Memorandum

To: Members of the Parks and Recreation Advisory Board,
the Recycling and Environment Advisory Committee, and
the Forest Preserve Task Force

cc: City Council, City Manager

From: Advisory Committee on Trees
Charles Jackman, Jennifer Sager Cosgrove, and Robert Trumbule

Date: April 14, 2004

Subject: Proposed Greenbelt Invasive Species Policy

The Advisory Committee on Trees (ACT) was asked by the City Manager to consider the problem of invasive species for the City of Greenbelt and propose a policy to deal with this issue. The "Invasive Species" issue cuts across the interests of at least four advisory boards and committees for the City of Greenbelt, including the Parks and Recreation Advisory Board (PRAB), the Recycling and Environment Advisory Committee (REAC), the Forest Preserve Task Force (FPTF), and the ACT. Because of this shared interest, these groups (PRAB, REAC, FPTF, and ACT) need to jointly agree on a possible Greenbelt Invasive Species Policy (GISP). The attached GISP is considered to be a first draft and it is now open for discussion and consideration by members of PRAB, REAC, and FPTF. A final suggested Greenbelt Invasive Species Policy would be jointly submitted from ACT, PRAB, REAC, and FPTF to the City Council for possible adoption as a City of Greenbelt policy.

ACT members have discussed this "Invasive Species" problem over the course of several months and have visited City woodlands with several types of invasive species. ACT members have also visited Greenbelt Housing Incorporated (GHI) areas, which have recently been treated with invasive species control measures. Robert Trumbule, a member of ACT since its inception, is a member and co-founder of the Maryland Department of Agriculture Invasive Species Council. He has worked for the state of Maryland Department of Agriculture over the past 17 years. Mr. Trumbule's work has focused on slowing the spread of invasive species, insects, and pathogens. The ACT members have also considered the books "Life Out of Bounds" by Chris Bright and "Invasion Biology: Critique of a Pseudo Science" by David I. Theodoropoulos for different points of view on this topic.

ACT members propose a three-section plan for a Greenbelt Invasive Species Policy. First, there are several factors that need to be considered in setting priorities for the areas in which invasive species are controlled. Second, a number of areas in the City have been inventoried and are considered potential sites for control of invasive species. Finally, several "invasive" plants are discussed, along with suggested control measures.

City of Greenbelt

Invasive Species Control Policy

Draft

Sections:

A. Factors in Setting Priorities for Areas to Control Invasives

1. Significance of native species present/threatened- Uncommon native plants (perfoliate bellwort, lady slippers, etc.) or less common ecosystems (ie. wetlands or oak barrens) should have priority for control.

2. Large tracts with limited invasion of non natives should have priority over small patches between houses (say less than 5 acres) with heavy infestations. Attacking the invasive species should occur from the inside, out.

   Small tracts between houses should only be targeted for control of invasive species if significant neighborhood volunteer effort is involved. City to supply one staff person with necessary machinery and herbicides per 10 volunteers. For long term control to succeed there must be a strong and sustained commitment by the neighborhood.

3. In general areas with the fewest invasive species should have priority over those with the most. This approach allows dollars spent to control invasive species to cover more acres and natives present can regenerate cover to slow re-invasion.

4. Areas found with invasive species, not previously seen in the City, should receive high priority for control.

5. Once an area is treated it should have very high priority for continued control, even at the expense of other areas not yet under control.

6. Older forest stands should be of a higher priority for control of invasive species than younger stands.

7. If the City undertakes reforestation of an area it should receive high priority for control of invasive species until trees are well established.

8. It must be realized that once control of invasive species in an area is begun, there must be a commitment to continued control in the area for the indefinite future. This is because the invasive species present are not the primary environmental problem of the treatment site. Generally *the underlying problem is that the ecosystem is in a disturbed condition*. It is important to determine that control methods will not create further disturbance and perpetuate the problem.

B. Potential Sites for Control of Invasive Species

Over the next year the Advisory Committe on Trees and staff will undertake an evaluation of woodland areas to determine what parcels of land should receive the highest priority for protection. Some possible candidates for protection are listed below.

North Forest Preserve

This wooded site is between Ridge Road and the USDA farms, between Northway and Research. GHI will likely work on the edges of this forest but encroachment is occurring on Canyon Creek with Multiflora Rose and Japanese Honeysuckle. In spots Japanese Honeysuckle is threatening Perfoliate Bellwort. There are many nice stands of wild flowers in the area, including Pink Lady Slippers and Trailing Arbutus. In the far Northeast corner Japanese stilt grass is invading a lowland flood plain and may threaten stands of native Lily of the Valley and Spring Beauty.

