

LOBLOLLY WOODS INVASIVE VINE MAINTENANCE

WORKING GROUP:

Withlacoochee Region Upland Invasive Exotic Plant Working Group

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PROJECT GOALS:

The primary goal of this project is to follow up on previous control efforts for several invasive vines: sweet autumn virgin's bower, (*Clematis terniflora*), air potato (*Dioscorea bulbifera*) and Japanese honeysuckle (*Lonicera japonica*) found within a 64-acre area at Loblolly Woods Nature Park. All of these species are included in the Florida Exotic Pest Plant Council's Category I and Category II lists and all are established in large portions of the natural area.

The secondary goal of this project is to prevent the spread of these species into diverse, healthy areas in the nature park and into new sites within the Hogtown Creek watershed. 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.

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, Florida. The property is divided by NW 8th Avenue. The northern portion of the property, which is the area targeted under this proposal, extends from NW 16th Avenue south To 8th Avenue and is bordered on the west by Westside Park and to the east by NW 22nd Terrace (Figure 1).

The City of Gainesville's Nature Operations Division manages Loblolly Woods to protect and restore the natural communities, to maintain the floodplains, to provide natural-resource-based recreation, and to serve as a connection to other conservation properties that compose the Hogtown Creek Greenway.

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.

The City of Gainesville acquired Loblolly Woods through a series of land acquisitions from 1978 to 2002. The property is managed to protect and restore the natural communities, to maintain the floodplains, to provide passive outdoor recreation, and to serve as a connection to other conservation properties that compose the Hogtown Creek Greenway. Loblolly Woods provides an important function in protecting urban greenspace. 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, and several years of in-house control.

