

LOBLOLLY WOODS INVASIVE VINE MAINTENANCE

WITH LACOOCHEE REGION INVASIVE UPLAND PLANT WORKING GROUP

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METHOD OF CONTROL:

Contractual

PROJECT GOALS:

- 1) To follow up on previous treatments of EPPC category I invasive vines: Air potato (*Dioscorea bulbifera*), Japanese honeysuckle (*Lonicera japonica*), and Japanese climbing fern (*Lygodium japonicum*).
- 2) To prevent the spread of these species into diverse, healthy areas in the nature park and into new sites within the Hogtown Creek watershed.

ACREAGE TO BE TREATED:

79 acres.

PROJECT DESCRIPTION

Introduction

Loblolly Woods is approximately 160 acres and contains Seepage Stream, Floodplain Forest, Upland Mixed Forest, and Bottomland Forest natural communities, as defined by the Florida Natural Areas Inventory (FNAI, 1990). Implementation of this project will assist in the long-term restoration and protection of these natural communities. Via the creek, Loblolly Woods is connected to over 1200 acres of additional conservation properties managed by the City of Gainesville and Alachua County, most of which are downstream.

The City of Gainesville acquired Loblolly Woods through a series of land acquisitions from 1978 to 2002. The property is managed by the City's Nature Operations Division to protect and restore the natural communities, to maintain the water quality and flood control benefits of the floodplain, to provide passive outdoor recreation, and as a wildlife corridor connected to other conservation properties that compose the Hogtown Creek Greenway. Loblolly Woods provides an important function in protecting urban green-space. Open greenspaces, and especially those which contain examples of high-quality natural communities, are becoming increasingly rare in Florida's urban areas.

This project follows up on two BIPM-funded treatments focusing on vines (1999 and 2007). An additional BIPM-funded treatment to take place in 2010 will treat honeysuckle and climbing fern but will be too early in the season to treat air potato. Extensive in-house treatments of the target species as well as collection of air potato bulbils have been done annually as well. These treatments have greatly reduced the density of invasive plants, particularly air potato, but patches remain scattered throughout the park.

Project Location

Loblolly Woods is located in the southern half of Section 36, Township 9S, Range 19E, and the Northwest corner of Section 1 Township 10S, and Range 19E in Gainesville, Alachua County, Florida (Figure 1). The property is divided by NW 8th Avenue. The project area consists of the 79 acres north of NW 8th Avenue. The area to be treated extends north to NW 16th Avenue and is bordered on the west by Westside Park and to the east by NW 22nd Terrace (Figure 2). The treatment area is mostly bordered on its north side by Hogtown Creek or private residences. Possum Creek and Hogtown Creek flow through the area.

