

MIAMI WOODS AND PRAIRIE

ECOLOGICAL RESTORATION

DURING 2007

NORTH BRANCH RESTORATION PROJECT
STEWARDS: Kent & Jerry Fuller 1/23/2008

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During 2007 more than 2,800 hours of volunteer work effort were added to the more than 8,500 hours already invested since 2001 when ecological restoration resumed in Miami Woods. This report briefly summarizes recent work and looks forward to work needed during 2008. A more extensive report was prepared for 2006 and can be viewed on www.northbranchrestoration.org.

The Miami Woods Forest Preserve consists of 112 acres of land along the west side of the North Branch of the Chicago River between Oakton and Dempster Streets in Morton Grove. It is complemented by St Paul Woods on the east side of the river and is part of the system of preserves along the North Branch of the Chicago River.

Five Zones

There are five restoration zones which include all of Miami Woods except for zone 6 which consists of the picnic grove with its mowed lawns and parking together with a wooded buffer strip along Caldwell Avenue. The zones are as follow:

- Cathedral Oaks (north) extends south from Dempster and is bounded by the bike path and the shopping center parking lot.
(Includes map units SA-01 and WO-01 & 02)
- Indigo Opening (northwest) is on the west side of the bike path and extends from the shopping center south to the prairie.
(Includes map units SA-02 and WO-6, & 8)
- The Prairie (central) extends from Caldwell Avenue to the river.
(Includes map units PR-01 & 02, SA-03, and WO-10, 11 & 12)
- River Woods North (northeast) lies between the bike path and river from Dempster to the prairie.
(Includes map units WO-03, 04, 05, 07, & 9, and FO-01 & 02)
- River Woods South (southeast) consists of the southern third of the Preserve except for the picnic grove.
(Includes ecological units FO-03, 04, & 05, SA-04, WO-13, 14, & 17 and UW-03)

Work During 2007

During 2007 brush clearing was concentrated in River Woods North and the Prairie. Seed was gathered from all zones and added to the North Branch seed mixes. Distribution of mixed seed was concentrated in recently cleared areas having little vegetative diversity.

Cathedral Oaks consists of ancient oaks in a mixture of savanna and woodland. Except for the ancient oaks and hickories that can be seen in an aerial photograph from 1925, the woodland trees have grown in since that time. Most of the invasive brush has been cleared from the area by students except for buffer areas shielding a major parking lot and Dempster Street. Continuing work by volunteers consists of garlic mustard control and thinning of sapling and pole sized trees to allow recovery of herbaceous plants. 21 volunteer work visits and 56 hours of work took place during 2007. Forest Preserve summer interns also worked one day in this area.

Indigo Opening consists of an open prairie remnant and surrounding woodlands which have grown in since 1925. Invasive brush has been cleared from the edges of the opening and has been removed from most of the surrounding woodland. During 2007 volunteer work consisted primarily of brush removal and pulling of garlic mustard and hedge parsley. 61 volunteer visits contributed 237 hours of work.

River Woods North consists of upland areas covered primarily with fire intolerant tree species that have grown since 1925, and riparian flood plain which is covered with silver maple and other flood tolerant tree species that have grown since 1925. The north end contains a substantial number of large oaks. Invasive brush has been removed from most of the zone by students from the Chicago City Day School and Carl Shurz High School. Continuing work consists of brush removal and pulling garlic mustard. During 2007 there were 290 volunteer visits which resulted in 839 hours of work and 712 hours of educational activity.

River Woods South consists river banks and upland areas covered with fire intolerant trees that have grown since 1925 together with scattered ancient oaks and a few younger oaks and hickories. There is a concentration of old oaks at the southern tip of the area. Continuing work consists primarily of pulling garlic mustard and hedge parsley. During 2007 there were 29 volunteer visits that resulted in 95 hours of work.

The Prairie Following resumption of restoration work in Miami Woods in 2001 encroaching brush was removed from the edges but little else was done due to the realization that the main problems were the lack of fire and presence of excessive numbers of white tailed deer, neither of which could be addressed by volunteers.

