

Establishment of a Long Island Weed Management Area

- PROJECT SUMMARY -
Marilyn Jordan 2003; revised July 2004

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Long Island Weed Management Area - background:

The Nature Conservancy (TNC) on Long Island, with public and private partners, decided in 2001 to establish a Long Island Weed Management Area (WMA). Our goal was to reduce the threat posed by invasive plant species to native ecosystem integrity and function, and to special-status species, on public and other conservation lands across Long Island. We were guided in our efforts by the online CIPM textbook "Guidelines for Coordinated Management of Noxious Weeds: Development of Weed Management Areas" and by Bischoff and Murray (2000) (see references).

A steering committee was formed at an initial meeting on Sept.10, 2001. The WMA boundary initially encompassed Suffolk and Nassau Counties (Long Island) but not adjacent Queens and Brooklyn. The boundary was later expanded to include Queens and Brooklyn (boroughs of New York City). A coordinated invasive plant management plan was written and approved by the steering committee in December 2002.

LI WMA partners hope to be a model and partner for future new WMAs in the northeast (three additional WMAs in NY are being established in 2004). The LI WMA is using proven approaches including inventory, prevention, early detection, integrated weed management, revegetation, monitoring, and public education.

Project Partners: Partners as of July 2004 include:

1. National Park Service
2. U.S. Fish and Wildlife Service
3. Brookhaven National Laboratory
4. National Resource Conservation Service
5. NY State Department of Transportation
6. NY Department of Environmental Conservation
7. NY Office of Parks, Recreation, & Historic Preservation

8. City of New York Parks & Recreation
9. Cornell Cooperative Extension of Suffolk County
10. Suffolk County Dept. of Parks, Recreation, and Conservation
11. Nassau County Department of Parks, Recreation, and Museums
12. Suffolk County Community College
13. Theodore Roosevelt Sanctuary and Audubon Center
14. Long Island Nursery and Landscape Association
15. Long Island Central Pine Barrens Commission
16. Open Space Preservation Trust
17. Brooklyn Botanic Garden
18. The Nature Conservancy

References

Guidelines for Coordinated Management of Noxious Weeds: Development of Weed Management Areas. Online textbook from:

Center for Invasive Plant Management
 Montana State University
 Department of Land Resources and Environmental Sciences
 P.O. Box 173120
 Bozeman, MT 59717
 Tel: 406-994-6832 Fax: 406-994-1889
 cipm@montana.
http://weedcenter.org/weed_mgmt_areas/wma_overview.htm

Cooperative Weed Management Areas in the Northwest: Taking Stock and Moving Forward. 2000. Bischoff, S. and W. Murray. Conservation Impact LLC. 515 Franklin Street, Denver, CO 80218. A report to The Nature Conservancy. willm@ecentral.com or www.conservationimpact.com

Accomplishments:

Year 1 (January 2002-May 2003)

1. Draft strategic plan has been prepared by an interagency subcommittee, and is under review.
2. MOU written and signed by two partners to date, with more expected soon.
3. Five meetings of the LIWMA steering committee, and two subcommittee meetings have been held.
4. Invasive species issues have been elevated in the awareness of all partners.
5. A volunteer Weed Watchers group with >30 members has been established, trained and set to work on early detection/eradication and weed mapping at a pilot priority site.
6. Educational materials identifying major invasive plant species on LI have been prepared. These materials have been used by the Weed Watchers, and will soon be distributed to the general public.
7. A list of invasive plants on LI has been prepared and categorized (see above), and quantitative ranking of selected species has begun.
8. Eradication efforts have been carried out for *Polygonum perfoliatum*; control efforts carried out for *Phragmites australis* and *Euphorbia cyparissias*; and several new occurrences of *Pueria montana* var. *lobata* have been found (work done by Weed Watchers, partner agencies and The

Nature Conservancy).