Target species

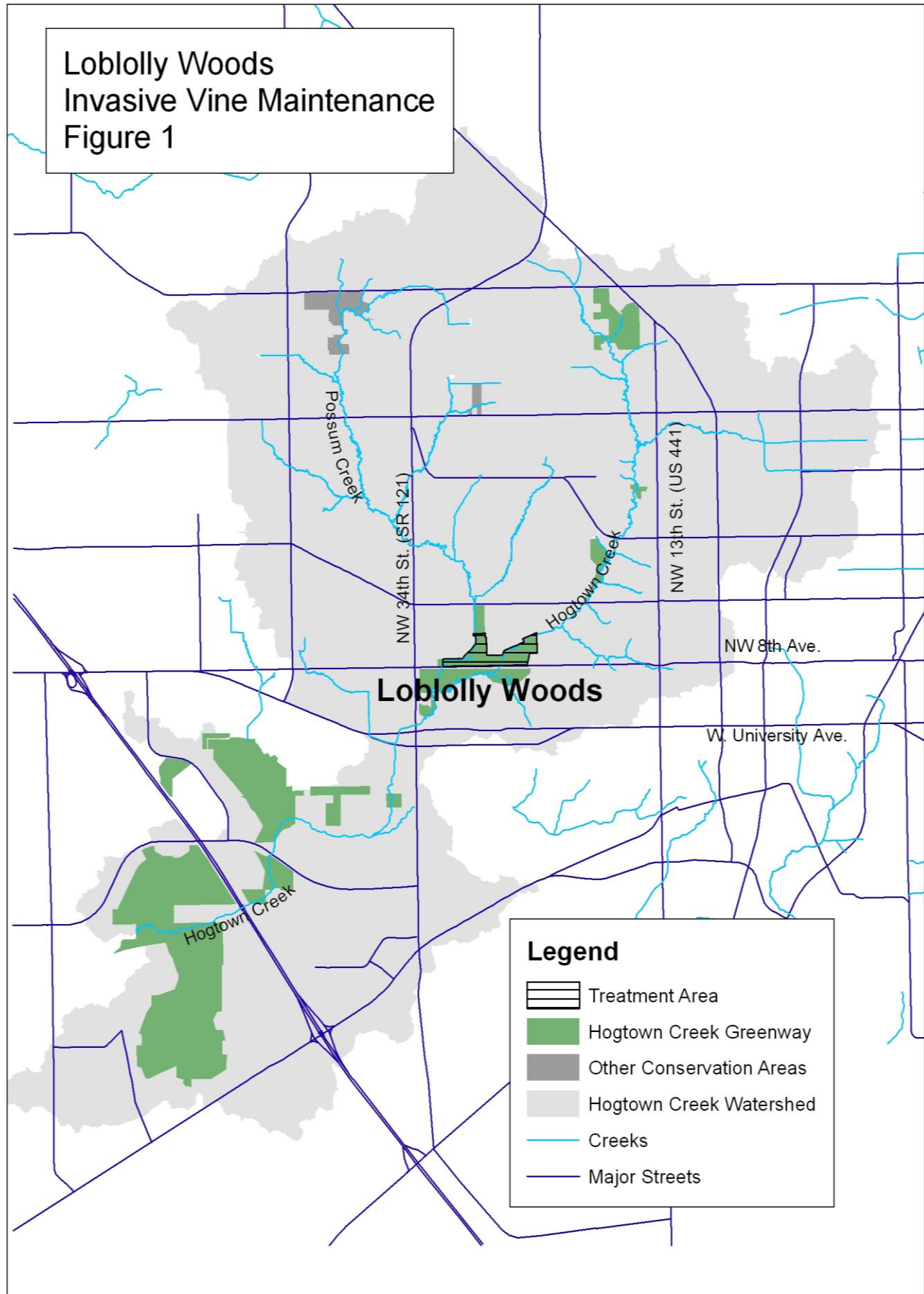
Air potato (*Dioscorea bulbifera*) and Japanese honeysuckle (*Lonicera japonica*) are widespread in the project site. Both species are FLEPPC category I invasive species. Japanese climbing fern (*Lygodium japonicum*) also occurs occasionally in the project area. Air potato and Japanese honeysuckle are established in large portions of the area, while *Lygodium* occurs sporadically as scattered individual plants.

