

2019 Forestry Division Update

Year in Review

Tree Population	24,606 Street Trees	3356 Park Trees
	88%	12%

Pruning:	2018	2017
• Train Pruning	1497	1490
• Full Street Pruning	1305	1098
• Request Pruning	510	357
• Park Tree Pruning	75	209
TOTAL Trees Pruned	3387 (Up 7%)	3154

Removals:

More Removals due to more infested ash and declining maples (More ash but lower % of Ash)

Total (2017) (Total Trees 684) Ash (453) (66%) All Others (231) (34%)
Total (2018) (Total Trees 957) (+273) Ash (556) (58%) All Others (401) (42%)
Contracted Removals: 39 Ash Trees

Service Requests: Up 3.7% from 2017

(Total Requests 725) Storm (197)(27%) Pruning (178)(25%) Misc. (350)(48%)

Planting: Down 23% from 2017 (Fewer Road Projects and Assessed Trees)

(Total Planted 473) New Plantings (64) Replacements (328) Projects (81)

Ash Update:

Total Ash (4436 Total Ash Trees) Streets 4098 Parks 338
Total Injected (Protected) **3,526** (79%) **910** Unprotected (21%)
Injected in 2017 **812** Trees Total = Re-Treatments **762** + New Treatments **50**

*Year 3 of 5 year Removal Program **1383 Ash Trees Removed : So Far**
910 Ash Trees Remaining

2 years remaining 455 Ash/yr.

Forestry Maintenance History

Year	Service Request	Trees Planted	Trees Removed	Trees Pruned	Comments
1998		1083			
1999		517			
2000		825			
2001		750			
2002		743		6,599	
2003		602	167	4,033	
2004	456	666 600=Street *36 = Park	185	3819 1,543 = REG. 2,276 = Train	*Last year of Park Tree Replacements
2005	483	568	303	3783 1,613 = Reg. 2,170= Train	
2006	478	488	380	5365 2,891= Reg. 2,474= Train	
2007	488	537	306	4,134	
2008	511	380	247	4,270	\$71.85/tree
2009	501	349	325	4,372	Operations Manager \$100.87/tree
	Loss	of	Arborist		
2010	591	337	328	3,911	\$92.96/tree
2011	581	407	317	4,786	\$85.85/tree
			6 yr. average 316		
2012	408	268	324	3,621	
2013	421	348	416	3,050	
2014	635	409	549	3,306	
2015	566	447	574	2,870	
2016	644	544	758	2,839	
2017	695	617	684	3,154	
2018	725	473	957	3,387	5 yr removal Ave = 704

