



City of New York
Parks & Recreation

The Arsenal
Central Park
New York, New York 10021

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Natural Resources Group Forest Restoration Team Spring 2005 Summary

This spring was a productive season for the Natural Resources Group (NRG) Forest Restoration Team. For the season, the team consisted of 4 full time foresters. Assistance was provided by other NRG staff, and 10 volunteer and school groups. Plantings took place in 7 parks in Queens, Manhattan, Brooklyn, and the Bronx. The following is a summary of the work completed in the Spring of 2005.

- Planted 4,381 2-3' containerized trees and shrubs (2004 – 7,259)
- Planted 4,700 1-2' bareroot trees in the field (2004 – 1,179)
- Planted 0 6-8' B&B trees (2004 – 30)
- Planted 4,367 herbaceous plants (2004 – 12,304)
- Hosted 15 volunteer events with 10 different volunteer and school groups (2004 – 20, 10)
- Planted 615 pounds of native groundcover seed (2004 – 516)



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Natural Resources Group Forest Restoration Team Planting Report Spring 2005

I. Tree Plantings

During the Spring 2005 planting season, the Natural Resources Group (NRG) Forest Restoration Team planted a total of 4,381 trees and shrubs. These plantings, containing 30 species, took place throughout 6 different parks in 3 boroughs. The majority were 2-3 foot containerized plants.

A. Containerized Plantings by Park

Alley Pond Park – Queens	1,158	containerized trees and shrubs
North Brother Island – Bronx	703	containerized trees and shrubs
Riverdale Park – Bronx	1,209	containerized trees and shrubs
Inwood Hill Park – Manhattan	886	containerized trees and shrubs
Cunningham Park – Queens	340	containerized trees and shrubs

TOTAL **4,381 Trees and Shrubs**

B. Containerized Plantings by Species

480	Northern red oak (<i>Quercus rubra</i>)
405	Arrowwood viburnum (<i>Viburnum dentatum</i>)
394	Hackberry (<i>Celtis occidentalis</i>)
393	Tulip poplar (<i>Liriodendron tulipifera</i>)
217	Chestnut oak (<i>Quercus prinus</i>)
206	Black chokeberry (<i>Aronia melanocarpa</i>)
196	Black birch (<i>Betula lenta</i>)
183	Elderberry (<i>Sambucus canadensis</i>)
179	Boxelder (<i>Acer negundo</i>)
164	Winterberry holly (<i>Ilex verticillata</i>)
164	White oak (<i>Quercus alba</i>)
135	Flowering dogwood (<i>Cornus florida</i>)

135	Black oak (<i>Quercus velutina</i>)
108	Pin oak (<i>Quercus palustris</i>)
107	Spicebush (<i>Lindera benzoin</i>)
105	Red-osier dogwood (<i>Cornus serotina</i>)
104	Red chokeberry (<i>Aronia arbutifolia</i>)
100	American elm (<i>Ulmus americana</i>)
100	Shadbush (<i>Amelanchier canadensis</i>)
97	Sweet pepperbush (<i>Clethra alnifolia</i>)
79	River birch (<i>Betula nigra</i>)
60	White ash (<i>Fraxinus americana</i>)
59	Bitternut hickory (<i>Carya cordiformis</i>)
55	American sycamore (<i>Platanus occidentalis</i>)
55	Green ash (<i>Fraxinus pennsylvanica</i>)
30	<i>Quercus x heterophylla</i>
24	Sugar maple (<i>Acer saccharum</i>)
23	Gray dogwood (<i>Cornus racemosa</i>)
15	Sweetgum (<i>Liquidambar styraciflua</i>)
9	Eastern hornbeam (<i>Carpinus caroliniana</i>)

TOTAL **4,381 Containerized Trees and Shrubs**

C. Bareroot Plantings by Park

Fort Washington Park – Manhattan	3,000
North Brother Island – Bronx	1,700
TOTAL	4,700 Bareroot Trees

D. Bareroot Plantings by Species

550	Pin oak (<i>Quercus palustris</i>)
450	Black gum (<i>Nyssa sylvatica</i>)
400	White ash (<i>Fraxinus americana</i>)
400	Red oak (<i>Quercus rubra</i>)
300	Sugar maple (<i>Acer saccharum</i>)
300	Black birch (<i>Betula lenta</i>)
300	Black oak (<i>Quercus velutina</i>)
300	Black chokeberry (<i>Aronia melanocarpa</i>)
200	Silky dogwood (<i>Cornus amomum</i>)
200	Gray dogwood (<i>Cornus racemosa</i>)
200	Gray birch (<i>Betula populifolia</i>)
200	Scarlet oak (<i>Quercus coccinea</i>)
200	Winterberry holly (<i>Ilex verticillata</i>)
200	Flowering dogwood (<i>Cornus florida</i>)
100	Red maple (<i>Acer rubrum</i>)
100	American hazlenut (<i>Corylus americana</i>)
100	Tulip poplar (<i>Liriodendron tulipifera</i>)
100	Swamp white oak (<i>Quercus bicolor</i>)
50	Osage orange (<i>Maclura pomifera</i>)
50	Black walnut (<i>Juglans nigra</i>)

