

Management Plan for Centerville – A Conservation Community

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Introduction

Centerville Farms is a 975.82-acre residential development. The property has historically been maintained for recreational hunting. Prior management has created a large expanse of open canopied upland areas with a low groundcover. Approximately 633.6 acres or 64.9% of the project will be maintained in open space including 413.0 acres designated OS-1 and 220.6 acres designated as OS-2. The OS-1 designation includes wetlands, HQS Forest and Gopher Tortoise Habitat Preserve, and additional upland areas to be managed to maintain these communities. The OS-2 designation includes the remaining open areas. Maintenance of the areas designated OS-2 will include efforts to restore and maintain native communities where feasible but will also allow for maintenance of storm water facilities and provide additional recreation opportunities for residents that are not available with the OS-1 areas.

Qualified Management Entity Designation

The Homeowners Association for *Centerville – A Conservation Community* is required to implement and maintain in perpetuity the Land Management Plan strategies contained within this report. To provide oversight of the implementation of this Land Management Plan, the Apalachee Land Conservancy (ALC) will serve to assure that the proper management techniques are being used in the OS-1 and OS-2 districts. ALC will provide guidance and oversight to assure that the techniques are successful, and if not, they will provide recommended modifications to the Land Management Plan. Any modifications to the Land Management Plan are subject to review by Leon County Environmental staff prior to implementation.

OS-1 Areas

The OS-1 designation includes the HQS Forest and Gopher Tortoise Preserve, existing wetlands and buffers and corridors between these areas. The upland areas are proposed to be prescribed burned on frequent intervals. The edges of wetlands will be allowed to burn during wet years when fires from the adjacent uplands enter the wetlands.

HQS Forest and Gopher Tortoise Habitat Preserve

THE HQS Forest and Gopher Tortoise Preserve is a 68+/- area in the southwest corner of the project. This area is an oak, pine, hickory community with an open canopy, and includes the 43 acres of the High-Quality Successional Forest. The preserve will be managed to maintain habitat for the expected 90-100 gopher tortoises that will be living within the preserve. For specific management techniques see the HQS Forest and Gopher Tortoise Preserve management plan.

Generally, the wetlands will be managed by preserving the wetlands and monitoring them for any problems. During the years when rainfall has been adequate to maintain high water levels, prescribed

Wetlands

fires from the adjacent uplands will be allowed to enter the wetlands to reduce hardwood stem densities and maintain a more natural edge. During the dry years with low water levels within the wetland, a disked fireline upland of the wetland buffers shall be used to prevent any prescribed burns from entering the wetland. These periodic dry periods and fires will maintain a diverse community within the wetlands.

The management of the surrounding upland buffers and adjacent uplands, and maintenance of the current hydrological condition of the wetlands are expected to help maintain the wetlands in a healthy state.

Ponds

The ponds will be managed for aesthetics and recreational use. Natural vegetation communities will be maintained. Invasive exotic plants will be controlled by manual removal or by selective herbicide use. A professional fisheries consultant is expected to be used to manage fish populations within the ponds.

Wetlands Buffers

The upland buffers surrounding the wetlands vary in width and will be managed using fire. Prescribed burns will occur in the spring on an annual basis. Disked or mowed firelines will be used outside of the upland side of the buffers in accordance with the wetlands section.

In areas where the buffers are within a larger upland community, the buffers will be treated as part of the larger upland communities with additional management activities as described in the following section:

Other OS-1 Areas

There are several upland communities within the OS-1 designation that will provide large areas of natural communities in addition to the wetlands and HQS Forest and Gopher Tortoise Preserve. These communities will be managed to maintain or restore the communities currently in these areas. This maintenance of the communities will provide habitat for the fox squirrels and pine snakes located on or adjacent to the project site.

The first three areas described will provide a continuous wildlife corridor from the HQS Forest and Gopher Tortoise Preserve to the northeast corner of the property. This corridor will also connect to the currently underdeveloped property adjacent to the project site.

