

Complete Population of All Trees

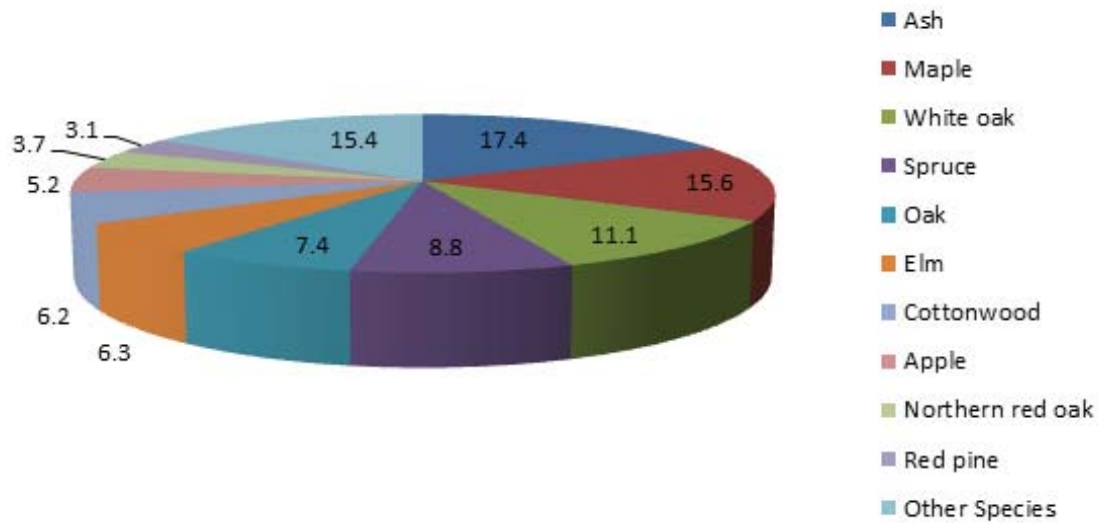
9/17/2013

Species	DBH Class (in)									Total Standard Error
	0-3	3-6	6-12	12-18	18-24	24-30	30-36	36-42	> 42	
Broadleaf Deciduous Large (BDL)										
Oak	0	52	739	1,627	864	348	45	8	8	3,691 (±2,148)
Maple	15	1,097	1,459	540	387	113	73	0	0	3,685 (±483)
White oak	0	88	307	842	642	231	39	0	0	2,149 (±872)
Elm	0	346	765	406	212	83	0	15	15	1,841 (±513)
Northern red oak	0	91	92	208	230	153	15	0	0	790 (±353)
Cottonwood	0	105	121	165	116	91	38	8	8	652 (±139)
Basswood	0	147	245	61	8	0	8	0	0	468 (±125)
Broadleaf Deciduous Large	0	31	24	102	16	8	16	0	8	204 (±65)
Northern hackberry	0	15	70	31	8	8	0	0	0	131 (±56)
Quaking aspen	0	33	57	16	8	0	8	0	0	122 (±70)
Black walnut	0	21	15	29	15	0	0	0	0	80 (±53)
Northern catalpa	0	0	15	28	14	0	0	0	0	57 (±46)
Total	15	2,025	3,909	4,055	2,520	1,035	243	30	38	13,871 (±2,188)
Broadleaf Deciduous Medium (BDM)										
Ash	33	776	863	206	107	14	0	0	0	1,999 (±245)
Birch	0	236	159	30	8	0	0	0	0	433 (±83)
Honeylocust	8	55	102	39	15	0	0	0	0	219 (±72)
Broadleaf Deciduous Medium	16	16	114	55	0	0	0	0	0	201 (±64)
Willow	0	16	65	33	33	8	0	15	0	170 (±52)
River birch	0	24	64	8	24	0	0	0	0	119 (±37)
Boxelder	0	8	41	8	0	7	0	0	0	64 (±47)
Ohio buckeye	0	0	8	0	0	0	0	0	0	8 (±7)
Total	57	1,131	1,415	378	187	29	0	15	0	3,213 (±372)
Broadleaf Deciduous Small (BDS)										
Apple	0	700	586	30	0	0	0	0	0	1,315 (±219)
Black cherry	0	55	93	23	15	0	8	0	0	194 (±115)
Broadleaf Deciduous Small	0	48	47	0	0	0	0	0	0	95 (±39)
Japanese tree lilac	0	49	25	0	0	0	0	0	0	74 (±54)
Mountain ash	0	8	31	0	7	0	0	0	0	46 (±22)
Mulberry	0	7	23	0	7	0	0	0	0	37 (±12)
Total	0	866	805	53	29	0	8	0	0	1,761 (±298)
Broadleaf Evergreen Large (BEL)										
Broadleaf Evergreen Large	0	0	0	0	7	0	0	0	0	7 (±6)
Total	0	0	0	0	7	0	0	0	0	7 (±6)
Broadleaf Evergreen Medium (BEM)										
Broadleaf Evergreen Medium	0	0	15	0	0	0	0	0	0	15 (±10)
Southern magnolia	0	0	8	0	0	0	0	0	0	8 (±8)
Total	0	0	23	0	0	0	0	0	0	23 (±12)
Broadleaf Evergreen Small (BES)										
Broadleaf Evergreen Small	16	0	0	0	0	0	0	0	0	16 (±15)
Total	16	0	0	0	0	0	0	0	0	16 (±15)
Conifer Evergreen Large (CEL)										
Spruce	87	1,250	908	160	8	0	0	0	0	2,414 (±433)
Red pine	0	76	353	288	45	0	0	0	0	763 (±433)
Eastern white pine	15	139	164	61	54	15	0	0	0	448 (±151)
Northern white cedar	47	197	31	8	0	0	0	0	0	282 (±152)
Total	149	1,662	1,456	517	107	15	0	0	0	3,907 (±652)
Conifer Evergreen Medium (CEM)										
Blue spruce	0	8	49	0	0	0	0	0	0	56 (±39)
Total	0	8	49	0	0	0	0	0	0	56 (±39)
Conifer Evergreen Small (CES)										
Eastern red cedar	55	77	250	98	15	0	0	0	0	494 (±155)
Total	55	77	250	98	15	0	0	0	0	494 (±155)
Grand Total	292	5,769	7,906	5,101	2,866	1,079	251	45	38	23,348 (±2,969)