With the promise of resumed use of fire, increased restoration work has been undertaken beginning in the fall of 2006 and continued during 2007. In the open area, the lack of fire was partially compensated by the mowing of brush by summer interns and stewards using power brush cutters and herbicide.

2007 began with the zone having an open area of about 15 acres. By the end of the year more than 5 acres were cleared and added to the Prairie in the Tunnel Access Area to the south and in the Northwest corner.

The Tunnel Access Area is a roughly rectangular area between the previously open prairie and the access drive that extends from Caldwell avenue to the Deep Tunnel Access structure adjacent to the bike path near the river. Until 2007 it was covered with dense thickets of invasive brush and fire intolerant tree species that had grown since it was a farm field in 1925. During the fall of 2006 and during 2007 all of the invasive brush was removed by volunteers, primarily students from Wright College. During early winter 2007 the remaining trees were removed by a Forest Preserve District contractor, adding nearly 5 acres to the open prairie.

In the Tunnel Access Area the existing herbaceous plant community is extremely degraded. Some prairie plants have survived, but much of the area is covered with Creeping Charlie and other weeds. Now that full sunlight has returned, we expect the existing and newly seeded prairie plants will suppress the weeds during the coming years.

The northwest corner of the prairie contained a similar area of unassociated woody growth which is being removed to expand the prairie. The portion of the approximately one acre area that was solid brush has been cleared and added to the prairie. The portion closest to the north property line contains heavy brush with old hawthorn trees. These hawthorns are being retained to provide a savanna like ecology and the foundation for a buffer screen.

During 2007 substantial amounts of seed were gathered from the prairie and either sown directly into the Tunnel Access Area or added to North Branch seed mixes, some of which were sown back into the prairie.

Also during 2007 a deer exclosure area was constructed in the prairie before the growing season to demonstrate the impact by deer and to preserve the last remnant population of wild indigo to provide a continuing source of local seed. The exclosure is a 60 foot diameter circle of 6 foot high fence. Although deer are known to jump higher than 6 feet in emergencies, the height is sufficient to exclude them in normal circumstances. Observable results of excluding the deer during this first year include vegetative recovery of the remaining wild indigo (*Baptisia leucantha*) plants although they are still too diminished to produce flowers or seeds. (All *Baptisia* plants outside the fence were eaten to the ground.) Also, lead plant (*Amorpha canescens*) showed new growth and produced flowers, unlike the plants outside the fence where virtually all new growth was eaten.

Work effort in the prairie during 2007 amounted to 455 volunteer visits which resulted in 1,392 hours of hands-on work.

Seed gathering in both the prairie and woodlands was very productive during 2007 because of favorable growing conditions. Seed was gathered by students, during North Branch workdays, and by the North Branch Wednesday Seed Team.

Workday Summary by Location and Group
of Volunteers & Work Hours

	North Branch	Elementary & Middle School *	High School **	College	Total
Cathedral Oaks	7 / 26	14 / 30			21 / 56
Indigo Opening	4 / 23	57 / 214			61 / 237
Prairie	195 / 638	64 / 137		196 / 621	455 / 1326
River Woods North	6 / 18	125 / 412	159 / 409		290 / 839
River Woods South	29 / 95				29 / 95
Multi Site	53 / 195				53 / 195
Total	294 / 995	260 / 793	159 / 409	196 / 621	909 / 2818

* 712 additional hours of educational activities

** 145 additional hours of educational activities

Typical Kinds of Work Events

During 2007 five kinds of work events occurred

1. Regularly scheduled North Branch Restoration Project workdays usually held on Sunday mornings. Scheduled on a semi monthly basis, these events draw widely varying numbers, often including college students.
2. Elementary and High School workdays held on weekdays with substantial teacher involvement plus North Branch stewards and leaders. Chicago City Day School and Shurz High School split time between restoration and river studies. Work is concentrated in the river north area.
3. College workdays scheduled with specific colleges. During 2007 seven events were held with Wright College on Saturdays and included stewards and North Branch leaders. All work was in the prairie and participants usually numbered 20 to 30.

