

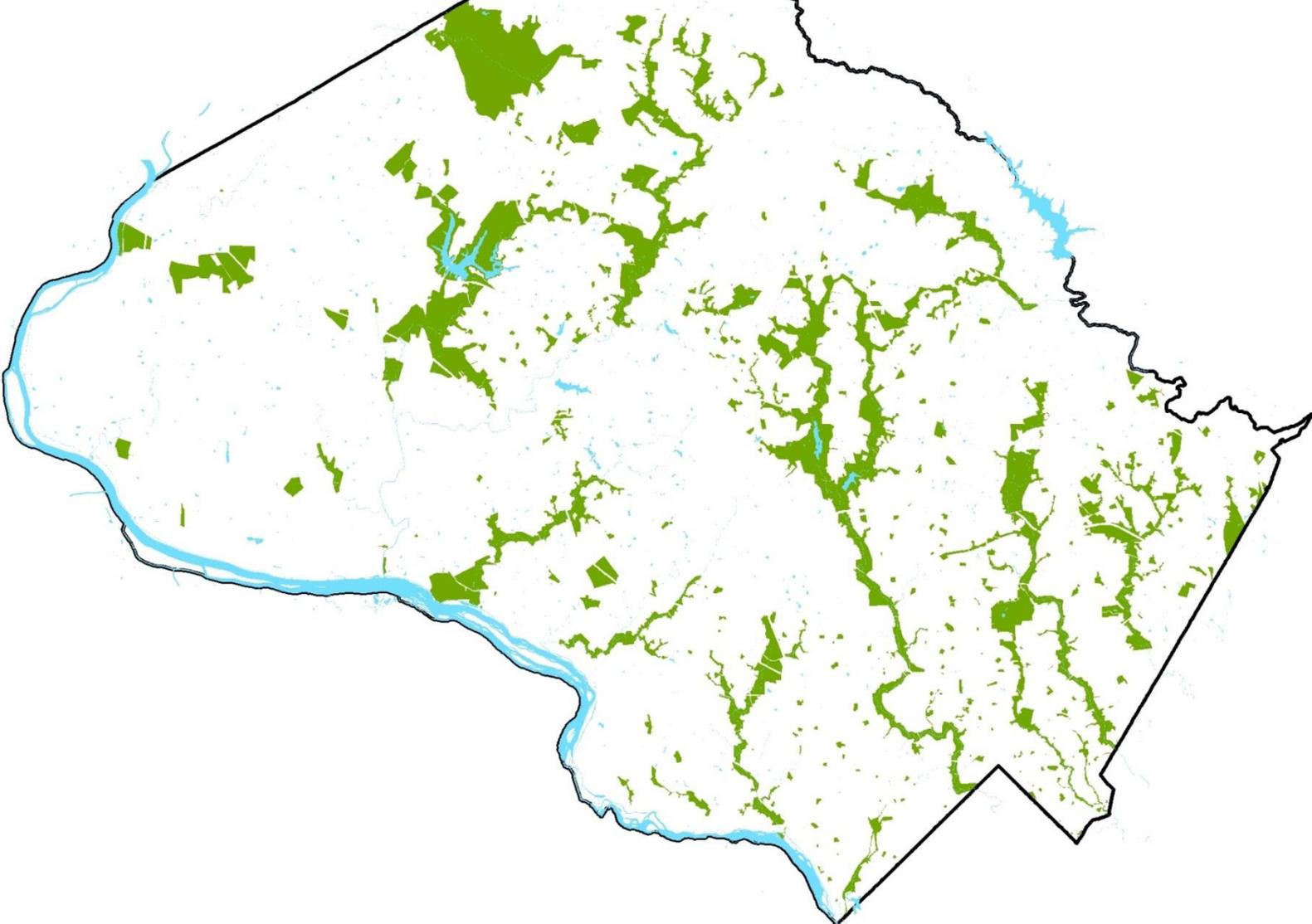
WEED WARRIORS

**(a Key Element in Invasive Management in an
Urban/Suburban Park System)**

Carole Bergmann

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Maryland National Capital Park & Planning
Commission, Montgomery Parks**

**M-NCPPC Parkland
Montgomery County, Maryland**



37,000+ acres/400+ parks--- high edge to area ratios, fragmented parcels,
over browsing, over use, **NNI GONE WILD**... No staff, little budget...