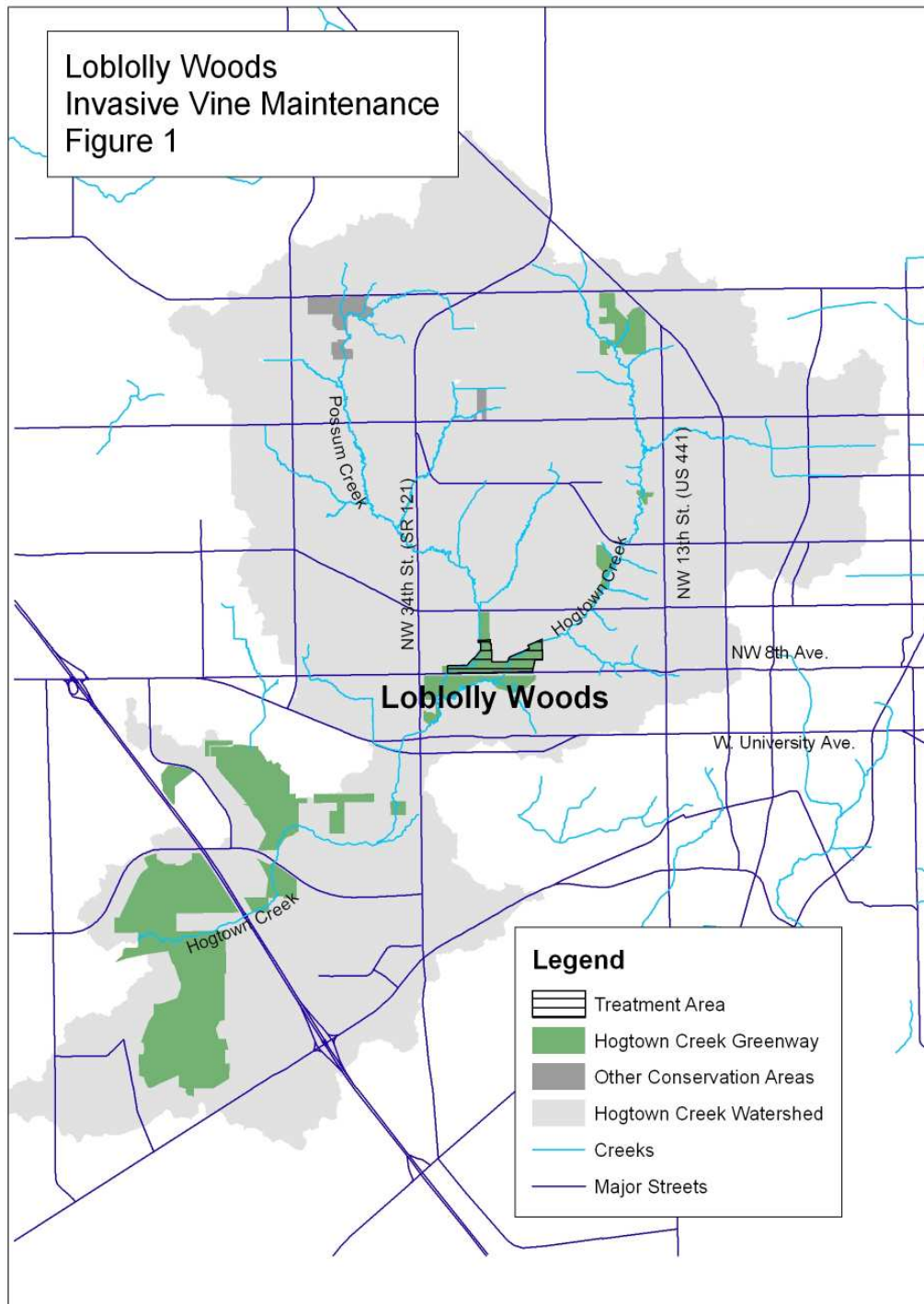
Project Location

The area to be treated in this project totals approximately 64 acres in the northern half of the property (Figure 2). Possum and Hogtown Creek flow through the area, which is bordered by 8th Avenue to the south and residential development to the north. This project will focus on populations of *Clematis terniflora*, *Dioscorea bulbifera*, and *Lonicera japonica* that are scattered throughout the site.

Target species

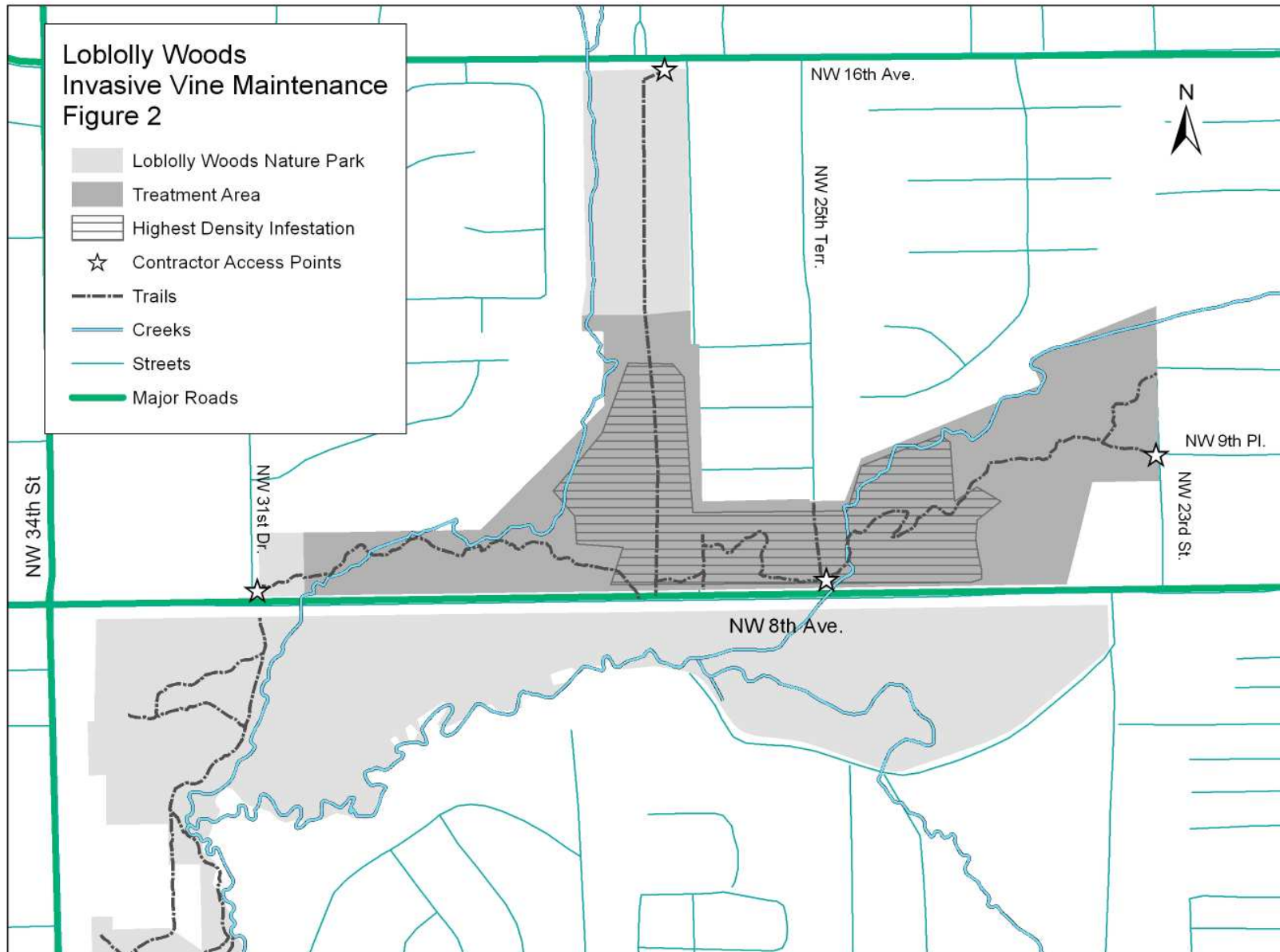
Clematis terniflora is a semi-evergreen vine than can climb up to 30 ft (9.1 m) on a semiwoody main stem that can get up to 4 in (10 cm) in diameter. It is a newly emerging invasive species that is not yet widespread in Florida, but is among the most serious pest plants of floodplain communities in the Gainesville area. *Clematis terniflora* is currently