Big Lake

Species Distribution of Public Trees

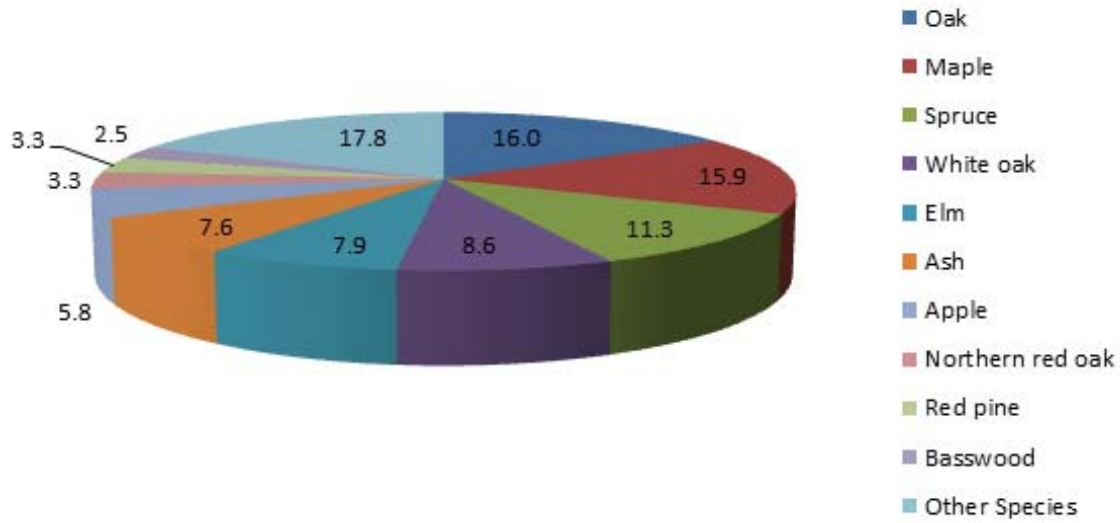
10/18/2013



Species	Percent
Ash	17.4
Maple	15.6
White oak	11.1
Spruce	8.8
Oak	7.4
Elm	6.3
Cottonwood	6.2
Apple	5.2
Northern red oak	3.7
Red pine	3.1
Other Species	15.4
Total	100.0