Structural Level

- Advocate for staff positions
- Vision Statements/ Guideline Documents/ “Requirements”

Staff Level

- Park Staff Awareness and Training— “Hands on”
- Park Staff Coordination— Prioritization and GIS documentation
- Natural Resource Staff Presence—at Project Planning/Development Stage

Volunteer Program Level

WEED WARRIORS

Cooperative Action Level



Structural Level:

Advocate for staff positions to prioritize work, teach fellow staff, manage contractors, write documents, supervise volunteers– in other words, coordinate all aspects of the program which I am about to outline.

Advocate for budget dollars to carry out actual management/restoration goals in the short and long term.

Formalize through documentation



Structural Level: Formalize through documentation:

NNI Management Plan for entire park system:

“Non-Native Invasive Management Plan”

April 2003 (updated Nov.2007) 22 pg

This document details a plan to protect and enhance natural communities and diversity on MC Parklands in regards to the removal of NNI plants, restoration and maintenance of natural communities, and the education of staff and citizens about the threat of NNI species.



Structural Level:

“Non-Native Invasive Management Plans for Individual Parks”

(We have 400+ parks...but we are prioritizing and have begun to make these NNI Plans for our Conservation Parks and Regional Parks in a systematic way).

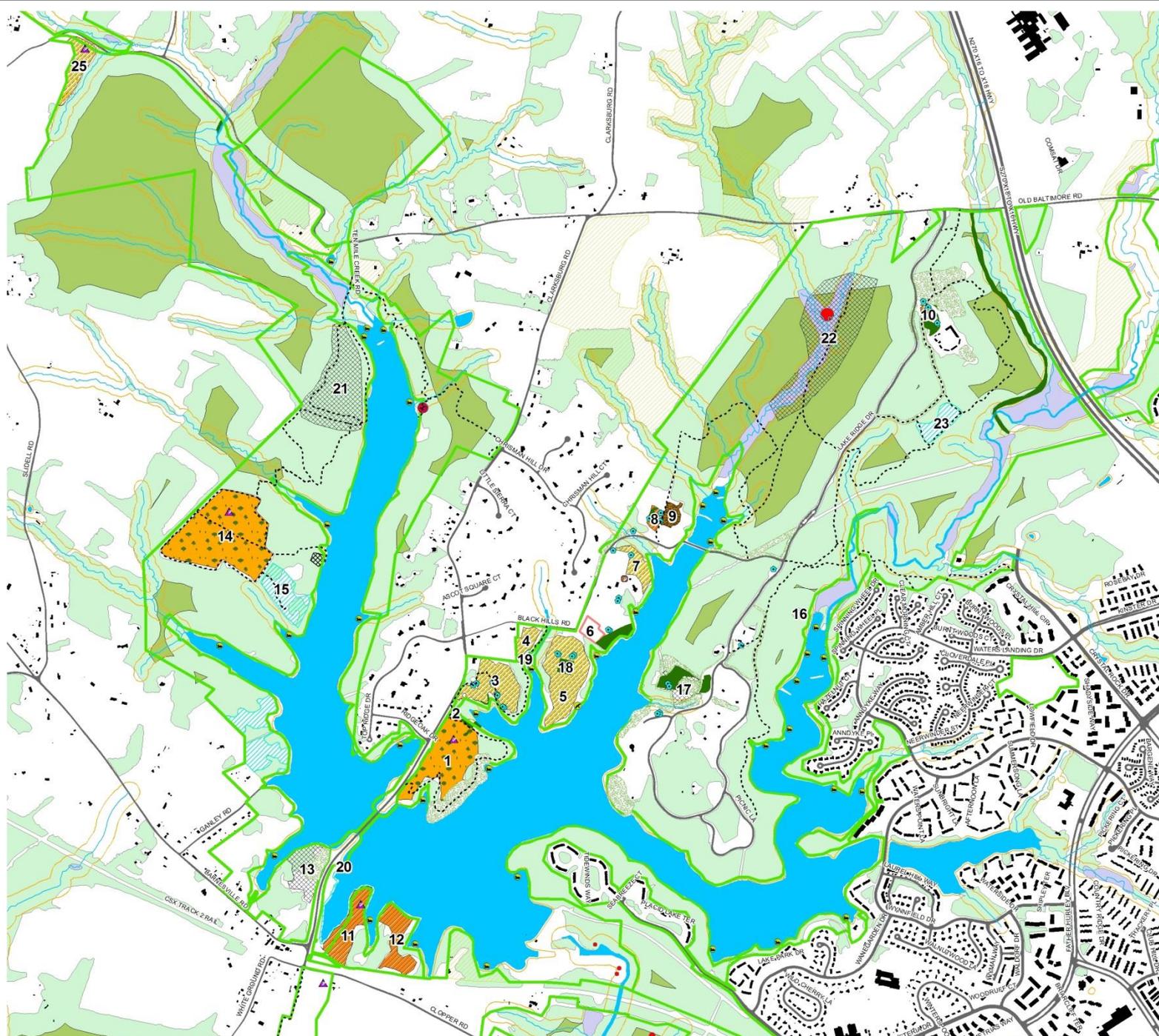
start with a map



Black Hill Regional Park Operation & Use Guidelines Natural Resource Management

Legend

- Trails
- Wildlife Nesting Structures
- Barn Owl
- Bat
- Kestrel
- Osprey
- bluebird
- owl/squirrel
- wood duck
- Amphibian breeding Pools
- Stream
- Rare to Uncommon Plants
- On-going NNI Work
- Existing Parkland
- Proposed Parkland
- Completed reforestation
- NNI occurrences
- Water
- Environmentally Sensitive Area
- forest Interior
- Forest



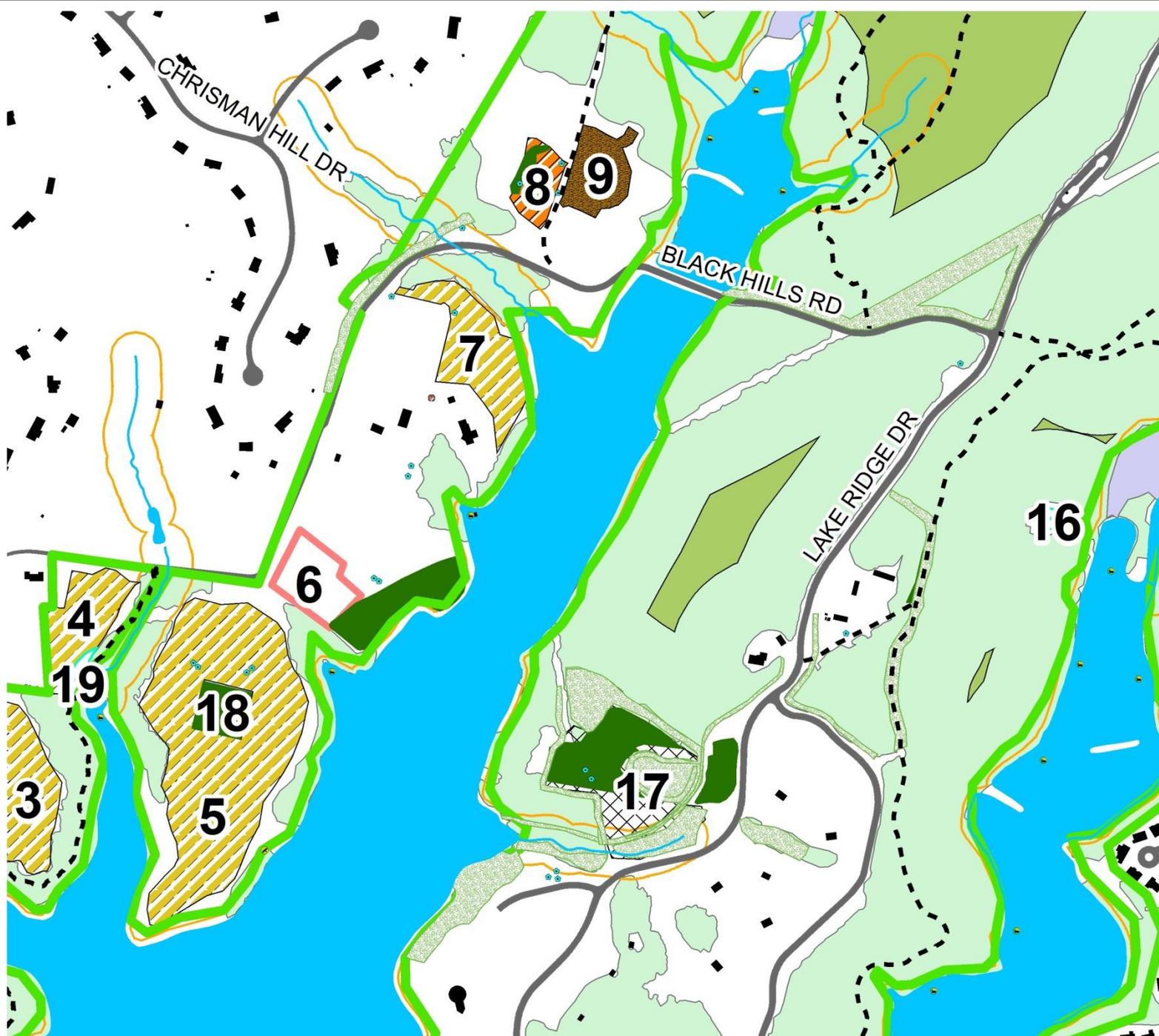
Legend for Natural Resource Management Maps