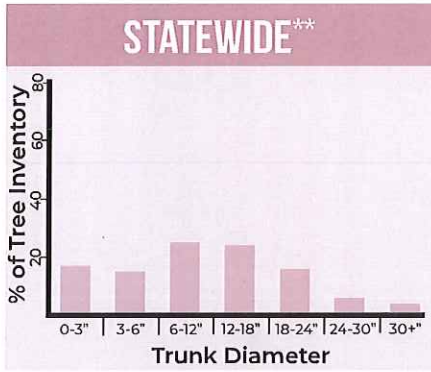
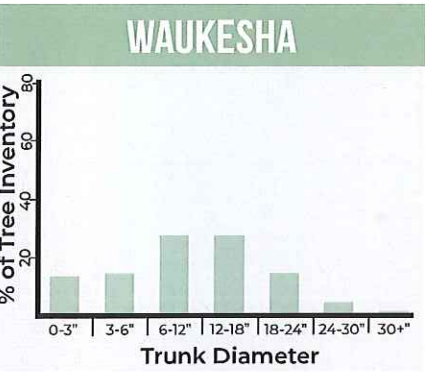
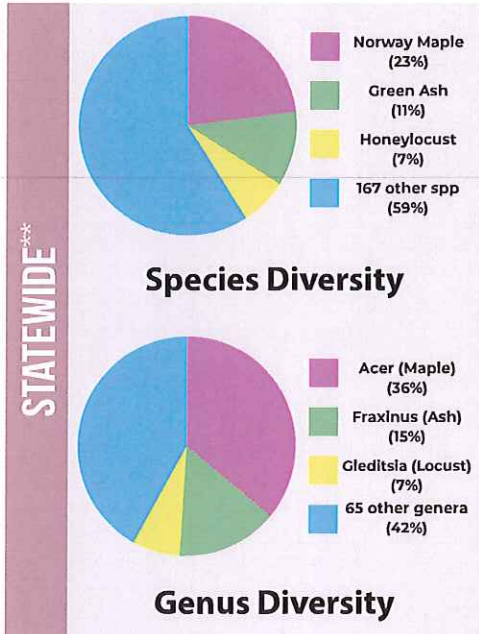
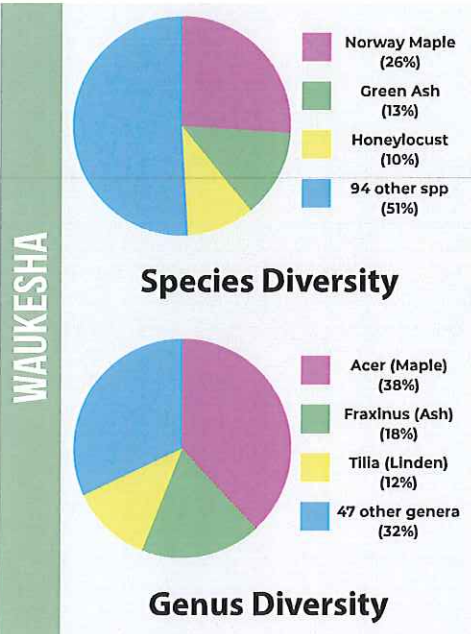
Forestry E A B Treatment History					Comments
Year	Number of Trees Treated	Method	Average Tree Diameter	Average Cost per tree per inch	
Spring/Summer					
2010	273	Tree-age	22 in.	\$56.78 ^{32 liters}	\$2.59
Goal 250					5,981 inches
2011	459	Tree-age	16"	\$33.58 ^{32 liters}	\$2.10
Goal 400					7,313 "
2012	589	Tree-age	15.4 "	\$33.32 ^{38 liters}	\$2.17
Goal 500					9,053 "
2013	796	Tree-age	10.36"	\$20.43 ^{27 liters}	\$2.16
Goal 500					7,525 "
		38.50%	5,494 Ash trees	4 year Average \$31.55/tree	29,872 inches
	Started	Retreatment	Program		
2014	230	Tree-age		of 2010 treated	previously treated
Goal 700	504	Additional		New Trees Treated	
Total	734	Total treated	2014		
	2621	48.80%	5309		
2015	459			of 2011 treated	
Goal 1000	521			new trees	
	980				
Grand Total	3142	59.20%	5309	Total street Ash	
2016	589	Tree-age	Re-Treatments	of 2012 treatments	
	359	Additional			
Total	948	Total treated			
	3501	67.00%	5309		
2017	745	Tree-age	less 51 (2013)		
	125	Additional			
	91	2018 Inj.			Move to 3 yr (E. Roberta)
	961	Total treated			
	3462	70.00%	4920	Total street Ash	
2018	762	Tree-age			
	0	Additional			
	50	2019 Inj.			Move to 3 yr.(Stardust)
	812	Total Treated			
	Park Trees	Treated	404.00	Population	
		Tree-age			
2014	67	16.50%			
2015	0	16.50%			
2016	68	26.50%			
2017	74	50.00%			
2018	87	68.00%			
Total Trees	229	68.00%			

COMMUNITY TREE MAP INVENTORY

SPECIES DIVERSITY

Species diversity is a very important, but often elusive, goal of community foresters. Having a diverse mix of species helps protect your forest from future pests and pathogens.

