

# 2013

Greenway Fields Homes Association

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## TREE PROJECT REPORT

The tree Census was conducted on April 27th, 2013. The Tree Committee of the Greenway Fields Homes Association is a resident volunteer group which implemented the census.

## Acknowledgement

The Tree Project was begun over one year ago. Urban Forest Restoration is a national and state priority. The research phase suggests that restoration of urban tree canopy and urban forests contribute to neighborhood viability and environmental sustainability. Locally Mid America Regional Council, the Kansas City Department of Forestry, the State of Missouri Department of Forestry have active projects to contribute to a vital to a healthy community. The grant application utilized the data from all these sources.

The City of Kansas City Missouri Public Improvement Advisory Council provided the grant funds for the project with the additional funding support of the Greenway Fields Homes Association Community Improvement District. The board of the Greenway Fields Homes Association approved the Tree Policy and the establishment of a standing committee the Tree Committee.

The Tree committee is acknowledged as a unique group committed volunteers who while busy professionals contributed skill and expertise to the Tree Project. The committee organized the Tree Census to document the current tree population and characteristics of this population. The committee produced the census methods, media and communication products, website coordination, the database, the statistics, the mapping products, and the plan for the eventual tree planting. The project acknowledges this contribution, and to all the census day volunteers.

The National Arbor Day Foundation recognized the project as a model for communities to address tree restoration and for focusing attention to Emerald Ash Borer as a threat to the urban forest. A grant from the Arborjet Corporation provided the chemicals which treated all GFHA Ash Trees, A grant from the Urban Tree Specialists to provide expertise in treating all the Ash Trees on the public tree lawns.

The media has also recognized the efforts of the Tree Project to address the Emerald Ash Borer.

The work of the Tree Committee makes all these recognitions possible. I sincerely appreciate every contribution. Our efforts may be helpful to other communities as they try to address these issues of neighborhood sustainability.

Elizabeth Noble, Ph.D.

July 21, 2013

## Tree Census Project Report Greenway Fields Homes Association GFHACID

### Introduction

Nationally and statewide there is a recognition that the urban forest is a vital component to a healthy vital neighborhood. The environmental and ecological benefits include the energy savings from heating and cooling, the air quality improvement and the strengthening of asset values of property. One study suggests that a well-placed 25-foot tree reduces heating and cooling costs for a typical residence 10%. There are estimates that trees can increase property values from 3.5%-20%. Tree species native to Missouri are the criteria for the replacement trees. The research base of this document produced a tree policy which provided the structure and process for this effort.

The impetus for this project was twofold. The first is the great loss of trees in the target area due to tree loss from storm damage, from road construction, and from installation of sidewalks. The goal of restoration of the urban tree forest and of the urban tree canopy as well as the maintenance of trees especially the Ash trees threatened by the Emerald Ash Borer in the Greenway Fields Homes Association was the grant application goal. This issue of tree loss due to storms and construction was identified in the 2002 Greenway Fields Assessment conducted by the Planning Department of the City of Kansas City.

The neighborhood involvement through a Tree Committee was the first step to the conduct of the tree census. The tree committee was comprised of persons interested in neighborhood improvement. This committee would be keyed to the grant activity utilizing the tree policy to conduct the tree census as a way to confirm the needs of the neighborhood. The design of a comprehensive tree census was a precondition of the planting of an estimated 250 trees.

The second step is the plan for restoration, preservation and maintenance of the urban canopy. This activity includes the tree planting, the tree pruning, and treatment for trees within the catchment area. Of concern here was the Emerald Ash Borer. The ash tree population in the GFHACID is of concern in that a substantial number of trees are Ash Trees. The number of Ash Trees on the public tree lawns is significant, and the number of Ash trees on residential properties is more significant..

The grant to the Public Improvement Advisory Committee of Kansas City Missouri he goals of urban tree canopy restoration, the preservation of the tree canopy, and the maintenance outlined these goals.

The Greenway Fields Homes Association Community Improvement District GFHACID is a residential Community Improvement District organized under the Chapter 67 of the Missouri Statute. This law allows residential districts eligibility for funding to support neighborhood planning. The CID process provides the necessary conditions to enable the neighborhoods to properly take advantage of experiences, technologies, knowledge and services. The CID statute assumes that at a micro level the neighborhoods can solve its own problems with a

cooperative relation with governmental policies and local and state development. This grant was awarded in May 2013

### Missouri Trees

The trees selected for this project are based on the recommendations of the State of Missouri Forestry Department. The trees in Table 1 reflect the large tree category and are trees which are native to the state of Missouri. These trees are the basis of selection for the tree replacement.