ID	Action	Symbol	Description	T
A	Forest - Monitor protect and Manage	Applyes to ALL forested	Monitor forest areas in order to identify and mitigate existing or potential impacts resulting from natural or anthropogenic changes.	F
B	Natural Regeneration	Don't mow except to manage for NNI's		F
C	Reforestation & other Plantings	Planting trees, shrubs, herbs to enhance, expand, or create habitat		F
D	Meadow Mgt - Annual Mowing	Mow area annually in March to control woody vegetation. Strip mowing may be done if NNI's and woody veg are minimal.		F
E	Savanna Mgt - Annual Mowing	All above except leave in 8 to 10 ft buffer around existing islands of woody vegetation		F
F	Mow for Hay	Avoid harvesting in June and any later than August 15.		F
G	Shrub Mgt Dry wet (includes Alder swamps) Conifer Regeneration Reforestation	Allow regeneration. Manage NNI's grids any trees >20 ft tall every 3 years (years ending in 0 and 5). Let regenerate or plant in conifers (Vs. pines, E. red cedar). Plant 1/3 to 1/2 of area at 10 year intervals, review management at 30 years.		F
H	and management	Manage grids any overlapping deciduous trees every 5 years		F
I	Woodcock Management Area	Manage mix of shrub wetlands, forest, & open habitats, w/ courtship display areas - mow narrow strips and 30 to 50 ft diameter openings.		F
J	Non-native Invasive Plant Management	Use approved mechanical and chemical treatment. Coordinate w/ NRS to ensure use of appropriate methods and to track in GIS.		F
K	Special habitat Features	Symbol varies by type	During tree removal or trimming, NNI clearing, or other similar maintenance: preserve and provide snags, logs & brush piles for wildlife.	F
L	Nesting roosting structures	Symbol varies by type	Add man-made nesting or roosting structures to provide missing habitat elements and enhance.	F
M	Long-term Reforestation maintenance		Annually inspect and maintain plantings - replace or remove dead protection as needed, control NNI's.	F

For details see the attached map titled "Operation & Use Guidelines - Natural Resource Management" in the "Guides" section.



Black Hill Regional Park
Operation & Use Guidelines
Natural Resource Management



Legend

- Trails
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- forest Interior
- Forest