WORK SPECIFICATIONS

City of Gainesville
Loblolly Woods Invasive Vine Maintenance

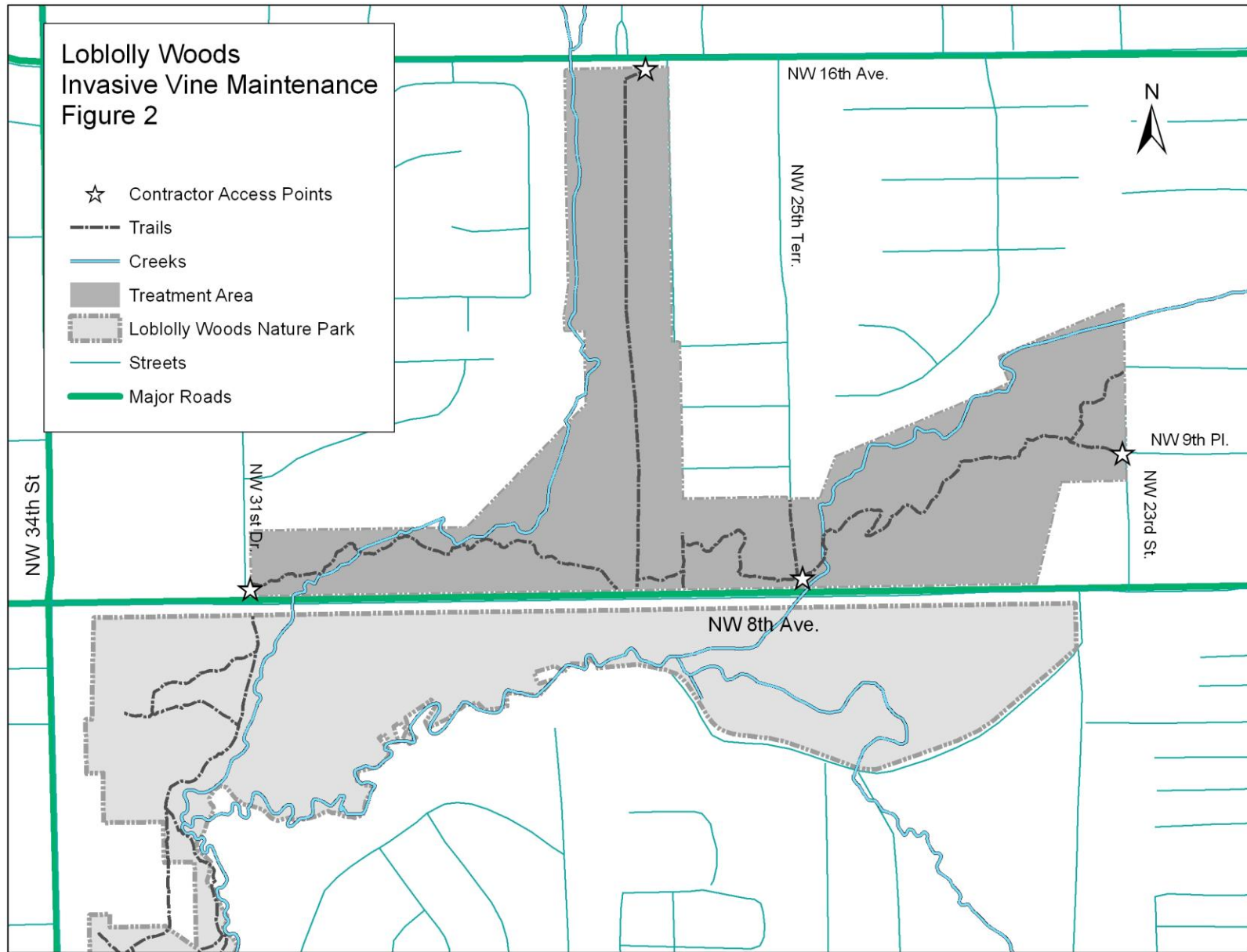
The contractor will treat all mature plants and seedlings of all target species using a 2% solution of Roundup Pro or equivalent (any applications over standing or flowing water must use a Glyphosate product labeled for aquatic use, with appropriate surfactant). All herbicides will be applied according to label rates and requirements using a low-pressure spray using backpack sprayers. Vegetation will be left to decompose on site. The contractor will furnish all labor, equipment, and supplies (including herbicides and adjuvants), and perform all operations for controlling exotic plants listed under Project Goals in the areas described in Project Description and shown in Figure 2.

Loblolly Woods
Invasive Vine Maintenance
Figure 1



Loblolly Woods Invasive Vine Maintenance Figure 2

- ☆ Contractor Access Points
- Trails
- Creeks
- Treatment Area
- ▤ Loblolly Woods Nature Park
- Streets
- Major Roads



Every effort shall be made to avoid damage to native vegetation or wildlife. Work will be conducted on weekdays only.

Depending on soil moisture and other conditions, the site manager may authorize limited use of ATVs for treatment of specific areas. Other vehicles, including swamp buggies, trucks, and tracked vehicles will not be allowed into the unit.

The site manager will help contractors identify access points, a water source, and mixing location(s). The site manager may inspect the contractor's procedures, equipment, and herbicides at any time, as well as approve applicator personnel.