**Table 1 Trees recommended for Missouri Urban Tree Canopy**

<b>Large (trees with a mature height of more than 40') Common Name</b>	<b>Scientific Name and Cultivar</b>	<b>Max DBH for KCMO (inches)</b>	<b>Minimum Planting Area (feet)</b>
Red Maple, Autumn Blaze	Acer x freemanii, "Jeffsred"	36	7x7
Red Maple, Red Sunset	Acer rubrum, "Red Sunset"	36	7x7
Tuliptree	Liriodendron Tulipifera	36	7x7
Swamp White Oak	Quercus bicolor	60	8x8
Northern Red Oak	Quercus rubra	60	8x8
Ginkgo	Ginkgo biloba, „Autumn Gold"	30	7x7
Silver Leaf Linden	Tilia tomentosa	42	8x8
Caddo Maple	Acer saccharum, "Autumn Splendor"	42	8x8
Bald Cypress	Taxodium distichum	44	8x8
Shumard Oak	Quercus shumardii	48	8x8
Locust, Shade master	Gleditsia triacanthos var. inermis, „Shademaster"	46	8x8

### Greenway Fields

The Greenway Fields Homes Association Community Improvement District is comprised of an area from 61<sup>st</sup> Street to 65<sup>th</sup> Street and from Wornal Road to Summit. This area includes 343 homes with public tree lawns, public entry areas on Greenway, and on Meyer Boulevard, two neighborhood parks and two landscaped circles.

The current tree population comprises 8 tree species categories with the Maple variety as the predominant species. The ash tree in this tree census was of importance in that the Emerald Ash Borer is a treat to Ash trees in Greenway Fields.

The project received additional benefits which has been made possible two recognitions. The first recognition received by an Award given to the GFHACID Tree Project by the National Arbor Day Foundation for being a model project in support of promoting the urban tree canopy. This award was linked to Arborjet Corporation to treat Ash Trees. This award has benefited

GFHACID through the treatment 38 trees in the tree lawns of the Greenway Fields Homes Association.

### Tree Census

The tree census focused on the count of the existing population of the trees. A tree data sheet in the attached appendix was used to collect data. The day of April 27<sup>th</sup> was chosen as Arbor Day event. The volunteer group was gathered from GFHACID residents who expressed on interest in the Tree Census Project. This group comprised 18 teams of individuals. A training session was conducted by the Urban Tree Specialist Arborist and the Arborist from ArborJet Corporation. This training was enhanced by a tree identification sheet (appendix 2). All individual were provided with maps (see appendix 3) and a data collection sheet. Each team identified the tree, measured the circumference and recorded the results. Importantly a clipboard and a fabric tape measure were provided. All tree data was collected and verified. Additional data was collected on the Wornal Road Baptist Church, the St Andrews Church, the contiguous street to Wornal Terrace, Washington, Pennsylvania, Jefferson, and Summit as well as trees in Parks. The data was processed using an Excel spreadsheet and statistics were compiled using a statistical program. Data were further compiled for Geographic Information System mapping. This product is designed for the web site to benefit the GFHACID residents.

### Tree Census Utilization

The tree replacements were identified based on the results of the Tree Census. The variables collected in the census included tree species, circumference of trees, geocodes for each tree, and property addresses of each tree. This tree census identified the tree population as it currently exists as 572 trees in 8 species categories. This population offers a diversity which is characteristic of a healthy urban forest. The goal of the replacement trees is to add to the diversity and enhance the current tree population utilizing the recommended Missouri trees. The tree preservation and maintenance of the urban forest plan is based the database created by the census.

### Tree Species Greenway Fields

The tree species data was collected by identifying the trees on the site. Most residential sites have at least one tree; some have two or more trees on the public tree lawns. There are 53 location sites which have no trees, and there are areas with long distances between trees. The species have been categorized into 8 species which include one category for flowering trees. The flowering trees include cherry, apple, crabapple, sweet gum and hackberry.

The charts further detail the species in the same order. These charts show the species by street location. These data show some streets have a concentration of a species.

Table 2 suggests the distribution of the tree categories by street location. The trees show that some streets have a dominant species with little or no diversity. Other streets have some diversity. All locations can benefit from additional trees to complement the current species.

## Mapping

The Mapping of the Greenway Fields Urban Canopy provides a visual perspective of the diversity and density of trees. The Tree committee has created a database and utilized the database to geocode all tree location to create the mapping. Figure 1 shows the tree species and the density.