Legend for Natural Resource Management Maps

ID	Action	Symbol	Description	T
A	Forest - Monitor protect and Manage	Applies to ALL forested Parkland	Monitor forest areas in order to identify and mitigate existing or potential impacts resulting from natural or anthropogenic changes.	F
B	Natural Regeneration		Don't mow except to manage for NNIs	F
C	Reforestation & other Plantings		Planting trees, shrubs, herbs to enhance, expand, or create habitat	F
D	Meadow Mgt - Annual Mowing		Mow area annually in March to control woody vegetation. Strip mowing may be done if NNIs and woody veg are minimal.	A
E	Savanna Mgt - Annual Mowing		All above except leave in 8 to 10' buffer around existing islands of woody vegetation	A
F	Mow for Hay		Avoid harvesting in June and any later than August 15.	A
G	Shrub Mgt Dry wet (includes Alder swamps) Conifer Regeneration		Allow regeneration. Manage NNIs: grids any trees >20 ft tall every 5 years (years ending in 0 and 5). Let regenerate or plant in conifers (W: spruce, E: red cedar). Plant 1/3 to 1/2 of area at 10 year intervals, review management at 30 years.	F
H	Reforestation and management		Manage - grids any overlapping deciduous trees every 5 years	F
I	Woodcock Management Area		Manage mix of shrub wetlands, forest & open habitats, w/ courtship display areas - mow narrow strips and 30 to 50 ft diameter openings. Use approved mechanical and chemical treatment. Coordinate w/ NRS to ensure use of appropriate methods and to track in GIS.	F
J	Non-native Invasive Plant Management			F
K	Special habitat Features (snags, logs, brush piles)	Symbol varies by type	During tree removal or trimming, NNI clearing, or other similar maintenance: preserve and provide snags, logs & brush piles for wildlife.	F
L	Nesting/roosting structures	Symbol varies by type	Add man-made nesting or roosting structures to provide missing habitat elements and enhance.	F
M	Long-term Reforestation maintenance		Annually inspect and maintain plantings - replace or remove dead protection as needed, control NNIs.	F

For details see the Standard Operating Procedures for Natural Resource Management on the Black Hill Regional Park website.



Structural Level:

“Best Management Practices for Control of Non-Native Invasives”

BMPs document is an innovative management tool... 2002

This **regularly updated field guide** provides park managers and maintenance personnel with easy-to-read information about mechanical and chemical control methods for the 25 worst NNIs in the Washington Metropolitan area.



Structural Level:

“Planting Requirements for Land disturbing Activities and Related Mitigation On Montgomery County Parkland”

Basically these are Re-vegetation guidelines— **NNI** removal and management is key in every-project!





- **Quickly stabilize land that has been disturbed as part of the project.**
- **Establish or re-establish healthy native plant communities.**
- **Minimize or prevent the colonization and spread of non-native invasives.**



7/19/11 Forest Mitigation! Herbicide—C



Signage up; some V work on cages, but otherwise...

Signage up; some V work on cages, but otherwise...

Staff Level

Park Staff Awareness and Training— “Hands-on” Resource Management

- **Training for Maintenance workers on removal techniques on site—their sites.**
- **“Field work lectures”—informal, mini-training every time we are in the field. Incorporate awareness during Trail Meetings, Reforestation Inspections, Stream Restoration field visits.**
- **Formal Training for Maintenance Staff and Park Managers in classroom situations—Pesticide Certification Training...**







Staff Level:

Park Staff

Coordination—

Prioritization of
problem areas,
and overall
management of
NNI removal
projects park-
wide.