9. Invasive species have been mapped using GPS at Sayville Grassland, a Federal property supporting a population of the federally endangered *Agalinis acuta* (sandplain gerardia).
10. A Powerpoint talk on the ecological impacts of invasive species has been prepared and presented to the LI Nurserymen and Landscape Gardener's Association, and to several local groups.
11. Interviews on the invasive species threat have appeared on a LI radio station and television program.

Year 2 (June 2003 – May 2004)

1. WMA Plan was written and adopted by 14 partner agencies and organizations in 2002.
2. The Nature Conservancy has devoted 3.5 Full Time Equivalent staff to the threat of invasive species; these staff assist with WMA coordination.
3. Assisted in creating legislation to establish an Invasive Species Task Force for NY State.
4. Begun creating a database based on product of TNC Oregon.
5. Drafted a list of new and potential invasive species for Long Island ([see Appendix](#)).
6. NYS Landscape and Nursery Association adopted the St. Louis Code of Conduct for nursery professionals.
7. Mapped weeds in 800 acres in the Pine Barrens Core Preserve.
8. Early detection/rapid response – NEW infestations found: Giant hogweed (*Heracleum mantegazzianum*) 2; Mile-a-minute vine (*Polygonum perfoliatum*) 7, Swallow-wort (*Cynanchum* spp.) 10; Japanese barberry (*Berberis thunbergii*) 1; Ludwigia peploides 1.
9. Number of infestations managed: Giant hogweed 1; mile-a-minute vine 3; swallow-wort 3; Japanese barberry 3, Phragmites at Long Pond 4, Phragmites at Flag Meadow one (only).
10. Received funding and carried out a public poll to assess awareness of invasive species, and willingness to support funding mechanisms.
11. Hired a marketing firm and got coverage in newspapers, radio and TV.
12. Created several versions of a PowerPoint talk on invasive species.
13. Trained 75 active volunteer Weed Watchers for weed mapping, early detection & speaker's bureau; gave ten presentations on invasive species threat to partners and public.
14. Executives of Nassau and Suffolk Counties proclaimed Feb. 28 as "Invasive Weeds Awareness Week."
15. Carried out a "Wipe Out Weeds" poster contest for elementary and middle schools.
16. Drafted ecological indicators and "measures of success" for the invasive species threat to terrestrial targets in conservation areas, using TNC's new enhanced 5-S Conservation Area Planning method.
17. Carried out research on effectiveness of Plateau for control of non-native, cool-season grasses (first stage in getting Plateau licensed for use in NY).
18. WMA partner A. Senesac (Cornell Co-op Extension) applied for and received a NYS exemption allowing legal use of RoundupPro and Garlon 4 for swallow-wort control (swallow-wort is not on herbicide labels). Note: research on which application was based was carried out by Fran Lawlor in the proposed Jefferson Co. WMA.
19. Assisted professors and students at the State University of New York at Stony Brook with research and thesis projects on invasive species.

EXCERPTS FROM 2002 PROPOSAL TO THE NATIONAL FISH AND WILDLIFE FOUNDATION, PULLING TOGETHER INITIATIVE

Project Name: Establishment of a Long Island, New York Weed Management Area

Project Abstract

The Nature Conservancy (TNC) on Long Island, with Federal, State, County, NGO, and private partners, will establish a Long Island Weed Management Area (LI WMA) including all of Nassau and Suffolk Counties [later expanded to include Queens and Brooklyn]. Invasive plant species on Long Island threaten globally endangered "Eastern Grasslands, Savannas and Barrens" communities (Noss and Peters 1995), the Federally listed, endangered *Agalinis acuta*, 15 state endangered species and 22 state threatened species. Long Island wetlands support more rare species than any other region in New York.

The LI WMA will adapt proven approaches used by western WMAs, including inventory, prevention, early detection, integrated weed management, revegetation, monitoring, and public education. We will network with others in New York City, New York State and beyond on prevention and early detection. Since some invasive species reach our country through the Port of New York, our early detection and eradication efforts may also prevent some new invasive species from spreading to the rest of the United States.