Mapping allows for visualization of the data in such a way as to facilitate the analysis of that data. The goal of the project is to enhance the density, and to promote urban forest diversity. Map 2 shows these diversity features. The predominance of a species such as Sycamores on Wornal Terrace, Maples on W62nd Street is apparent on the mapping. In the future analysis the diversity will be more apparent as the urban canopy is restored.

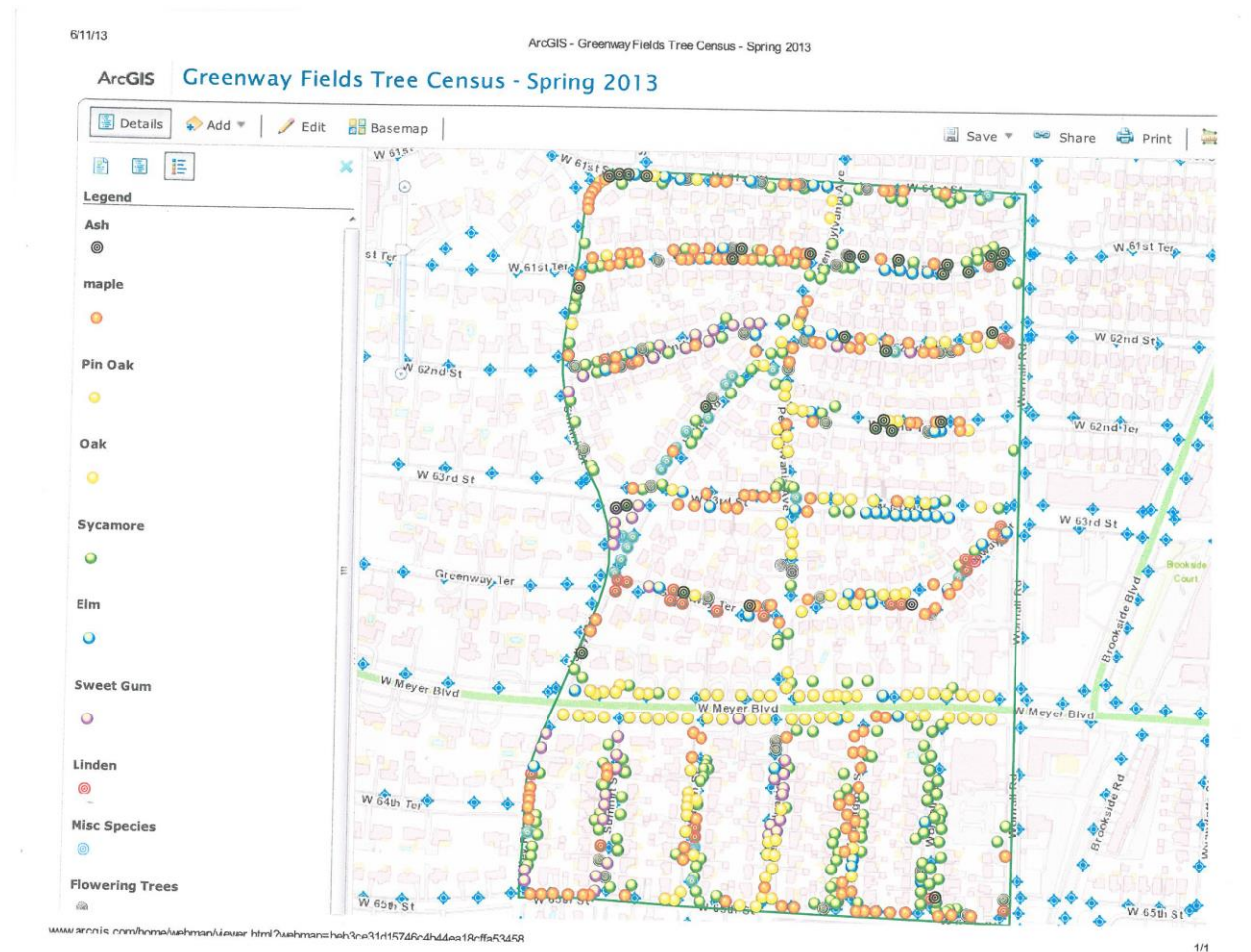


Figure 1 Greenway Fields Tree Diversity

**Table 2 Tree species distribution by street location**

	Species ID									Total
	NO TREES	ASH	MAPLE	PIN OAK	OAK	SYCAMORE	ELM	LINDEN	FLOWERING	
GREENWAY	9	3	11	5	3	1	7	16	6	61
WEST MEYER	0	0	2	50	0	0	4	0	1	57
WORNAL TERRACE	2	1	0	0	0	16	2	1	1	23
W61ST TERRACE	11	12	26	1	0	4	6	1	4	65
WASHINTON	0	0	16	1	1	0	2	0	0	20
PENNSYLVANIA	4	0	7	14	10	0	1	0	17	53
JEFFERSON	4	0	6	3	6	0	0	2	3	24
SUMMIT	6	1	4	0	1	0	0	1	19	32
VALLEY ROAD	6	2	10	0	2	0	2	1	22	45