4. Major events include days such Earth Day, National Public Lands Day or corporate work events. During 2007 a major event was held on Earth Day weekend sponsored by Forest Preserve District Commissioners Goslin and Suffredin. On that day 101 volunteers worked to expand the open area of the prairie.
5. North Branch small groups. These are usually held on weekdays and include: stewards working with a small number of North Branch volunteers to burn brush piles and do limited brush removal; stewards working with FPD interns to apply herbicide or cut brush; and the North Branch Wednesday seed gatherers that move from one Preserve to another.

The Earth Day Workday was unusual in several respects. Held on April 22, it involved a record number of participants and ended with an unusual twist. 101 volunteers cut and burned brush from the tunnel access area and the northwest corner of the prairie, making way for native plants to reclaim the prairie soil. About 1/3 of the participants were from Wright College and the remainder from all walks of life. North Branch crew leaders led groups at about a dozen burning brush piles. Late in the day two protesters arrived and called in a false alarm to the Morton Grove Fire Department claiming that the fires were untended in spite of the presence of two stewards on site. The firemen were shown the bare safety areas around the fires and were fully satisfied as to the situation. During the night while the Preserve was closed, two protesters returned and disturbed the ash blankets covering the embers so they could take pictures. Fortunately this vandalism did not result in any spreading of the fires. This reflected the situation which has played out over the past 10 years with large numbers of supporters working to restore the preserve while a small numbers of objectors try unsuccessfully to block the recovery.

Looking Forward to Management During 2008

In general, invasive brush has been cleared from much of Miami Woods, shifting needs from primarily brush removal to later stages of restoration. The later stages rely to a large extent on the controlled use of fire, supplemented with herbicide, to control re-sprouts from root systems and herbaceous invasives stimulated by improved sunlight availability. Returning fire to the landscape remains an urgent priority as does management of the excessive deer herd which continues to grow with increasingly adverse impact on vegetation.

During 2008 we look forward to continuing our relationship with the Chicago City Day School, Carl Shurz High School and Wright College who have contributed greatly to ecological restoration in Miami Woods.

2008 Activities

Cathedral Oaks

- Burn if possible. This is the # 2 burn priority for Miami Woods
- Herbicide invasive species and re-sprouts
- Pull garlic mustard and spray where concentrated
- Sow seed
- As resources allow: Remove buckthorn buffer from parking lot and plant shrubs and low-growing trees.

Indigo Opening

- Herbicide invasive species and re-sprouts
- Pull garlic mustard
- Sow seed
- As resources allow: Remove remaining buckthorn from west side of the zone.

Prairie

- Burn. This is the top burn priority for Miami Woods
- Herbicide invasive species and re-sprouts, especially in Tunnel Access Area and NW corner
- Sow seed
- Clear remaining brush from northwest corner
- Clear brush from along Caldwell Avenue leaving enough to serve as a visual buffer
- As resources allow: Remove buckthorn and honeysuckle to the south of the Tunnel access area and plant shrubs and low growing trees to enhance the visual buffer at the northwest corner of the prairie

River Woods North

- Herbicide invasive species and re-sprouts
- Sow seed
- Clear remaining brush
- Pull garlic mustard
- As resources allow: Obtain approval of flood plane demonstration of the effect of removing pole sized trees to increase sunlight and herbaceous plants.