North of the HQS Forest and Gopher Tortoise Preserve and along the western edge of the project is a forested area that will provide a wildlife corridor from the preserve to the wetlands and pond near the northwest corner of the site. This corridor, the wetlands and watercourses, and buffers adjacent to the pond will be managed as one unit. During the annual prescribed burns, the fires be allowed to burn into the wetlands and watercourses. If thick stands of hardwood saplings become established, these areas

can be treated with herbicides or mowing. Small areas can be planted with longleaf pine, live oak or hickory seedling or saplings to provide replacement sources of fox squirrel forage as older trees die out.

should be limited to small areas (0.10 acres or less) with wide spacing (less than 300 stems per acre).

East of the powerline there is an area surrounded by watercourses and wetlands. This area will be managed for a longleaf pine/wiregrass community—~~P~~~~Annual~~ prescribed burns will be allowed to burn across the watercourses and into the wetlands in accordance with the wetland section. The burns are expected to release the wiregrass groundcover. Hardwood encroachment into this area will be monitored and kept to scattered individual trees by selective killing. Planting of longleaf seedlings at densities at below 400 stems per acre can be used to increase the number of longleaf trees. The basal area of pines at maturity will be limited to 70 square feet per acre.

The northeast part of the site has a mix of wetlands and hardwood communities. The uplands will be burned annually in the spring. Access across the wetlands to the isolated uplands on the property borders in this area may not be possible with machinery. If conditions require firelines in these areas, then small mowers may be used to establish a mowed fireline. To maintain the hardwoods growing in the area, fires will be timed to precede leaf flush.

LaQuinta Swamp is in the eastern part of the project site. This wetland and adjacent uplands will provide the southern part of the wildlife corridor. Most uplands west of the swamp are in pines, while much of the uplands on the eastern side are hardwoods. Fires from adjacent uplands will be allowed to burn into the swamp in accordance with the wetlands section. The area west of the swamp, where mature sweetgum, laurel and water oaks are abundant, continue to girdle to create snags or consider removal of some of them, where safe to do so, to improve wildlife habitat. A good goal is three to five snags per acre, while the eastern side will be maintained in mixed hardwoods. On the east side, selective cutting and herbicides will be used to maintain species diversity, particularly in areas where sweetgums and water oaks are numerous.

Hardwood species will be considered a problem if the stem density in a $\frac{1}{4}$ acre or greater is high enough to shade out the groundcover plants. Prior to beginning any hardwood controls, a professional ecologist or wildlife manger should be consulted to determine whether it is needed and the appropriate treatment method.

OS-2

The OS-2 areas will be managed the same as the adjacent OS-1 areas where feasible. Where prescribed fire is not a suitable management tool, the areas will be managed by mowing and herbicides on an as needed basis. In most areas, trees will be maintained to provide an open canopy and additional food and shelter outside of the OS-1 areas for fox squirrels. These areas will also provide additional areas for wildlife corridors for most species.

Homeowner Education

An important part of the overall management strategy of the property will be homeowner education. By providing the homeowners with information on the listed species and other wildlife found on the site, and the importance of the natural communities and their management to these species, management of these areas will be enhanced. Homeowners using the trails and otherwise seeing the habitats at frequent intervals will provide additional sets of eyes to locate and identify problems early on, before damage to the wildlife population occurs. Homeowners will be encouraged to report unusual activities or negligent acts within the natural areas thereby providing enforcement of the management plan, and discouraging damage to the natural areas from encroachment, feral pets, uncaring residents, or other sources. Invasive exotics plants, signs of unusual animal or plant mortality, or other problems are likely to be noticed and reported quickly and allow for early intervention and problem solving.

HQS Forest and Gopher Tortoise Habitat Preserve Management Plan

The HQS Forest and Gopher Tortoise Preserve is in the southwest corner of the project. This is a 68+/- acre area that as an oak pine hickory community with an open canopy and includes the 43 acres of High-Quality Successional forest. All the gopher tortoises currently living on the project property outside of the preserve will be relocated to this area. The preserve will be managed in perpetuity to maintain the current natural community and provide a high-quality habitat for the gopher tortoises that will be living within the preserve.