Species Distribution of Private Trees

10/18/2013

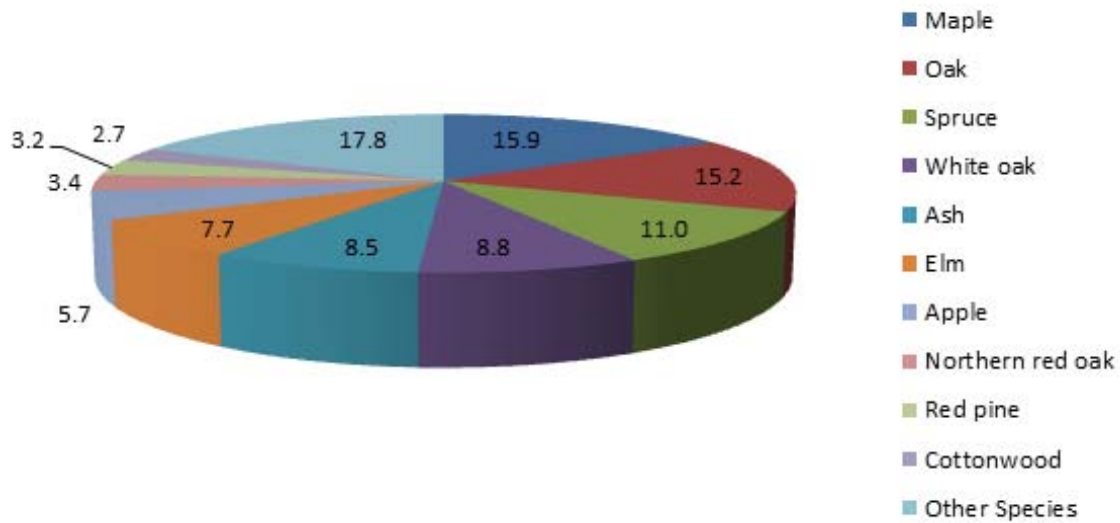


Species	Percent
Oak	16.0
Maple	15.9
Spruce	11.3
White oak	8.6
Elm	7.9
Ash	7.6
Apple	5.8
Northern red oak	3.3
Red pine	3.3
Basswood	2.5
Other Species	17.8
Total	100.0

Big Lake

Species Distribution of All Trees

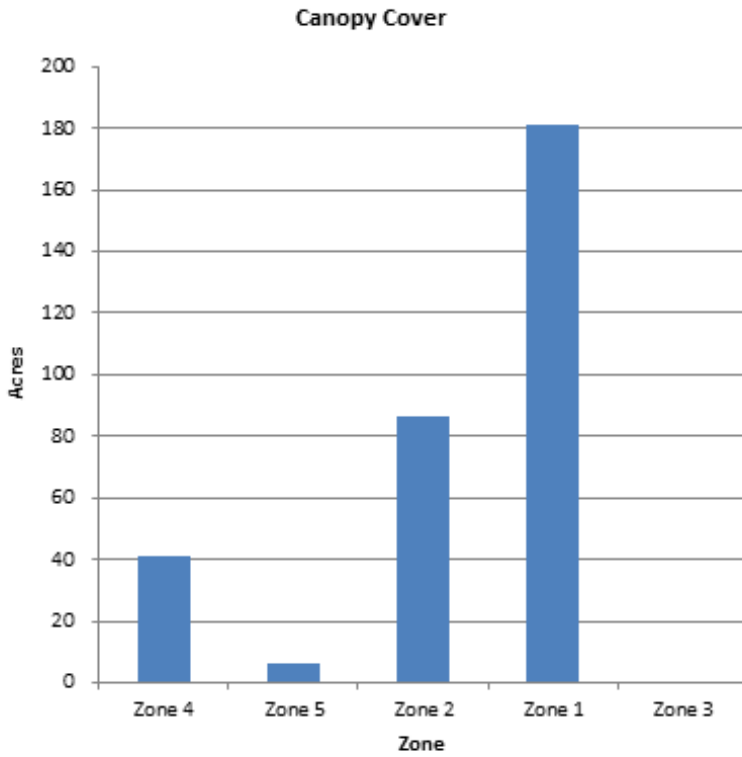
10/18/2013



Species	Percent
Maple	15.9
Oak	15.2
Spruce	11.0
White oak	8.8
Ash	8.5
Elm	7.7
Apple	5.7
Northern red oak	3.4
Red pine	3.2
Cottonwood	2.7
Other Species	17.8
Total	100.0

Canopy Cover of All Trees (Acres)

10/18/2013



Zone	Acres	% of Total Canopy Cover
Zone 4	41	13.1
Zone 5	6	2.0
Zone 2	86	27.4
Zone 1	181	57.5
Zone 3	0	0.1
Citywide total	316	100.0

	Total Land Area	Total Street and Sidewalk Area	Total Canopy Cover	Canopy Cover as % of Total Land Area	Canopy Cover as % of Total Streets and Sidewalks
Citywide Total	0	0	316	0.00	0.00