WEST 63RD STREET	4	2	12	2	6	1	12	0	1	40
WEST 62ND TERRACE	9	4	6	3	2	0	3	0	2	29
WEST 62ND STREET	5	3	15	0	6	0	5	4	20	58
WORNAL ROAD	2	0	1	0	0	0	0	1	1	5
WEST 61ST STREET	3	4	14	0	3	0	6	0	6	36
65 <sup>th</sup> Street	0	0	18	4	0	0	0	0	2	24
<b>Total</b>	<b>65</b>	<b>32</b>	<b>148</b>	<b>83</b>	<b>40</b>	<b>22</b>	<b>50</b>	<b>27</b>	<b>105</b>	<b>572</b>

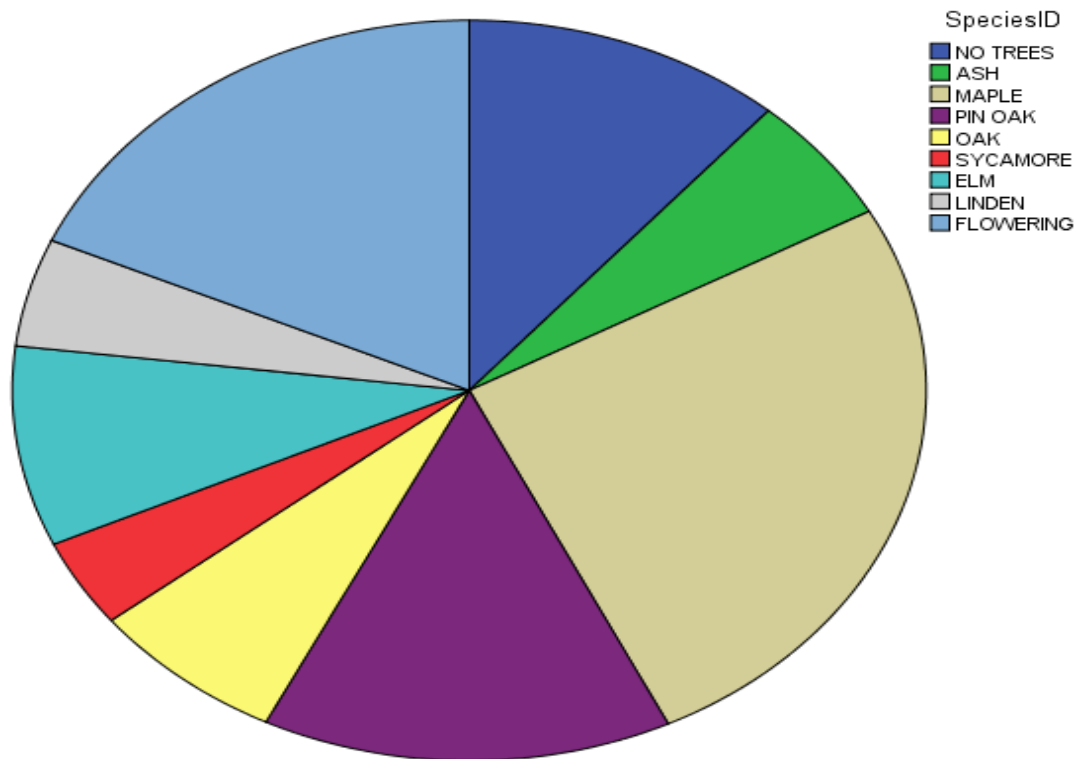




Figure 2 Greenway Fields Tree Distribution



**Chart 1 Tree Species for GFHACID shows the distribution graphically.**



### Tree Replacement Criteria

The tree replacement to achieve the urban tree canopy will focus the planting on locations with no trees. These locations are tree lawns which due to storm damage, sidewalk installation or street construction for water and sewers. These locations were identified in the tree census. Each location will be planted with two trees with a distance of 12 to 15 feet. The criteria of diversity of species will guide the tree selection.