These management techniques are a continuation and intensification of the techniques that have been in use on the property and have kept the tortoise population at its current level. This management scheme for the preserve area is expected to provide an increase in the amount of available forage and increase the area suitable for burrowing which will allow the increased population of tortoises to thrive in the preserve.

Management activities within the preserve will include frequent prescribed burning, mowing as needed and selective herbicide use. Prescribed burns will generally be ~~annually~~ on a 1–3-year basis including dormant and growing season as applicable ~~in the spring after leaf flush~~. Periodically, burns can occur during the dormant season if fuel loading reduction is necessary. After years of high cone production from the pine trees, the preserve will be left unburned for two years to allow some pine recruitment. This burning regime will serve to maintain the fuels at low levels, provide a diverse plant community suitable for gopher tortoises and fox squirrels, and prevent wildfires from damaging the mature trees.

A 10' wide disked fireline will be constructed just inside the outer edge of the preserve and will be re-disked prior to every burn event. If vegetative or weather conditions warrant, an additional 10' wide area will be mowed inside of the disked fireline. After each burn event, the disked fireline may be seeded with native grasses and forbs to improve the appearance of the fireline. The fireline will be meandered around any gopher tortoise burrows found within the planned fireline route. In no case will

the disked fireline be closer than 5 feet to an active or inactive gopher tortoise burrows. Mowing is only expected to be needed in those areas where fuels are not sufficient for carrying fire during prescribed burns and brushy species such as blackberry are crowding out forage species and restricting gopher tortoise travel and burrowing. Selective herbicide use will only occur in areas where hardwood seedling and sapling control becomes a problem. Hardwood species will be a problem if the stem density in a 1/4 acre or greater area is high enough to discourage gopher tortoises foraging or burrowing, or the native shrub layer exceeds 5-10% cover over the entire preserve. Any areas where sweetgum and/or water oak have become established as more than 10% of the number of stems will also be considered a problem area. Prior to mowing or herbicide use, a professional ecologist or wildlife manager and Leon County will be consulted to determine whether either is needed and the specific areas to be treated.

For areas within the HQS Forest and Gopher Tortoise Preserve, but outside of the High-Quality Successional Forest, the management plan will help restore the plant community to resemble the High-Quality Successional Forest area more closely. If, after 3 years, the management activities do not successfully restore these areas, then additional management activities that can include tree and ground cover planting, selective tree removal, or other techniques will be used to restore these areas. A professional ecologist or wildlife manager should be consulted to determine the specific needs for these areas. Approval by Leon County staff is also required for the restoration.

In areas where non-native invasive plants become established, removal should occur as soon as possible, or at least on an annual basis. Bahia grass should be monitored frequently and treated any time it becomes established outside of the existing road locations.

The initial management of the preserve area occurred during the past year. Hardwoods were treated with herbicides in the fall of 2004. The preserve area was burned in the spring of 2005. Most areas where blackberry thickets or hardwood saplings had begun to establish themselves were successfully burned and the number of stems significantly reduced. Any areas where the stems were not significantly reduced will be mowed prior to relocation activities.

Secondary impacts from the residential subdivision can include accidental clearing into conservation areas, introduction of exotic plants, wildlife mortality along the roadways, and wildlife mortality from free-roaming or feral cats and dogs. To minimize these impacts to the HQS Forest and Gopher Tortoise Preserve, the following techniques will be used:

1. At all entrances to the HQS and Gopher Tortoise Preserve along the pedestrian trails and along the internal road abutting the preserve, permanent metal signs will be placed that identify the area as the HQS Forest and Gopher Tortoise Preserve and remind people to refrain from molesting or feeding the tortoises and to keep their pets always leashed.
2. At the subdivision entrances and along the road abutting the HQS Forest and Gopher Tortoise Preserve, permanent metal wildlife crossing signs will be installed.

3. At the entrance to the HQS Forest and Gopher Tortoise Preserve, permanent informational signs will be placed to provide information to the residents and visitors. The signs should include information about gopher tortoise, fox squirrel and pine snake habitat requirements and the plant community within the preserve area and its management using prescribed fire.