Greenbelt Lake inside the lake path

This area has unique wetland habitats and plants that are threatened by English Ivy, Japanese Honeysuckle, and Multiflora Rose.

Schrom Hills

This is the most significant woodland in east Greenbelt and has low populations of invasive species, except in the disturbed area in the northeast corner.

Walker Cemetery/Indian Springs

Same reasons as Schrom Hills

Greenbriar Park

Same reasons as Schrom Hills

Old Springhill Lake Golf Course

If reforestation is undertaken plans should be made for contractual control of invasive species.

Indian Creek

This is a unique braided stream environment. Will this become City property?

C. Plants to be Considered for Removal Due to Negative Impact

It is imperative that if City funds are expended that it is determined that eradication of invasive species is the best use of funds for environmental improvements at the time. Other projects such as storm water control should be part of the equation in determining where funds spent on environmental projects are allocated.

A second consideration is if the plants are invading otherwise undisturbed areas. A plant is not necessarily a problem simply because it is a non-native species but must in fact have verifiable evidence of damage to the environment. Plants listed below will only be controlled on sites after staff and public review based on section A.

English Ivy

Damage

Forms a complete cover over low lying vegetation and becomes a mono-culture. Climbs into trees and may damage them and develops into a mature fruiting form than can spread longer distances.

Control measures

1. Hand pull or spray with Garlon 3A
2. Hand pull with volunteers near residences, staff to only be used for chemical control. Otherwise labor costs are prohibitive.

If upon removal large areas are devoid of vegetation, replanting with under story plants must be promptly undertaken to prevent other invasive species from taking over in the disturbed area. Every effort must be made to preserve existing native plants on the site.

Japanese Honeysuckle

Damage

Covers smaller under story trees, shrubs and wild flowers. Control should only be undertaken where under story is clearly being suppressed or uncommon native plants are in danger of being lost.

Control measures

1. Hand pull away from natives; Roundup when herbaceous natives are dormant (Nov.- Dec)
2. Hand pull with volunteers near residences, staff to only be used for chemical control. Otherwise labor costs are prohibitive.
3. Cut vines climbing on vegetation at the ground

Bamboo

Damage

Unclear if it will invade heavily wooded areas.

Control

1. Install root barrier to prevent spread into wooded areas
2. Tordon on cut stems or Fusilade as a foliar application..

Multiflora Rose

Damage

May suppress native plants but can be beneficial to wildlife. Environmental detriment is unclear.

Control

Rose rosette virus is present in the City and likely all multiflora rose will die over the next decade. No action recommended at this time. Control is complicated by similarity to native rose species.

Wisteria

Damage

Climbs and strangles trees, large or small. Can cover the tree canopy in large areas in time.

Control

Cut vines and paint stumps with Garlon 3A

Japanese Stilt Grass

Damage

Appears to have the ability to smother native herbaceous groundcovers and wildflowers. This should be determined objectively with field observations over several years before beginning control in an area. It is possible that emergence of Stilt Grass is late enough that spring ephemerals are not suppressed.

Control

Spray with 2% Roundup or Fusilade prior to setting seed in September. Hand pull near natives. Use of fire as a control option should be explored.

Japanese Barberry

Damage

Some sources claim it suppresses native species. While it is present in our woodlands it does not appear to be crowding out native plants and appears to be integrating into the ecosystem.

Control

None recommended at this time.

Bush Honeysuckle

Damage

It is currently unclear if this is a problem in Greenbelt's woodlands. Like Barberry it may be integrating into the ecosystem.

Control

If it is determined that control is necessary, hand pull with volunteers or cut stump and paint with Garlon 3A.

Garlic Mustard

Damage

It is currently unclear if this is a problem in Greenbelt's woodlands. While it is present in our woodlands it does not appear to be threatening to native wild flowers at this time. Further study and observation is needed before implementing control.

Control

If necessary spray with 2% Roundup prior to setting seed or hand pull near natives.

Tree of Heaven

Damage

On disturbed sites it can form thickets and prevent establishment of native trees.

Control

Cut stump and paint with Garlon 3A or slash stem and treat with Roundup.

Mile a Minute Weed

Damage

On disturbed sites it can form dense stands and prevent establishment of native trees.

Control

When it is suppressing young trees it should be controlled with 2% Roundup prior to setting seed. Hand pull it near natives. Control should be maintained until trees are well established.