Public lands for conservation are scattered across Long Island from New York City to the East End. Only an Island-wide coordinated approach can reduce the numbers of new invasive species reaching public lands on Long Island and beyond, or effectively eradicate existing invasives. Control methods and native seed sources developed by the WMA will benefit all partners, including Federal.

The focus in year one will be to hire a full-time coordinator, enlist new partners, write a LI WMA plan that is approved by our partners, rank and prioritize species for invasiveness and control urgency, establish a prevention and early detection program using volunteers that looks beyond Long Island, begin a public education program, seek new funding sources, and begin eradication efforts for the most threatening new invasive species.

In years 2-3 we will work to obtain permanent funding, establish weed management zones and begin weed control at priority sites, begin restoration efforts, begin developing local seed sources for native species, and monitor success in reducing the threat of invasive species. We also hope to be a model, and partner, for new WMAs or similar initiatives in the northeast.

Project Description

A. Project Need

Nonnative species comprise 35% of the plant species in New York, more than in any other state in the continental US with the possible exception of Florida (Rejmanek & Randall 1994, Mitchell and Tucker 1997). New York City and Long Island have a nearly 400 year post-settlement history during which hundreds of nonnative species have been introduced, many

through the Port of New York. As a result, nonnative plants are widely distributed and pose a serious threat to biodiversity.

Long Island supports 231 state rare, threatened and endangered species, more than any other region of New York State. Of these, 38 state threatened and endangered species should benefit from establishment of a LI WMA, including the Federally listed, endangered sandplain gerardia (*Agalinis acuta*). Long Island has approximately 50,000 acres of pine barrens, native grassland, savanna, and shrubland ecosystems, which as a group are highly threatened regionally and nationally (Noss and Peters 1995). Long Island also has 3,500 acres of exemplary coastal oak forests, more than 4,300 acres of fresh water wetlands, and thousands of acres of coastal beaches, dunes and tidal wetlands. A large proportion of these species and ecosystems are threatened by invasive plants.

Nonnative species are a major cause or contributing factor in the decline of 42% of the US species federally listed as threatened or endangered, second only to outright habitat destruction (Stein and Flack 1996). On Long Island, nonnative species and fire exclusion are the most important threats to native species and ecosystems. Long Island has approximately 126,000 acres of protected lands in parks and reserves, which is approximately 16% of the combined acreage of Nassau and Suffolk Counties.

Despite the clear threat posed by invasive plants, there has been essentially no effort on Long Island to assess the full extent and severity of the threat or to think about weed prevention and early detection, and only limited control efforts. Establishment of a LI WMA would enable us to mount a coordinated, cooperative, Island-wide approach to prevention, early detection and control that would have the best chance of success.

The WMA boundary encompasses all of Suffolk and Nassau Counties, but not Queens and Brooklyn which are boroughs of New York City. [The boundary was later expanded to include Queens and Brooklyn]. Numerous agencies will be involved: US Fish & Wildlife Service Refuges, Brookhaven National Laboratory (DOE), National Park Service, State Dept. Environmental Conservation, State Parks, Nassau and Suffolk County Parks, Towns, and NGOs such as The Nature Conservancy and the Brooklyn Botanic Garden. Fortunately many of these agencies have been working together for six years as partners in the multi-jurisdictional LI Central Pine Barrens Preserve (55,000 acre preserve in eastern Suffolk County), which should facilitate cooperation in a WMA. Prevention, early detection and education efforts will involve all of Nassau and Suffolk Counties. [Prevention efforts will also include New York City and beyond]. Weed management zones will be designated within the WMA, based on ecological factors and land ownership.

We hope and expect that successful establishment of a WMA on Long Island will serve as a model for establishment of additional WMAs in the eastern US, where very few such cooperative weed management efforts exist.