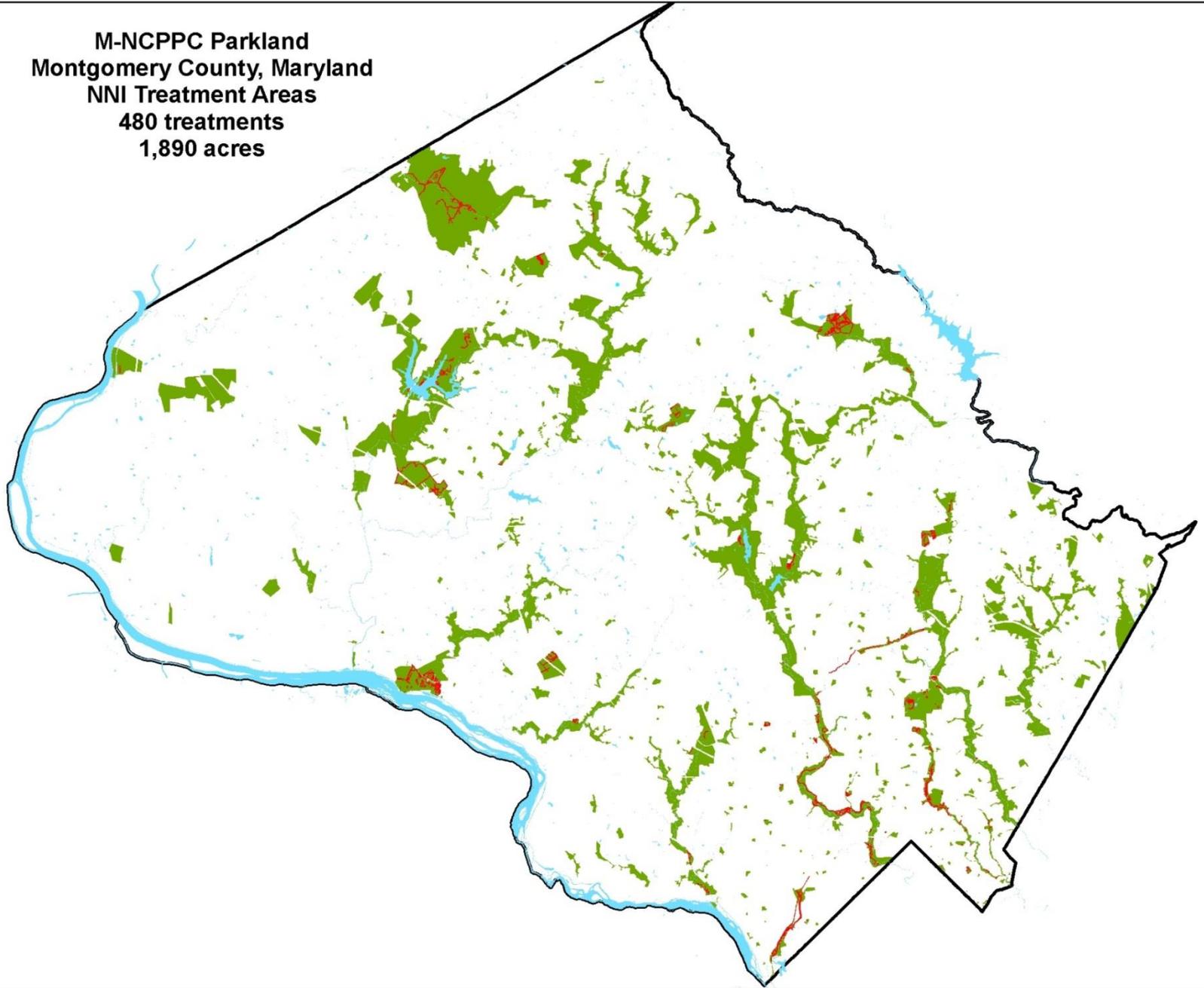
Coordination of
contract work.



re: Documentation-- **GIS mapping**

- of NNI management work (staff/contractors/volunteers; date; species; mechanical/chemical).
- of NNI (multi-species) hotspots.
- of areas of some target species (Ailanthus, Japanese knotweed, kudzu) which need chemical control...

M-NCPPC Parkland
Montgomery County, Maryland
NNI Treatment Areas
480 treatments
1,890 acres



Staff Level

Natural Resource Staff Presence at Project Planning/Development Stage

- **Review all development projects in the Planning Stage, and include NNI removal management in the project CIP, “long-term maintenance goals” aspect.**
- **Spread the knowledge/bring awareness of the issue at all meetings, on all committees.**









Volunteer Program Level

“WEED WARRIORS”

- **Signature program.**
- **Founded 1999.**
- **Over 950 certified WEED WARRIORS,
and
1000s more have participated in single event
group projects.**

www.weedwarrior.org





3 steps:

*On-line training

*2 hour class/field training

*attend one WWW



16 and older





10/04/2013 14:45

- Hat with the “Park Volunteer” Logo
- Pair of leather gloves
- “GREEN card”—which says you are a “CERTIFIED WEED WARRIOR”



- Work in any of our 37,000 Park acres.
- On your own schedule.
- Mechanical removal only



Emphasize **SAVING TREES-** any season



Volunteer Program Level

- **“WW Supervisors”**
(Over 40 now signed on)
Authorized to lead Group Projects

- **“Woods Warriors”**
doing maintenance on reforestation sites and repairing deer exclosures.







10/04/2013 14:20



awareness,
education, action

Volunteer Program Level

“Weed Warriors”

73,000+ volunteer hours

(=28 paid staff work years!!!)





10/04/2013 16:21

Cooperative Action Level

- **Coordinating with “Friends Groups” and other area Green Programs.**
- **Network with Like-minded groups/individuals.**
- **Be active in Regional NNI Awareness Groups (MA-IPC , MISC, MNPS, Potomac Watershed Partnership)...**
- **Email groups, list serves; attend area workshops.**



Final Thought = **EDUCATION**

With education (on all levels = your supervisors, your park staff, park patrons, citizens, the Planning Board/County Council, the Congress)...