Loblolly Woods
Invasive Vine Maintenance
Figure 1



Loblolly Woods Invasive Vine Maintenance Figure 2

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



listed by FLEPPC as a Category II species, and by the SE-EPPC as a Rank 2 species (Significant Threat).

Air potato (*Dioscorea bulbifera*) and Japanese honeysuckle (*Lonicera japonica*) are also 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.

WORK SPECIFICATIONS

The contractor will treat all mature plants and seedlings of all target species using a 3% Roundup solution. All herbicides will be applied according to label rates and requirements using a low-pressure spray using backpack sprayers and on weekdays only. 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 delineated in Figure 2. Every effort shall be made to avoid damage to native vegetation or wildlife.

Vehicles including swamp buggies, trucks and tracked vehicles will not be allowed into the unit. Limited use of ATVs for treatment of specific areas may be permitted, depending on conditions, only with specific authorization of the site manager.

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 several native species that can be confused with *Clematis terniflora*. The most similar is Swamp leather-flower, *Clematis crispa*, which usually has some golden stems, and has leaves that are usually thinner and more wrinkled and lack any silver or whitish spots. Flowering individuals can be easily told apart. Other species that are superficially similar to *C. terniflora* are Florida Valerian, *Valeriana scandens*, and two other species of *Clematis*. These species are different enough in leaf shape that they should not be a problem for identification. Coral honeysuckle, a native species of *Lonicera*, also occurs in the project site; contractors are to take precautions to avoid this species wherever possible. To assure that damage to native vines is minimal, 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 July–September 2009. Seasonal inundation of Loblolly Woods’ Floodplain Forest may limit treatment of target species in some areas. If wet weather restricts access to the floodplain during these periods, treatment time will be rescheduled. *Clematis terniflora* should preferably be treated prior to August, when seed production occurs. The contractor shall complete one retreatment of target species in all project areas 2-3 months after initial treatment (or later if needed due to flooding).

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 time devoted to coordination and air potato removal as part of the Great Air Potato Roundup and other volunteer work onsite. In-kind contributions for this project total approximately \$4,025.

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 has four employees responsible for invasive exotic plant control, follow-up treatments, long-term maintenance, and restoration at Loblolly Woods and other City nature parks. Approximately 20% of staff time is devoted to control of non-native invasive species. Annual funding for these activities comes from the City’s general fund.

Upland Invasive Exotic Plant Control Program			
Budget Justification Worksheet			
Project Title: Loblolly Woods Invasive Vine Maintenance			
Federal Employer Identification (FEID):		#59-6000.32	
Will project be in-house or contracted?		Contracted	
Matching Funds			
In the first column list the source of funds (county, grant, non-profit, etc.) and available dollars in second:			
Source	Dollars		
Total matching funds from project sponsor:		\$ 0	
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
Crew hours(D. Musen)	42	24.00	1008.00
Crew hours (R. Rich)	42	15.60	655.20
Crew hours (G. Parks)	20	25.20	504.00
Volunteer hours	120	12.50	1500.00
Manual equip. (backpack sprayer)	64	1.50	96.00
Glyphosate	7.5	30.00	225.00
surfactant	1	25.00	25.00
misc. expendables (gloves)	6	2.00	12.00
other (explain)			
Total in-kind value from project sponsor:		\$4,025.20	
Total matching and in-kind dollars:		\$4,025.20	
Total funds requested from FWC:		\$35,600.00	
TOTAL COST OF PROJECT:		\$39,625.20	
Notes/Explanations			
Explain any special equipment needs (such as a Brontosaurus) or costs, or other (from above).			
Also note, if entire cost is to be funded by DEP, why no matching or in-kind contributions are available.			