River Woods South

- Burn if possible: This is the # 3 burn priority in Miami Woods
- Herbicide invasive species and re-sprouts
- Sow seed
- Pull garlic mustard and Japanese hedge parsley

Miami Woods

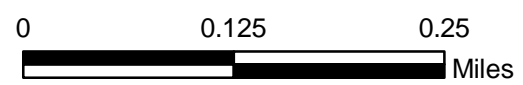
Land Management Site #1206



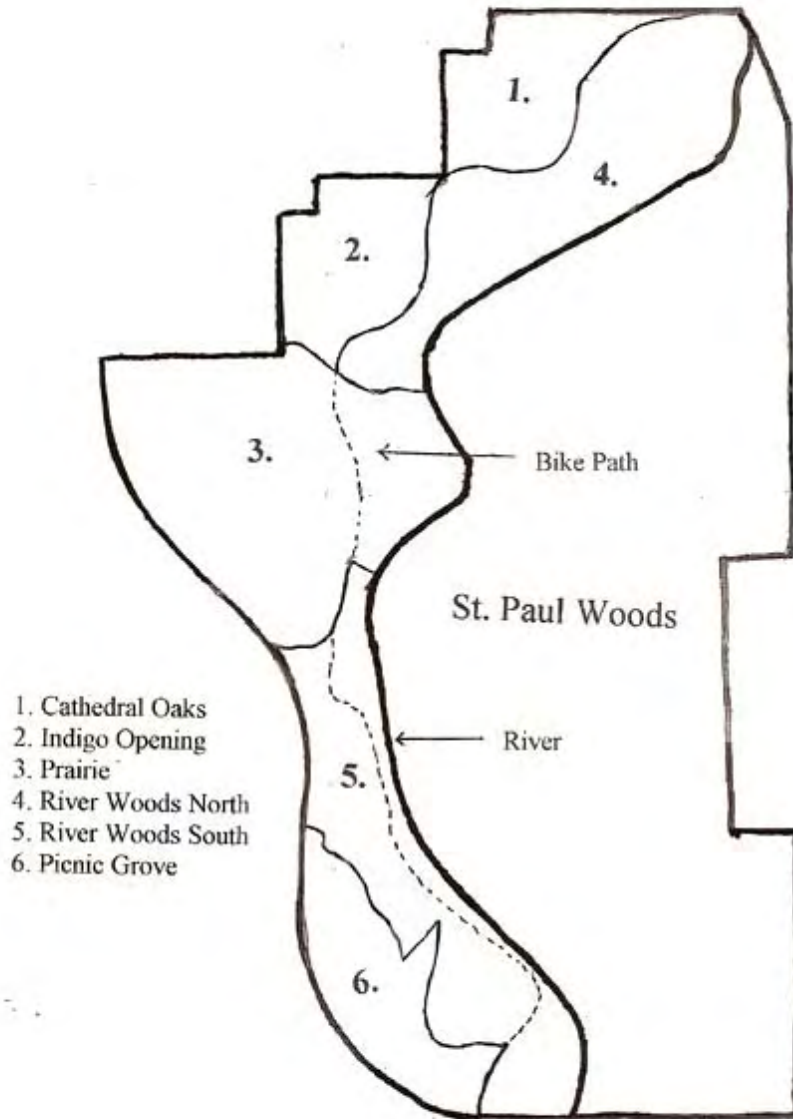
Site Extent: 106 Acres Designated Management Units



Note: Volunteer work is focused primarily in areas including and north of Prairie 01 (PR01). It is the mission of the Forest Preserve District to manage all of its remnant natural areas county-wide, including areas outside of volunteer work units.



MIAMI WOODS





Appendix

MIAMI WOODS 2007 WORKDAY SUMMARY BY AREA

<u>Date</u>	<u>Group</u>	<u>Activity</u>	<u>Hours</u>	<u># Volunteers</u>
<u>Cathedral Oaks etc</u>				
4/04/07	Duke et al	Burn Brush piles WO01	7	26
5/11/07	Atea Middle School	Pull Garlic Mustard WO01 & SA01	<u>14</u>	<u>30</u>
Total			21	56
<u>River North</u>				
4-11-07	Duke et al	Burn Brush piles WO04	6	18
5/07/07	Shurz High School	Remove & Burn Brush WO04	90	219
5/09/07	Shurz High School	Remove & Burn Brush WO04	69	190
5/23/07	CCDS 7 th Grade	Pull Garlic Mustard WO04&07	32	131
6/04/07	CCDS 8 th Grade	Remove Brush WO04	32	53
10/03/07	CCDS 7 th Grade	Remove Brush WO04	26	100
10/30/07	CCDS 8 th Grade	Remove Brush WO04	<u>35</u>	<u>128</u>
Total			290	839
<u>Indigo Opening, etc</u>				
5/15/07	CCDS 6 th Grade	Pull Garlic Mustard WO06&07	34	140
10/09/07	CCDS 6 th Grade	Remove Brush SA02	23	74
12/10/07	Duke et al	Burn Brush Piles SA02 & WO04	<u>4</u>	<u>23</u>
Total			61	237
<u>Prairie</u>				
2/25/07	North Branch	Remove Brush from TAA	10	34
3/10/07	Wright College & NB	Remove & Burn Brush from TAA	35	114
3/18/07	Wright	Remove & Burn Brush from TAA	32	109

