and the groundcover becomes a dense mix of wetland grasses and sedges. This is the edge of Lake Kanapaha, which is more of a forested wetland than a lake here. In 1937, this area was treeless and was probably dominated by wetland grasses and sedges.

*Surface Waters On-Site or Adjacent:* The site includes a small part of the southeast edge of Lake Kanapaha, an area which varies, depending on water level, from a shallow open-water lake to a prairie-like wetland. At times of high water, the lake receives water over a sill from Hogtown Prairie to the north. (Hogtown Prairie includes the lowermost portion of Hogtown Creek and Haile Sink, into which Hogtown Creek flows.) The ground surface of Lake Kanapaha consists of a shallow layer of clay and sand over the Ocala Limestone, which includes the Floridan Aquifer from which Gainesville draws its drinking water. Any degradation of the water quality of this area may degrade the quality of the Floridan Aquifer.

*Wetlands On-Site or Adjacent:* The edge of Lake Kanapaha here is a wetland. It extends to the area of the laurel oaks at the base of the slope.

*Listed Species Probable or Present:* The Florida Natural Areas Inventory (FNAI) has no record of state- or federally-listed plants or animals from the parcel. During a site visit on January 13, 2010, a possible gopher-tortoise (*Gopherus*



*polyphemus*) burrow was seen in the northeastern portion of the site. The lake most likely serves as habitat for wading birds.

*Karst Features on Property (Caves, Springs, Sinkholes):* The site lies within the "unconfined zone" of Alachua County, where the Ocala Limestone and the Floridan Aquifer are at or near the surface. In this area, karst features are common. The whole Lake Kanapaha basin and its adjacent slope may be considered a karst feature.

*Historical and Archaeological Resources:* The area around Lake Kanapaha and lower Hogtown Creek is rich in archaeological sites. A Phase I archaeological investigation of this property showed that it contains part of the Rock Knockers site (Florida Master Site File number 8AL5111), a site where chert tools were produced from the Early to Late Archaic periods (7500 to 1000 B.C.). Pottery provided evidence for Alachua period campsites (A.D. 600 to European contact) here. The investigators recommended additional testing in the areas of high concentrations of artifacts. This should be completed before the site is developed.

*Disturbance:* Major recent disturbances on this site include the clearing of the eastern half for pasture; construction of a house with associated structures such as a well, power line, and kerosene or propane tanks; and the introduction of invasive exotic plants. There are also at least two areas of recent trash near the house that may include some hazardous material, and a large gas or diesel fuel tank with attached hoses in front of the house.

*Environmental significance:* The most significant environmental features on this property are in its western half: the live-oak hammock on the slope and the wetland edge of Lake Kanapaha. Recognizing this, Alachua County placed *Lake Kanapaha and the adjacent slope in its Hogtown Prairie Strategic Ecosystem*.

Since Lake Kanapaha is lying almost directly on the Floridan Aquifer, it is important to protect the quality of water entering it. One important protection can be the restriction of development in and near the wetland and on the live-oak hammock that covers the slope down to the wetland. The property to the north has recently had the slope and wetland placed in Conservation land use and zoning; this land-use and zoning should be considered for the slope and wetland on this property as well.