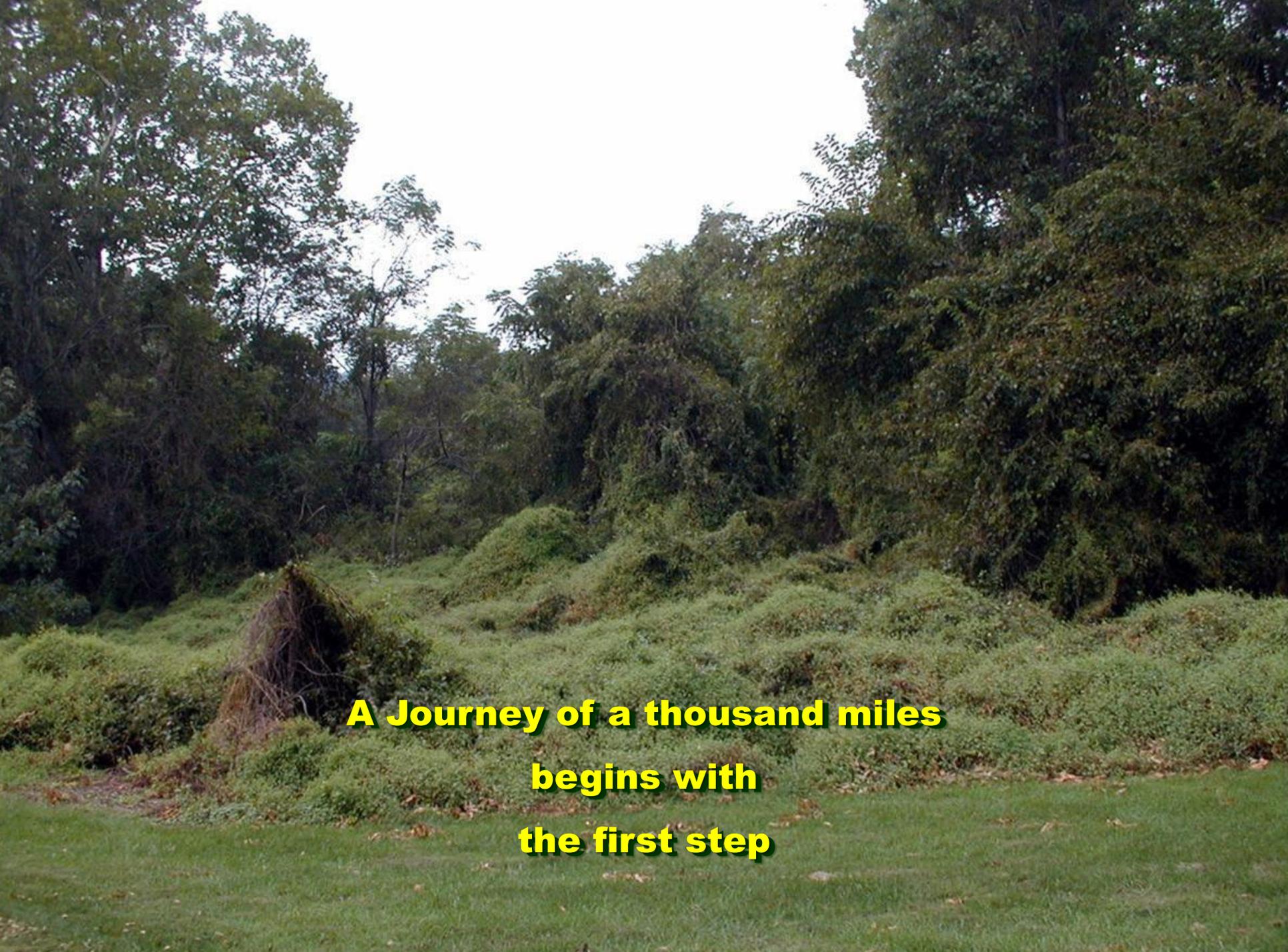
Comes awareness,

Comes action,

**Comes conservation of, and preservation of
our precious—and I do mean that—natural resources.**

...Be enthusiastic!...





**A Journey of a thousand miles
begins with
the first step**