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3/24/07	Wright	Remove & Burn Brush from TAA	34	115
3/26/07	Wright JO	Remove & Burn Brush PR01	24	44
4/15/07	NB w/ Wright et al	Cut & Burn Brush piles from TAA	72	232
4/18/07	Duke et al	Burn Brush piles TAA	7	27
4/ ?/07	KF	Drove Posts for Deer Exclosure	1	3
4/22/07	N B Wright et al	Remove & Burn Br TAA & PR01	101	330
4/25/07	Duke et al	Hung fence Deer Exclosure	4	12
5/24/07	CCDS 4 th Grade	Pull Garlic Mustard TAA	37	78
9/08/07	Wright	Remove & Burn Brush TAA	23	70
11/01/07	CCDS 4 th Grade	Gathered Seed PR01& plntd in TAA	27	59
12/01/07	Wright	Remove & Burn Brush PR01 NW	21	75
12/08/07	Wright	Remove & Burn Brush PR01 NW	<u>27</u>	<u>94</u>
Total			455	1396

River South

5/06/07	NB	Pull Garlic Mustard WO13,14,16&17	6	23
5/12/07	NB	Pull Garlic Mustard WO08,9,10&11	<u>23</u>	<u>72</u>
Total			29	95

Multiple Areas

8/05/07	NB	Pull Hedge Parsley WO08,09,10,11	8	28
10/07/07	NB	Seed Gathering whole site	<u>45</u>	<u>167</u>
Total			53	195
TOTAL all areas			==== 909	==== 2818

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MIAMI WOODS 2007 WORKDAY SUMMARY BY GROUP

<u>Date</u>	<u>Group</u>	<u>Activity</u>	<u>Hours</u>	<u># Volunteers</u>
North Branch				
2/25/07	North Branch	Remove Brush from TAA	10	34
4/04/07	Duke et al	Burn Brush piles WO01	7	26
4-11-07	Duke et al	Burn Brush piles WO04	6	18
4/15/07	NB w/ Wright et al	Cut & Burn Brush piles from TAA	72	232
4/18/07	Duke et al	Burn Brush piles TAA	7	27
4/ ?/07	KF	Drove Posts for Deer Exclosure	1	3
4/25/07	Duke et al	Hung fence Deer Exclosure	4	12
4/22/07	N B, Wright et al	Remove & Burn Br TAA & PR01	101	330
5/06/07	NB	Pull Garlic Mustard WO13,14,16&17	6	23
5/12/07	NB	Pull Garlic Mustard WO08,9,10&11	23	72
8/05/07	NB	Pull Hedge Parsley WO08,09,10,11	8	28
10/07/07	NB	Seed Gathering whole site	45	167
12/10/07	Duke et al	Burn Brush Piles SA02 & WO04	<u>4</u>	<u>23</u>
Total			294	995
Wright College				
3/10/07	Wright College & NB	Remove & Burn Brush from TAA	35	114
3/18/07	Wright	Remove & Burn Brush from TAA	32	109
3/24/07	Wright	Remove & Burn Brush from TAA	34	115
3/26/07	Wright JO	Remove & Burn Brush PR01	24	44
9/08/07	Wright	Remove & Burn Brush TAA	23	70
12/01/07	Wright	Remove & Burn Brush PR01 NW	21	75
12/08/07	Wright	Remove & Burn Brush PR01 NW	<u>27</u>	<u>94</u>
Total			196	621