OTHER REQUIREMENTS AND PROVISIONS

City staff will mark known locations of listed plants within the treatment area prior to contracted spraying. However, not all listed plant species within the project area are currently mapped with GPS or can be marked before treatment, so the contractor should assume that listed species may be present wherever there is native vegetation, and take appropriate precautions.

There are two native species occurring at Loblolly Woods that can be confused with *Dioscorea bulbifera*. Florida yam, *Dioscorea floridana*, is very similar but typically has thinner leaves and narrow stems. Four-leaf yam, *Dioscorea villosa*, is also found onsite. This species is also more delicate than air potato, has multiple leaves attached at a single point on the stem, and is typically a bluer green than air potato. Neither four-leaf yam or florida yam make aerial tubers, and unlike air potato, both four-leaf yam and florida yam commonly flower and make papery, three-sided fruits.

Coral honeysuckle, a native species of *Lonicera*, also occurs in the project site, and could be confused with *Lonicera japonica*. This species differs from Japanese honeysuckle in having hairless stems, less pointed leaves that have inconspicuous veins, and red (not whitish) flowers. Contractors are to take precautions to avoid this species wherever possible.

To assure that damage to native vines is minimized, City Nature Operations staff will assist contractors with identification of these species and will closely monitor the project.

When treating vegetation adjacent to trails, the contractor will be responsible for placing signs at the entrances to those trails notifying the public that treatments are taking place.

PROJECT TIME FRAME

The first treatment of target species will be carried out between August–September 2010. At least 30 days after the initial treatment but before November 15, 2010, the contractor shall complete one retreatment of target species in the entire project area.

FUNDING INFORMATION

Detailed funding information is included in the Budget Worksheet. The city's in-kind contributions include staff time treating invasive plants in the remainder of Loblolly Woods; preparing training materials to assist contractors in identifying look-alike non-target species; and staff and volunteer labor for volunteer invasive removal onsite. In-kind contributions for this project total approximately \$5,780.

PROPOSAL INFORMATION

CONSERVATION LAND QUALIFICATION

Owned by the City of Gainesville, Loblolly Woods is public land managed for the long-term restoration and protection of its natural communities. The Loblolly Woods property is one of 12 city and county conservation areas properties making up the Hogtown Creek Greenway. Loblolly Woods and other city owned conservation lands (approximately 2,000 acres) are listed in FNAI's Florida Conservation Lands database. The City's *Comprehensive Plan* calls for the conservation of environmentally significant natural communities, protection of listed plant and animal species, and the removal of invasive exotic species. These goals and policies include an invasive exotic plant species control program in all of the City's nature parks.

ABILITY TO MAINTAIN SITE AFTER INITIAL TREATMENT

The City of Gainesville's Nature Operations Division has two full time Habitat Naturalists who are responsible for invasive plant control in the City's nature parks. Both are licensed pest control applicators. Environmental maintenance staff, volunteers, and TNC's Northeast Florida Resource Management Team also can assist with invasive plant control when available. Retreatment of previous BIPM/IPMS project areas, and treatment of category 1 vines, are among the City's highest priorities for invasive plant management. City staff will ensure that the treatment area continues to receive follow-up treatments in the future.

Upland Invasive Exotic Plant Control Program Budget Justification Worksheet

Loblolly Woods Invasive Vine Maintenance

Federal Employer Identification (FEID): #59-6000.32

Will project be in-house or contracted? Contracted

Matching Funds

Source	Dollars
N/A	0

Total matching funds from project sponsor:

In-kind Contributions

In-kind refers only to staff time, equipment, and materials used directly in control operations.