The charts to the right show the composition of the three most commonly planted species and genera in the community and state. The higher the percentage in the "other" category, the better. It is best practice to have many species and genera, but not large percentages of either.



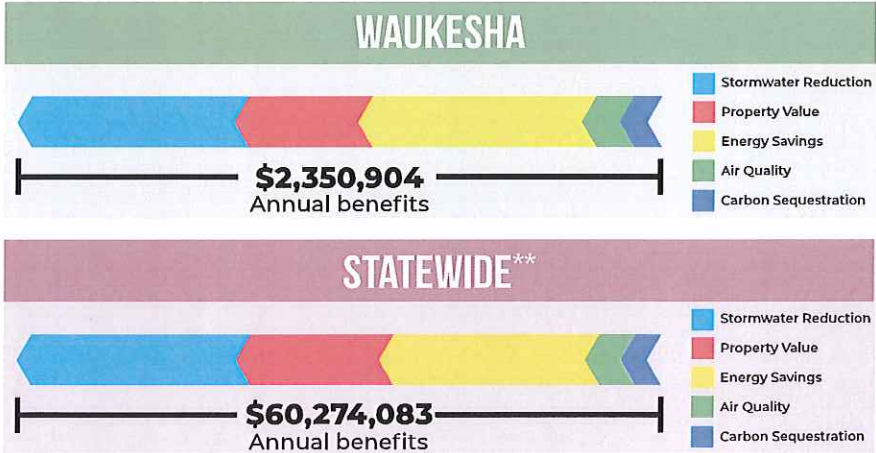
SIZE DISTRIBUTION

It is important to manage a forest of mixed ages and sizes. Large trees generally provide more benefits than smaller trees, though a sustainable forest requires a significant percentage of small, young trees in order to replace the old. Charts to the left show the distribution of trees of different diameter classes, a common way of measuring tree size and estimating age.

URBAN FOREST BENEFITS***

Trees are part of a community's infrastructure, providing valuable benefits:

- **Stormwater reduction:** Reduce amount and speed of rain on built infrastructure
- **Property value:** Add real estate value
- **Energy savings:** Cool buildings, reducing air conditioning costs, and block wind, reducing heating costs
- **Air Quality:** Remove pollutants from the atmosphere
- **Carbon sequestration:** Capture CO₂ from the atmosphere

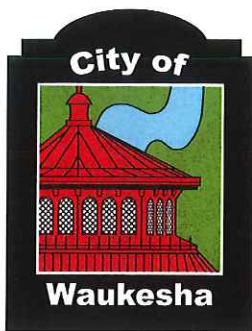


*Trees incorporated into the Wisconsin Community Tree Map (pg-cloud.com/wisconsin). These are mostly street trees and do not represent all trees in a community.
 **Of 694,863 trees incorporated into the WCTM.
 ***Derived from I-Tree Streets, part of the U.S. Forest Service's I-Tree suite of software calculating the value of ecosystem and infrastructural benefits of trees.

For more information on urban forest composition, visit: pg-cloud.com/wisconsin

The information shown on this sheet has been obtained from various sources, and is of varying age, reliability and resolution.





PARKS, RECREATION & FORESTRY

1900 AVIATION DRIVE
WAUKESHA, WISCONSIN 53188-2471
TELEPHONE 262/524-3737 FAX 262/524-3713

Ron Grall, Director

rgrall@ci.waukesha.wi.us

Street Tree Planting Program Spring, 2019

Our spring street tree planting program will be up slightly from last spring consisting of 392 trees. Of these trees, 245 or 64% are replacement trees the majority of which have resulted from the removal of ash trees due to the Emerald Ash Borer. We are continuing an aggressive approach of removing the unprotected ash trees which are increasingly showing signs of decline from the effects of the borer. Our policy is to replace all trees that have been removed with the exception with sites that are lacking the room for a new tree or where utilities prohibit the planting. All efforts are made to replace our trees.