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Carl Shurz High School

5/07/07	Shurz High School	Remove & Burn Brush WO04	90	219
5/09/07	Shurz High School	Remove & Burn Brush WO04	<u>69</u>	<u>190</u>
Total			159	409

Chicago City Day School

5/15/07	CCDS 6 th Grade	Pull Garlic Mustard WO06&07	34	140
5/23/07	CCDS 7 th Grade	Pull Garlic Mustard WO04&07	32	131
5/24/07	CCDS 4 th Grade	Pull Garlic Mustard TAA	37	78
6/04/07	CCDS 8 th Grade	Remove Brush WO04	32	53
10/03/07	CCDS 7 th Grade	Remove Brush WO04	26	100
10/09/07	CCDS 6 th Grade	Remove Brush SA02	23	74
10/30/07	CCDS 8 th Grade	Remove Brush WO04	35	128
11/01/07	CCDS 4 th Grade	Gathered Seed PR01& plntd in TAA	<u>27</u>	<u>59</u>
Total			246	763

Other

5/11/07	Atea Middle School	Pull Garlic Mustard WO01 & SA01	<u>14</u>	<u>30</u>
Total			14	30
			=====	=====
TOTAL all groups			909	2818

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MIAMI WOODS 2007 WORKDAY SUMMARY BY ACTIVITY

Remove Brush

<u>Date</u>	<u>Group</u>	<u>Activity</u>	<u># Volunteers</u>	<u>Hours</u>
2/25/07	North Branch	Remove Brush from TAA	10	34
3/10/07	Wright College & NB	Remove & Burn Brush from TAA	35	114
3/18/07	Wright	Remove & Burn Brush from TAA	32	109
3/24/07	Wright	Remove & Burn Brush from TAA	34	115
3/26/07	Wright JO	Remove & Burn Brush PR01	24	44
4/04/07	Duke et al	Burn Brush piles WO01	7	26
4-11-07	Duke et al	Burn Brush piles WO04	6	18
4/15/07	NB w/ Wright et al	Remove & Burn Brush from TAA	72	232
4/18/07	Duke et al	Burn Brush piles TAA	7	27
4/22/07	N B Wright et al	Remove & Burn Br TAA & PR01	101	330
5/07/07	Shurz High School	Remove & Burn Brush WO04	90	219
5/09/07	Shurz High School	Remove & Burn Brush WO04	69	190
6/04/07	CCDS 8 th Grade	Remove Brush WO04	32	53
9/08/07	Wright	Remove & Burn Brush TAA	23	70
10/03/07	CCDS 7 th Grade	Remove Brush WO04	26	100
10/09/07	CCDS 6 th Grade	Remove Brush SA02	23	74
10/30/07	CCDS 8 th Grade	Remove Brush WO04	35	128
12/01/07	Wright	Remove & Burn Brush PR01 NW	21	75
12/08/07	Wright	Remove & Burn Brush PR01 NW	27	94
12/10/07	Duke et al	Burn Brush Piles SA02 & WO04	<u>4</u>	<u>23</u>
Total			678	2075

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Pull Garlic Mustard

5/06/07	NB	Pull Garlic Mustard WO13,14,16&17	6	23
5/11/07	Atea Middle School	Pull Garlic Mustard WO01 & SA01	14	30
5/12/07	NB	Pull Garlic Mustard WO08,9,10&11	23	72
5/15/07	CCDS 6 th Grade	Pull Garlic Mustard WO06&07	34	140
5/23/07	CCDS 7 th Grade	Pull Garlic Mustard WO04&07	32	131
<u>5/24/07</u>	<u>CCDS 4th Grade</u>	<u>Pull Garlic Mustard TAA</u>	<u>37</u>	<u>78</u>
Total			146	453