Table 3 shows the property address of the tree replacement site for locations with no trees. The 106 trees to be planted will help to replace the urban canopy for each of the streets. In addition Wornal Road will be planted with 20 trees along the 61<sup>st</sup> street to 63<sup>rd</sup> street corridor.

There are locations in which there is only one tree on the tree lawn. In these locations the replacement tree will be determined based on the space appropriateness. In these sites it is estimated that 100 trees will be planted in order to restore the tree canopy.

**Table 3 Property Addresses with No Trees**

Property Address	Tree Species	
	Replacement Tree	
400 West 62nd Terrace	White oak	2
400 West 63rd Street	Gingko	2
403 West 62nd Terrace	Red oak	2
408 West 63rd Street	Swampy oak	2
409 West 61st Terrace	Sunset Maple	2
412 West 62nd Terrace	Gingko	2
414 Greenway Terrace	Linden	2
422 Greenway Terrace	none	2
425 West 61st Street	Red Oak	2
427 West 62nd Street	Linden	2
432 West 62nd Street	White oak	2
435 West 62nd Terrace	Red oak	2
439 West 61st Terrace	Sunset Maple	2
443 Greenway Terrace	Linden	2
443 West 62nd Terrace	Gingko	2
444 West 62nd Terrace	SunsetMaple	2
445 West 63rd Street	Gingko	2
447 Greenway Terrace	Sunset Maple	2
447 West 62nd Terrace	White oak	2
448 West 62nd Terrace	Red oak	2
450 West 62nd Terrace	Linden	2
610 Greenway Terrace	Gingko	2
612 West 63rd Street	Gingko	2
613 Greenway Terrace	Gingko	2
616 Greenway Terrace	Gingko	2
6215 Summit Street	Linden	2
6215 Valley Road	Bald Cypress	2
6218 Pennsylvania Avenue	Sunset Maple	2
6219 Valley Road	Shade Master Locust	2
6224 Pennsylvania Avenue	Linden	2
6227 Valley Road	Shade Master Locust	2
623 Greenway Terrace	Gingko	2
6230 Valley Road	Shade Master Locust	2
6231 Valley Road	Bald Cypress	2

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6233 Summit Street	Linden	2
626 West 62nd Street	Linden	2
6310 Pennsylvania Avenue	White Oak	2
635 Greenway Terrace	none	2
641 West 61st Terrace	White Oak	2
6411 Jefferson Street	Sunset Maple	2
6415 Jefferson Street	Swampy oak	2
6416 Pennsylvania Avenue	Sunset Maple	2
6417 Summit Street	Gingko	2
6423 Summit Street	Linden	2
6425 Summit Street	Sugar Maple	2
6430 Jefferson Street	Linden	2
6434 Wornall Terrace	Linden	2
6436 Wornall Terrace	White oak	2
6437 Valley Road	Shade Master Locutst	2
6439 Jefferson Street	Linden	2
644 West 61st Terrace	Linden	2
6440 Wornall Road	Gingko	2
6442 Wornall Road	Gingko	2
Wornal Road 61 <sup>st</sup> to 63 <sup>rd</sup>	Gingko	20
	Sunset Maple	
	Linden	
	Red Oak	

### Replacement Criteria for Tree Canopy

The replacement trees are intended to implement the goal of restoring the urban tree canopy. The urban tree canopy is characterized as providing a diverse population of trees which provide the benefit is in the form of environment and air quality, asset value enhancement, and reducing the heating and cooling costs for residents.

The replacement trees have been selected on the basis of this goal. The distance between trees is desired at 12 to 15 feet. This distance will be applied in selecting sites for new trees. The achievement of this goal is subject to appropriateness of locations considering the presence of utilities, light post, and hydrants. Each site will be checked for these issues.

The high traffic corridors of Wornal Road and 63<sup>rd</sup> Street can particularly benefit from trees which are efficient in removing CO<sub>2</sub>. These include Maple and Oak trees. In addition the trees which are able to endure Heavy Street cleaning and plowing are also selected for these corridors. In particular the Gingko and the Linden are of relevance.

Another selection criterion is the beautification of the neighborhood with the addition of flowering trees. The Tulip tree is one which can be shared throughout the GFHACID and will add

elegance to every street. For streets with a predominance of one species there will be several additions of Oak, Gingko and Linden.

By applying these criteria GFHACID will achieve a greater diversity and a healthy urban forest. The mapping shows the tree distribution. The new plantings will enable the filing of gaps, and the restoration of the tree canopy. .