Our spring planting program will also consist of 67 new development plantings. This is also up slightly from last year. These plantings will continue to be primarily in the Fox Lake Village and Howell Oaks Estates subdivisions. The level of new home construction looks to be about the same due to the level of building activity observed in these subdivisions. We have 62 project trees to plant 41 of which have resulted from the road reconstruction project on Northview Rd and 21 from the downtown road re-construction project on E. Main St.

Finding available trees from nurseries continues to be a challenge. Average price of trees has increased slightly from last spring. The process of purchasing trees through a "growing agreement" to alleviate this problem will continue this year. Species diversity is still a priority as well as quality nursery stock to ensure the continuation of a healthy urban forest facing various urban and environmental challenges.

Thank You For your continued support.

David Rauterberg
City Forester
Department of Parks, Recreation and Forestry



City of Waukesha
Spring 2019 Tree Planting Summary

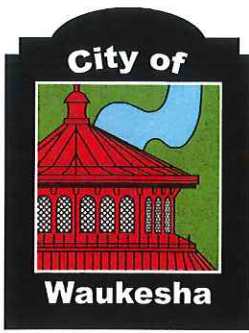
TYPE	WITH CHARGE	WITHOUT CHARGE	TOTAL
Fill In	60	7	67
Replacements	4	241	245
Requests	1	1	2
Road Re-Construction Projects	62	0	62
Memorial/Dedication	0	12	12
Accident	3	0	3
Project		1	1
TOTALS	103	253	392

1.75" – 2" Caliber (B&B)

28 Species

Cost Assessment \$235.00 per tree (pending approval)

2/18/19



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PROCLAMATION

WHEREAS, Arbor Day has been observed both nationally and internationally for many years, and

WHEREAS, The Waukesha Parks, Recreation and Forestry Department has participated in this observance for forty years, and

WHEREAS, The City of Waukesha has been designated Tree City USA by the National Arbor Day Foundation for the 40th year, and

WHEREAS, The City of Waukesha has named the recipient of the Arbor Day Gold Leaf Award by the International Society of Arboriculture five times, and

WHEREAS, Arbor Day serves to create not only an appreciation for trees, but also, an awareness for the proper care and maintenance of trees in an urban environment, and

WHEREAS, The City of Waukesha recognizes that the efforts put forth by professional parks, recreation and forestry personnel have enhanced the urban forest available to City residents.

NOW THEREFORE,

In keeping within the Proclamation, the City of Waukesha proclaims April 1 – April 26th, 2019, concluding on Arbor Day April 26th, 2019.

ARBOR MONTH

In the City of Waukesha, and urge our citizens to observe this month.

Signed this _____ day of _____ 2019.

Shawn N. Reilly Mayor



Tree Planting Assessment Charge History 2019

Year	Charge	\$ Difference	% Difference
2005	102.00	\$12	13.3%
2006	115.00	13	12.7%
2007	155.00	40	34.7%
2008	165.00	10	6.4%
2009	175.00	10	6.0%
2010	185.00	10	5.7%
Break-even	\$186.00	Cost to plant	One tree
2011	190.00	\$ 5	2.7%
2012	195.00	\$5	2.6%
2013	195.00	----	----
2014	195.00	----	----
2015	195.00	----	----
Break-even			
2016	205.00	+ \$10	4.6%
2017	205.00	+ \$15	6.8%
2018	220.00	+\$23	9.5%
2019	235.00	----	----

Tree Planting Breakdown

(On aver. 450 to 550 trees per season)
20 trees / day

Average tree cost = \$150.00 / tree
(Using 2019 spring tree bids)

Direct Labor cost is \$28.07/hour
(Using 2019 Arborist labor rates)

Locate site, diggers and mark	.25hrs	
Load tree and travel to site	.25hrs	
Dig the site and prep hole	.5hrs	
Plant the tree	1.0hrs	
Backfill hole	.5hrs	
Mulch and water in	.5hrs	
Total	3.0	@ \$28.07/hr. = \$84.21

Aver. tree cost @ \$150 + Direct Labor cost @ \$84 = \$234.00