INVENTORY AND ANALYSIS OF GROW-ZONE EFFECTIVENESS ON PRCR AND W&OD PUBLIC PROPERTIES

November 14, 2009

Prepared by Greg Zell, Natural Resource Specialist / PRCR

BACKGROUND

The concept and establishment of "no-mow" zones in Arlington County can be traced back to the year 2001 as an environmental effort designed to improve local water quality within the Four Mile Run and Potomac watersheds. The name was eventually changed to "Grow Zone" and signs were placed throughout parkland to designate areas to be naturally re-vegetated. A majority of the "Grow Zones" were established along park trails within the Four Mile Run corridor. The value of this new program was highlighted and promoted within several reports and publications at the time, including the Chesapeake Bay Preservation Plan (2001), the Watershed Management Plan (DES), and more recently, the Four Mile Run Restoration Plan.

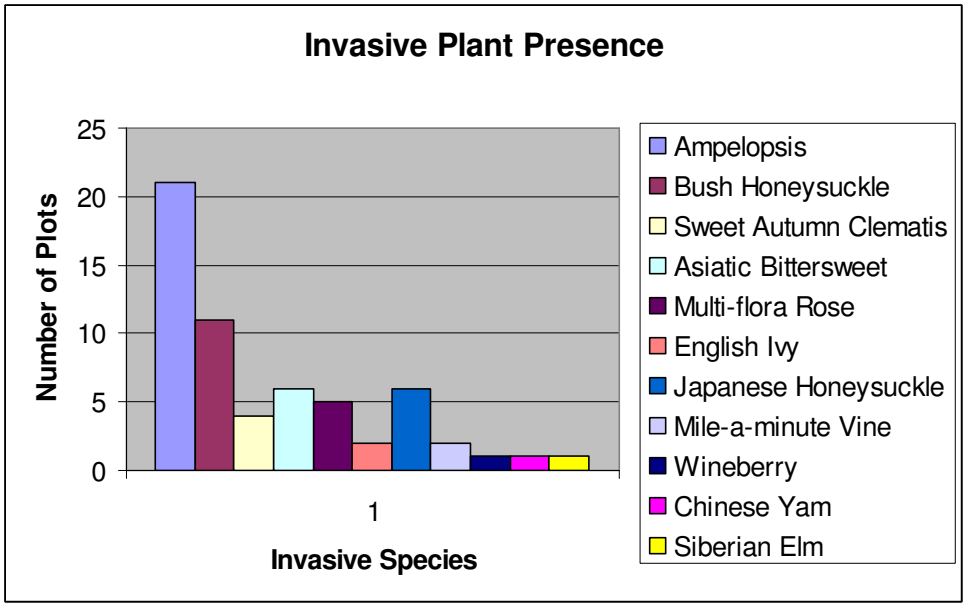
ABSTRACT

After almost a decade of use as an environmental management tool, a brief investigation was conducted in order to determine whether the original goals of the management technique were being met. In November of 2009, an attempt was made to collect relevant information regarding current management practices and the locations of all known "Grow Zones" within the four park districts. This was followed by a field search for sections of parkland marked with distinct signage indicating some form of vegetative restoration in progress (i.e. previously mowed areas). A majority of the signs found indicated a "Grow Zone" in place, however, several sites contained signs indicating "Wildflower Area", "Tree Grow Zone" or "Reforestation". At each signed site, a rapid inventory was conducted to determine overall vegetative value, i.e. the types and percentage of invasive plants present within each plot. Photos were taken at each site. Plots were then delineated by GIS and printed on small maps to document current locations within various parks.

ANALYSIS

Thirty-one (31) sites with signs were located and inventoried. All sites were within the Four Mile Run park system with the exception of Cherry Valley Park. Parks inventoried were Benjamin Banneker, East Falls Church, Madison Manor, Bon Air, Bluemont, Glencarlyn, Barcroft, Allie S. Freed, Shirlington/Nauck, Jennie Dean, and Cherry Valley Park. A number of the sites were located in co-managed areas of the W&OD Trail.

Each site received a cursory inventory to determine the species of invasive plants present and an estimate of the total percentage of coverage of invasive plants within each plot was made. Eleven (11) species of invasive plant were identified, with Porcelain Berry (Ampelopsis) being the most prevalent across all plots. Other species present included: Bush Honeysuckle, Sweet Autumn Clematis, Asiatic Bittersweet, Multi-flora Rose, English Ivy, Japanese Honeysuckle, Mile-a-minute Vine, Wineberry, Chinese Yam, and Siberian Elm. Other species would undoubtedly have been documented with additional time in the field. The following chart shows the presence of selected invasive species within all plots inventoried.



Total invasive plant coverage within each plot was found to be high. More than half of the plots had an estimated coverage of invasive plants from 50-80%. Four plots were more than 90% covered in invasive plants. Three sites were found to contain very low levels of invasive plants.

Typical Grow Zone Area

Wildflower Area along W&OD

CONCLUSIONS

Park Management Issues:

- There appears to be no clear management strategy or central point of management for "Grow Zones".
- The number of "Grow Zones" and locations are currently unknown.
- There is no GIS information available.

Natural Resource Management Issues:

- The current management of county-wide "Grow Zones" does not meet the natural reforestation goal of the original program. Twenty-eight (28) of thirty-one (31) sites investigated were found to be moderately to heavily infested with non-native invasive plants.

- It is apparent that most "Grow Zone" sites were established simply through the elimination of previous mowing operations in areas or along vegetative strips already populated with invasive plants – providing a ready source of recruitment.