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), *Matelea floridana* (G2, S2; Endangered--DACS), *Matelea gonocarpos* (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. 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 extraordinary value of public education concerning invasive exotic plants. Because nearby residential neighborhoods, apartment complexes, and businesses are significant sources of invasive exotic plants in natural areas, the City of Gainesville is committed to continuing its public education campaign to help people understand how landscaping decisions they make at home can affect the natural communities in their parks. The campaign achieves this objective through the following established avenues.

Each year since 2000, the City of Gainesville has organized the Great Air Potato Roundup to educate the public about the problem of invasive non-native plants. The Roundup is a large volunteer/educational event focusing attention on the impacts of invasive exotic plants in Gainesville's natural areas, featuring hands-on invasive plant removal as well as educational displays and guest speakers. The educational message reaches beyond those who actually participate in the event, since publicity through a wide variety of advertising, media coverage, and word-of-mouth exposes a broad segment of the community to the issue of invasive plants. The 10th Annual Great Air Potato Roundup was held in January of 2009 and had the participation of over 1000 volunteers. In the ten years that the event has been held, as many as 9000 people have participated in the event and learned about the impacts of invasive plants on our natural areas. The eleventh annual Great Air Potato Roundup is scheduled for January 2010, and will be funded by the City of Gainesville and community sponsors.

The City of Gainesville continues to expand the Nature Operations Division's community volunteer and education program, offering 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.

In addition to the Great Air Potato Roundup, 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.

REGIONAL CRITERIA ISSUES

1. Due to budgetary circumstances, no matching funds are available for this project. However, extensive in-kind services are available.
2. The City of Gainesville's in-kind contributions to this project include: treating 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 lands.
3. This project targets Air Potato, *Clematis terniflora*, and Japanese honeysuckle, which are highly invasive due to their vining growth habit and prolific reproduction. All are susceptible to control by foliar spraying.
3. This project will benefit at least 5 listed/sensitive plant species, 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. With ten years of success with the Great Air Potato Roundup, the City of Gainesville has demonstrated a commitment and ability to reach out to the community and generate interest in the invasive plant issue. The Great Air Potato Roundup is perhaps the single largest educational event relating to invasive species in the southeast, attracting over 1000 participants annually.
6. *Clematis terniflora* is a new emerging exotic species that has recently become abundant in Loblolly Woods.. Presently, this species is widespread in Loblolly Woods and is established in Hogtown Creek watershed, in Alachua Audubon's Colclough Pond preserve, and in the City of Gainesville's Alfred A. Ring Nature Park, Boulware Springs Nature Park, Cofrin Nature Park and 29th Road property. Although *Clematis terniflora* was placed on FLEPPC category II list, there is substantial evidence that this species is expanding aggressively and will become even more problematic in the future, and should be included in the EPPC category I list. Prompt control of this species is compatible with

WRIP's main priority goal: eradication of new populations of upland invasive exotic species on Florida's conservation lands.

7. The floodplain forest natural community in Loblolly Woods is naturally regenerating and has high species diversity. Control of emerging exotic plant populations at Loblolly Woods will improve the existing invasive exotic species control programs on adjacent properties managed by the City of Gainesville and will significantly reduce the spread of these invasive species to new sites within the Hogtown Creek watershed. Hydrochory appears to be an important dispersal mechanism for *Clematis terniflora*, and likely for Japanese honeysuckle and air potato as well, 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 3). Although *Clematis* has become well-established in Loblolly Woods and in some public and private lands upstream, it is not yet widespread in conservation areas downstream. Continued followup at Loblolly Woods should slow the spread of this 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, City staff has worked extensively to follow up and perform initial treatment on new and existing infestations throughout the park. Many woody invasive species have declined significantly, and density of Air Potato in many areas has been greatly reduced. More recent treatments have begun to reduce the density of *Clematis* as well. City staff expects to continue follow-up activities on this site after contractor treatment.