Annual monitoring reports will be submitted to Leon County to document relocation success and management of the HQS Forest and Gopher Tortoise Preserve. These reports will include, at a minimum, the date and description of the most recent prescribed fire, visual estimates of the percent canopy, shrub and herbaceous cover and color photographs taken from permanent photo points. The photo points will be GPS located and a scaled map showing these points will be provided as part of the reports.

Fox Squirrel Habitat Management Plan

There have been multiple sightings of fox squirrels on the project site. The current estimated size of the fox squirrel habitat is approximately 385 acres. This estimate is based on the recent revisions of the FLUCCS mapping and fox squirrel habitat mapping explained in the preliminary EIA. The estimated population of fox squirrels is between 6 and 10 individuals.

No relocations of fox squirrels are planned. Much of the site will remain in a nearly natural state, fox squirrels are known to co-exist with humans, the fox squirrel population is not expected to be affected by this development.

Any trees with fox squirrel nests that are found on the site are expected to remain and be protected from disturbance. If a known nest tree must be removed, multiple suitable next trees are expected to be available nearby for the squirrel to reestablish a nest. If a nest tree must be removed, the nest will be inspected to ensure that no adult or young fox squirrels are in the nest during tree removal. If young squirrels are found in a nest, the tree will not be removed until the young squirrels are old enough to leave the nest.

Management activities with the HQS Forest and Gopher Tortoise Preserve and the OS-1 district will include frequent prescribed burning, mowing as needed and selective herbicide use. Prescribed burns are planned on a 1–3-year basis including dormant and growing season as applicable to maintain the fuels at low levels and prevent wildfires from damaging mature trees. Mowing is only expected to be needed in those areas where fuels are not sufficient for carrying fire during prescribed burns. Selective herbicide use will occur in areas where hardwood seedling and sapling control becomes a problem. These management techniques are a continuation and intensification of the techniques that have been in use on the property and have kept the wildlife populations at its current level. The more frequent management of the project is expected to provide an increase in the amounts of available habitat for the fox squirrels which will maintain the population of fox squirrels on the site.

In fox squirrel habitat areas, the OS-2 district, management activities will include periodic mowing and selective herbicide use. The elimination of prescribed burning in the areas is not expected to reduce the quality of the fox squirrel habitat. Secondary impacts from the residential subdivision can include accidental clearing into the conservation areas, introduction of exotic plants, wildlife mortality along the roadways, and wildlife mortality from free-roaming or feral cats and dogs. To minimize impacts to the fox squirrels, the following techniques will be used:

1. At all entrances to the HQS and Gopher Tortoise Preserve along the pedestrian trails and along the internal road abutting the preserve, permanent metal signs will be placed that identify the area as the HQS Forest and Gopher Tortoise Preserve and remind people to refrain from molesting or feeding the tortoises and to keep their pets always leashed.
2. At the subdivision entrances and along the road abutting the HQS Forest and Gopher Tortoise Preserve, permanent metal wildlife crossing signs will be installed.
3. At the entrance to the HQS Forest and Gopher Tortoise Preserve, permanent informational signs will be placed to provide information to the residents and visitors. The signs should include information about gopher tortoise, fox squirrel and pine snake habitat requirements and the plant community within the preserve area and its management using prescribed fire.

Invasive Exotic Plant Management

The control of invasive exotic plants is an important part of the overall management of the communities found within the project. At a minimum, the OS-1 and Os-2 areas will be inspected for an invasive as listed by the **Leon County List of Invasive Exotic Plants** during regular management activities. Any invasive exotic plants found will be removed by pulling out the entire plant by hand and placing the plant in plastic bags for pickup with regular trash removal. If the plants are too big or have become established in too large an area for this method to be suitable, the plants will be treated with an appropriate herbicide or by cutting the plants and leaving the un-piled to prevent regrowth. Any areas where invasive exotic plants have been found and removed or killed will be reinspected at least monthly for a one-year period to verify that the removal effort was unsuccessful.