Category	Total	Rate (\$/hr/day)	Total in-kind value (\$)
supervisor hours	52	\$26.00	\$1,352.00
crew hours (temp staff)	80	\$15.00	\$1,200.00
crew hours (NCF resource management team)	40	\$10.00	\$400.00
crew hours (volunteers)	160	\$10.00	\$1,600.00
vehicle hours	40	\$19.00	\$760.00
manual equipment (backpack sprayers)	132	\$1.50	\$198.00
Herbicide (gallons)	7.5	\$30.00	\$225.00
Surfactant (gallons)	1	\$25.00	\$25.00
misc. expendables (gloves)	10	\$2.00	\$20.00

Total in-kind value from project sponsor: \$5,780.00

Total matching and in-kind dollars: \$5,780.00

Total funds requested from FWC: \$36,000.00

TOTAL COST OF PROJECT: \$41,780.00

Notes/Explanations

City of Gainesville intends to use in-house staff with assistance from the TNC Northeast Florida Resource Management Team to treat the target species in the remainder of the park (outside the project area). Herbicides shown are for in-house treatments only. Volunteer follow-up will be in both the contract and in-house treatment areas.

RESTORATION PLAN FOR NATIVE PLANTS

The forest communities in the treatment area have a high diversity of native plant species which are widespread throughout the site. Accordingly, natural regeneration of native species is anticipated, particularly since native species remain despite the fact that the target species have already been treated repeatedly at this location. However, if needed, some limited funding for restoration could be available from the Nature Operations Division budget and planting could be done with in-house staff. If necessary, funds for additional restoration of this area would also be sought from outside sources.

LISTED SPECIES OR NATURAL COMMUNITIES

Six listed plant species have been identified in Loblolly Woods, with all three known to occur in EMU 1 and 2. The habitats of all these plants, Godfrey's swampprivet (*Forestiera godfreyi*; G2, S2; Endangered--DACS), Florida milkvine (*Matelea floridana*; G2, S2; Endangered--DACS), *Matelea gonocarpus* (Threatened--DACS), *Epidendrum conopseum* (commercially exploited--DACS), Cinnamon fern (*Osmunda cinnamomoea*; commercially exploited--DACS), and *Rhapidophyllum hystrix* (commercially exploited--DACS), are heavily impacted by exotic pest plants. Godfrey's privet and Florida milkvine occur in the immediate vicinity of air potato and Japanese honeysuckle on the site, and thus will be directly impacted by the target species if not controlled. Other listed or rare plants and animals may occur on the site but have not been documented. Upland Mixed Forest, Bottomland Forest, Floodplain Forest, and Seepage Stream are FNAI ranked S4, S3, S3, and S2 respectively. The quality of these natural communities will be improved by the removal of invasive exotic species.

PUBLIC EDUCATION PROGRAM

The City of Gainesville recognizes the power of public education to reduce the threats from invasive exotic plants. Because nearby residential neighborhoods, apartment complexes, and businesses are significant sources of invasive plants in natural areas, the City of Gainesville is committed to continuing to educate people about how their landscaping decisions affect natural areas.

For the past 11 years, the city has coordinated the Great Air Potato Roundup, consistently one of the largest volunteer/educational events relating to invasive species in the southeast. Through these efforts we have reached literally thousands of citizens and formed bonds with groups throughout the community from the boy scouts to University of Florida researchers to other government agencies. Due to budgetary circumstances, it has not been determined whether the City will continue to coordinate the air potato roundup as it has in the past. However, because of the deep involvement of the community and the event's long history, each year—before the event is even publicized—groups approach the Nature Operations Division, either to participate in the Roundup, or for advice on removing air potato. It is clear that even if the Roundup does not continue as a formal event, many groups who have participated year after year will continue to conduct cleanups in their own neighborhoods or to volunteer to clean up air potato in City properties. The City expects to continue to provide supplies and

support to these groups, and will continue to act as a clearinghouse for information about identifying and controlling invasive plants in the community.

The City of Gainesville is an official partner in the Alachua County Cisma (formerly the Alachua County Cogongrass Initiative). City staff have contributed to the Cisma's main initiatives, by participating in cogongrass mapping efforts and providing materials for the website.

The City of Gainesville continues to expand the Nature Operations Division's community volunteer and education program, and employs a full-time volunteer coordinator. Through the volunteer program, the division offers regular opportunities for invasive exotic plant removal, tree planting and ecosystem restoration, and litter cleanups in City nature parks. Several such workdays take place each year, with a significant portion of these taking place at Loblolly Woods.