Pull Hedge Parsley

8/05/07	NB	Pull Hedge Parsley WO08,09,10,11	<u>8</u>	<u>28</u>
Total			8	28

Gather Seed

10/07/07	NB	Seed Gathering whole site	45	167
11/01/07	CCDS 4 th Grade	Gathered Seed PR01& plntd in TAA	<u>27</u>	<u>59</u>
Total			72	226

Deer Exclosure

4/ ?/07	KF	Drove Posts for Deer Exclosure	1	3
4/25/07	Duke et al	Hung fence Deer Exclosure	<u>4</u>	<u>12</u>
Total			5	15

			=====	=====
TOTAL all activities			909	2818

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MIAMI WOODS 2007 WORKDAY SUMMARY BY DATE

<u>Date</u>	<u>Group</u>	<u>Activity</u>	<u># Volunteers</u>	<u>Hours</u>
2/25/07	North Branch	Remove Brush from TAA	10	34
3/10/07	Wright College & NB	Remove & Burn Brush from TAA	35	114
3/18/07	Wright	Remove & Burn Brush from TAA	32	109
3/24/07	Wright	Remove & Burn Brush from TAA	34	115
3/26/07	Wright JO	Remove & Burn Brush PR01	24	44
4/04/07	Duke et al	Burn Brush piles WO01	7	26
4-11-07	Duke et al	Burn Brush piles WO04	6	18
4/15/07	NB w/ Wright et al	Cut & Burn Brush piles from TAA	72	232
4/18/07	Duke et al	Burn Brush piles TAA	7	27
4/ ?/07	KF	Drove Posts for Deer Exclosure	1	3
4/22/07	N B Wright et al	Remove & Burn Br TAA & PR01	101	330
4/25/07	Duke et al	Hung fence Deer Exclosure	4	12
5/06/07	NB	Pull Garlic Mustard WO13,14,16&17	6	23
5/07/07	Shurz High School	Remove & Burn Brush WO04	90	219
5/09/07	Shurz High School	Remove & Burn Brush WO04	69	190
5/11/07	Atea Middle School	Pull Garlic Mustard WO01 & SA01	14	30
5/12/07	NB	Pull Garlic Mustard WO08,9,10&11	23	72
5/15/07	CCDS 6 th Grade	Pull Garlic Mustard WO06&07	34	140
5/23/07	CCDS 7 th Grade	Pull Garlic Mustard WO04&07	32	131
5/24/07	CCDS 4 th Grade	Pull Garlic Mustard TAA	37	78
6/04/07	CCDS 8 th Grade	Remove Brush WO04	32	53
8/05/07	NB	Pull Hedge Parsley WO08,09,10,11	8	28

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9/08/07	Wright	Remove & Burn Brush TAA	23	70
10/03/07	CCDS 7 th Grade	Remove Brush WO04	26	100
10/07/07	NB	Seed Gathering whole site	45	167
10/09/07	CCDS 6 th Grade	Remove Brush SA02	23	74
10/30/07	CCDS 8 th Grade	Remove Brush WO04	35	128
11/01/07	CCDS 4 th Grade	Gathered Seed PR01& plntd in TAA	27	59
12/01/07	Wright	Remove & Burn Brush PR01 NW	21	75
12/08/07	Wright	Remove & Burn Brush PR01 NW	27	94
12/10/07	Duke et al	Burn Brush Piles SA02 & WO04	4	23
			=====	=====
TOTAL			909	2818

Appendix

MIAMI WOODS 2007 WORKDAY EDUCATIONAL ACTIVITY

Group	# Volunteers	Hours
Carl Shurz High School		
5/07/07	83	106
5/09/07	<u>62</u>	<u>190</u>
Total	145	296
Chicago City Day School		
5/15/07 6 th Grade		83
5/23/07 7 th Grade		79
5/24/07 4 th Grade		47
6/04/07 8 th Grade		20
10/03/07 7 th Grade		63
10/09/07 6 th Grade		40
10/30/07 8 th Grade		<u>84</u>
Total		416
		=====
Total both schools		712