TOTAL

4,700 Bareroot Trees

II. Groundcover Plantings

During the Spring 2005 planting season, NRG Forest Restoration staff planted a total of 4,367 herbaceous groundcover plants, representing 18 species. Groundcover root systems reduce sedimentation and non-point source pollution by stabilizing steep, eroded slopes and streambanks. Cribbing and jute or coir mats temporarily stabilize the slope and groundcover vegetation is planted through the mat. The mats and cribbing eventually biodegrade as the root systems become established. The majority of these plants were 2 ½ “ by 2 ½ “ plugs.

A. Groundcover Planting Totals by Park

Riverdale Park – Bronx	2,083 plants
Cunningham Park – Queens	1,474 plants
Inwood Hill Park - Manhattan	810 plants
TOTAL	4,367 Groundcover Plants

B. Groundcover Planting Totals by Species

648	Blue stemmed goldenrod (<i>Solidago caesia</i>)
510	White snakeroot (<i>Eupatorium rugosum</i>)
424	Path rush (<i>Juncus tenuis</i>)
361	Poverty oatgrass (<i>Danthonia spicata</i>)
360	Appalachian sedge (<i>Carex appalachica</i>)
346	Pennsylvania sedge (<i>Carex pensylvanica</i>)
329	White wood aster (<i>Aster divaricatus</i>)
314	Virginia creeper (<i>Parthenocissus quinquefolia</i>)
270	Virginia wild rye (<i>Elymus virginicus</i>)
200	Heart leaf aster (<i>Aster cordifolia</i>)
112	Woodland sunflower (<i>Helianthus divaricatus</i>)
100	Sensitive fern (<i>Onoclea sensibilis</i>)
100	Wild columbine (<i>Aquilegia canadensis</i>)
96	Deer tongue grass (<i>Panicum clandestinum</i>)
91	Virginia mountain mint (<i>Pycnanthemum virginianum</i>)
45	White avens (<i>Geum canadensis</i>)
36	Prarie cordgrass (<i>Spartina pectinata</i>)
25	Sessile-leaved bellwort (<i>Uvularia sessilifolia</i>)
TOTAL	4,367 Groundcover Plants

III. Bioengineering

During the Spring 2005 planting season, 996 linear feet of streambank stabilization were completed. This work involves regrading portions of eroding streambanks and slopes, stabilizing them with biodegradable coconut fiber logs, wooden logs, and rock, covering surfaces prone to erosion with various geotextile mats and blankets, and planting large amounts of woody and herbaceous plant material. While the fabric and fiber products provide the immediate erosion control, it is the roots of the plant material which will provide the long term stabilization of the eroded site.

A. Bronx River

With assistance from Green Apple Corps and Sustainable South Bronx, 296 linear feet of streambank were restored with 37 20-foot brush bundles of silky dogwood, silky willow, redosier dogwood, and black willow. 1,100 bareroot trees and shrubs were incorporated into the brush layers in trenches along the banks. Additionally, 880 linear feet of coir log were installed in a different reach of the river to enhance work recently completed by contractors. 200 bareroot trees and shrubs were planted along with the coir logs.

B. Riverdale

A total of 1,800 bareroot shrubs were installed in Riverdale Park. Nearly 380 linear feet of trenches were dug along steep eroding slopes, and the seedlings were densely planted to form hedgerows to stabilize the soil.

C. Bioengineering by Park

Bronx River – Bronx	1,500 plants
Riverdale Park – Bronx	1,800 plants
TOTAL	3,300 Plants

D. Bioengineering by Species

1,100	Arrowwood viburnum (<i>Viburnum dentatum</i>)
850	Redosier dogwood (<i>Cornus sericea</i>)
800	Silky dogwood (<i>Cornus amomum</i>)
300	Grey dogwood (<i>Cornus reaemosa</i>)
200	Red maple (<i>Acer rubrum</i>)
50	Winterberry holly (<i>Ilex verticillata</i>)
TOTAL	3,300 Plants