In addition to the land management staff, the City of Gainesville's Nature Operations Division includes an environmental programming section, consisting of 3 full time and 4 part-time staff responsible for providing environmental programs and special events for all ages. Several of these programs include non-native invasive species as a focus.

In conjunction with the Florida Native Plant Society and the Friends of Nature Parks, City Nature Operations staff work to organize and staff two native plant sales annually. Each of these sales attracts 300-500 people, drawing customers from a wide geographic area. At the sales, informational booths provide information about invasive plants and advice on landscaping with natives.

REGIONAL CRITERIA ISSUES

1. Due to budgetary circumstances, the City of Gainesville cannot provide matching funds for this project. However, despite reduced staff and resources, the City of Gainesville will provide in-kind services that directly contribute to this project, including: in-house treatment of the target species in the remainder of the Loblolly Woods property; creating reference materials to assist contractors in identifying look-alike species; and coordinating volunteer workdays to remove invasive plants from this and other Hogtown Creek Greenway properties.
2. All target species to be treated in this project are FLEPPC Category 1 vines.
3. This project will benefit at least 5 listed/sensitive plant species, directly benefiting at least two, as indicated in the text. Control of invasive plants in the project area will benefit the vegetation buffers of the seepage streams (S2) that pass through the site.
4. The project area has a high revegetation potential due to the diverse native vegetation present onsite. Native canopy trees will not be affected by the planned treatments. Remnant patches of high-quality vegetation are interspersed with infested areas, making seed sources available for recolonization, and allowing continued recruitment of desirable species.
5. See "Public Education", above.

6. Air potato and Japanese honeysuckle have long been well-established in the Gainesville area, so these species are not new to the region. However, because this project lies at the convergence of two major creeks and upstream from many additional acres of conservation land, the site is strategically important in preventing further expansion of these species in the Hogtown Creek system.

Lygodium japonicum, although it has been present in Alachua County for a long time, is not generally a widespread problem in the Gainesville area. Treating the scattered low-level infestations in Loblolly Woods will slow expansion of this species in the region.

7. The city of Gainesville has long been committed to controlling invasive plants in the 23 nature parks under its management. Invasive plants in virtually all of these properties are currently under some level of maintenance control following years of previous treatments. Due to the current economic circumstances, the City's staffing and budget available for herbicide treatments are somewhat lower than in past years. Funding for this project therefore has the additional benefit of freeing up our limited resources so that we can ensure that follow-up treatments of these high-priority species can continue in all of our parks. Thus, the impact of this project extends well beyond the project boundaries.

The floodplain forest natural community in Loblolly Woods is naturally regenerating and has high species diversity. This property is one of the largest managed natural areas in urban Gainesville and is used by a wide variety of wildlife species, so maintaining the health of the natural communities is integral to preserving a reservoir of biodiversity within the urban landscape. Preserving native species in close proximity to people so that they can experience it is critically important: it provides people with a connection to nature, fostering an environmental ethic and better environmental stewardship for the future.

Control of emerging exotic plant populations at Loblolly Woods benefit the extensive natural areas downstream by reducing the spread of these invasive species to new sites within the Hogtown Creek watershed. Hydrochory is likely to be an important dispersal mechanism for Japanese honeysuckle and air potato, as fragments and bulbils are moved during flood events. As mentioned previously, Loblolly Woods is part of a complex of over 1200 acres of conservation land connected via Hogtown Creek (Figure 1). Continued followup at Loblolly Woods should slow the spread of these species to additional sites in the area.

8. Loblolly Woods has been the site of several BIPM projects in the past, focusing on a variety of species. In addition, the City has done extensive initial and follow-up treatments on invasive plants throughout the park using in-house funds and labor. Many woody invasive species have declined significantly, and the density of Air Potato in many areas has been greatly reduced. City staff, with assistance of volunteers and the Northeast Florida Resource Management Team, expects to continue annual follow-up activities on this site after contractor treatment, with funding from the City of Gainesville's general fund. Although assistance from FWC always makes our resources go further, it is not expected to be the primary source of funds or labor to maintain this site over the long term.