- Sections signed as "Wildflower Areas" were found to be either devoid of any native wildflowers or only sparsely populated by taller growing, late-summer blooming native plants. Invasive plants were often the dominant vegetation. The planting and maintenance history of these sites are unknown.

- The three (3) sites found to be relatively clean of invasive plants demonstrated a history of moderate success for the following reasons –

    1. Allie S. Freed Park – A linear, trail-side "Grow Zone" in this park was a planned restoration. After primary removal of existing plants with a bushhog, the work area was grubbed of remaining subterranean vegetation. The area was then heavily seeded with several species of Fescue. The resulting thick grass cover was moderately successful in denying new invasive plants from obtaining a foothold.

    2. Barcroft Park – The "Tree Grow" zone which occupies the former practice ball field adjacent to the magnolia bog has been reasonably successful from a reforestation standpoint because it was initially devoid of invasive plants. Exposed areas of bare soil were immediately seeded with both perennial and annual grasses. Tree saplings were later added. The small areas of invasive colonization currently present are primarily from fruit-producing plants that have been transported by birds.

3. Jennie Dean Park – The small "Grow Zone" located on the outfield boundary is presently clean of invasive plants and composed of fallow turf grasses. Fortunately, there appears to be no immediate source of invasive plants and may be successful in the short-term.

RECOMMENDATIONS / MANAGEMENT OPTIONS

Status Quo – Make no management changes to program. This option represents a risk that in the future, an increasingly educated public will question why the Department is fostering an increase of invasive plants on parkland.

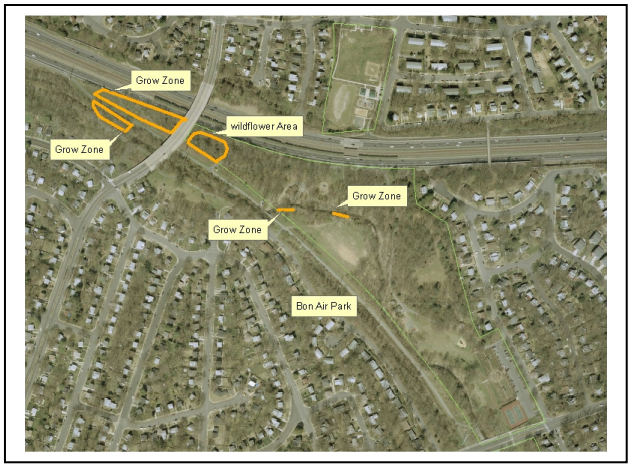
Restart Mowing Operations – Expanded mowing operations may increase park maintenance costs, but does represent an effective methodology for invasive plant control in heavily infested zones. Renewed mowing operations may require public explanation.

Perform a complete review and redesign of the program. This would include setting new goals and objectives, assigning program responsibilities, and the design of new methodologies and maintenance requirements.

Remove all "Grow Zone" and "Wildflower Area" signs from sections where goals are not being met.

Combination of options listed above.

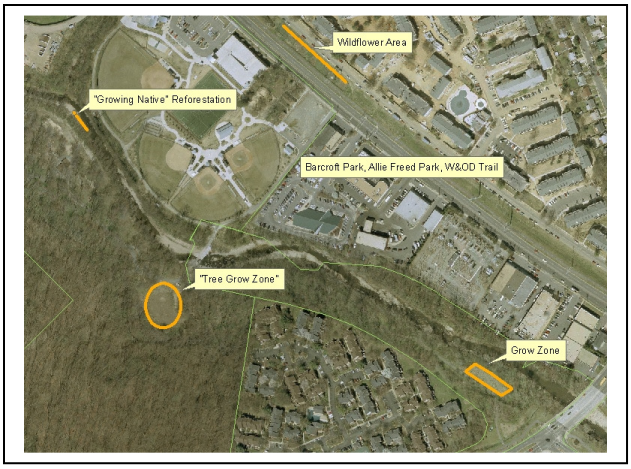
Attached: GIS maps of inventoried parcels

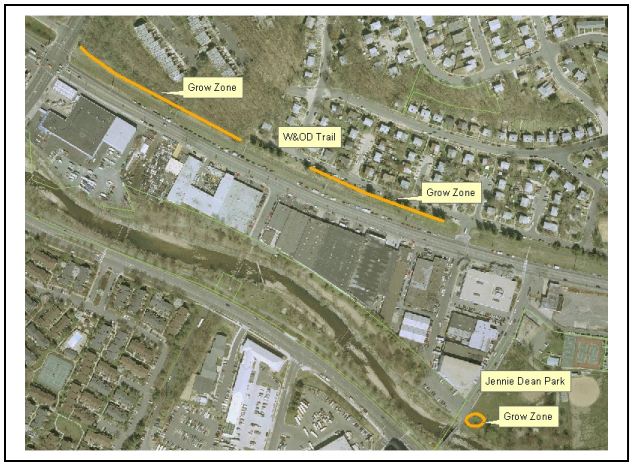

Grow Zone
wildflower Area
Grow Zone
Grow Zone
Grow Zone
Bon Air Park

Grow Zone
Grow Zone
Bluemont Park
Grow Zone

Grow Zone
Glencarlyn - Bluemont Park
Grow Zone

Grow Zone
W&OD Trail / Glencarlyn Park
Grow Zone
Grow Zone


Wildflower Area
"Growing Native" Reforestation
Barcroft Park, Allie Freed Park, W&OD Trail
"Tree Grow Zone"
Grow Zone


Grow Zone
W&OD Trail
Grow Zone
Jennie Dean Park
Grow Zone

Cherry Valley Park
Wildflower Area