Condition Rating for Public Trees by Species

10/18/2013

Species	Condition Rating	Tree Count	Standard Error	% of Species	% of Public Trees
Apple	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	15	(±49)	12.64	0.66
	Total		15	(±49)	12.64
Ash	non-recoverable	0	(±0)	0.00	0.00
	significant defects	2	(±11)	0.50	0.09
	minor defects	7	(±21)	1.76	0.31
	no obvious defects	41	(±135)	10.33	1.79
	Total		50	(±152)	12.60
Basswood	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	6	(±26)	13.03	0.26
	Total		6	(±26)	13.03
Birch	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	1	(±8)	13.04	0.04
	Total		1	(±8)	13.04
Black cherry	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	2	(±12)	13.64	0.09
	Total		2	(±12)	13.64
Black walnut	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	2	(±18)	14.29	0.09
	Total		2	(±18)	14.29
Broadleaf Deciduous Large	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	3	(±18)	12.76	0.13
	Total		3	(±18)	12.76
Broadleaf Deciduous Medium	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	4	(±25)	12.42	0.18
	Total		4	(±25)	12.42
Broadleaf Deciduous Small	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	1	(±9)	14.29	0.04
	Total		1	(±9)	14.29
Cottonwood	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	18	(±83)	12.76	0.79
	Total		18	(±83)	12.76
Eastern red cedar	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	5	(±26)	13.27	0.22
	Total		5	(±26)	13.27

Condition Rating for Public Trees by Species

10/18/2013

Species	Condition Rating	Tree Count	Standard Error	% of Species	% of Public Trees
Eastern white pine	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	7	(±34)	13.04	0.31
	Total	7	(±34)	13.04	0.31
Elm	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	19	(±79)	13.23	0.83
	Total	19	(±79)	13.23	0.83
Honeylocust	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	4	(±19)	13.04	0.18
	Total	4	(±19)	13.04	0.18
Maple	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	45	(±115)	12.66	1.97
	Total	45	(±115)	12.66	1.97
Mountain ash	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	2	(±16)	13.04	0.09
	Total	2	(±16)	13.04	0.09
Mulberry	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	2	(±18)	14.29	0.09
	Total	2	(±18)	14.29	0.09
Northern hackberry	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	1	(±8)	13.04	0.04
	Total	1	(±8)	13.04	0.04
Northern red oak	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	11	(±57)	13.04	0.48
	Total	11	(±57)	13.04	0.48
Northern white cedar	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	2	(±18)	14.29	0.09
	Total	2	(±18)	14.29	0.09
Oak	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	23	(±125)	13.61	1.01
	Total	23	(±125)	13.61	1.01
Quaking aspen	non-recoverable	0	(±0)	0.00	0.00
	significant defects	0	(±0)	0.00	0.00
	minor defects	0	(±0)	0.00	0.00
	no obvious defects	1	(±8)	12.22	0.04
	Total	1	(±8)	12.22	0.04

Condition Rating for Public Trees by Species

10/18/2013

Species	Condition Rating	Tree Count Standard Error	% of Species	% of Public Trees
Red pine	non-recoverable	0 (± 0)	0.00	0.00
	significant defects	0 (± 0)	0.00	0.00
	minor defects	0 (± 0)	0.00	0.00
	no obvious defects	9 (± 49)	12.85	0.39
	Total	9 (± 49)	12.85	0.39
Spruce	non-recoverable	0 (± 0)	0.00	0.00
	significant defects	0 (± 0)	0.00	0.00
	minor defects	0 (± 0)	0.00	0.00
	no obvious defects	26 (± 82)	12.92	1.14
	Total	26 (± 82)	12.92	1.14
White oak	non-recoverable	0 (± 0)	0.00	0.00
	significant defects	0 (± 0)	0.00	0.00
	minor defects	0 (± 0)	0.00	0.00
	no obvious defects	33 (± 186)	13.02	1.44
	Total	33 (± 186)	13.02	1.44
Willow	non-recoverable	0 (± 0)	0.00	0.00
	significant defects	0 (± 0)	0.00	0.00
	minor defects	0 (± 0)	0.00	0.00
	no obvious defects	3 (± 24)	12.22	0.13
	Total	3 (± 24)	12.22	0.13

Big Lake

Total Annual Benefits, Net Benefits, and Costs for Public Trees

10/18/2013

Benefits	Total (\$) Standard Error	\$/tree Standard Error	\$/capita Standard Error
Energy	68,097 (±14,538)	29.81 (±6.36)	0.00(±0.00)
CO2	4,439 (±1,036)	1.94 (±0.45)	0.00(±0.00)
Air Quality	10,704 (±2,363)	4.69 (±1.03)	0.00(±0.00)
Stormwater	74,453 (±17,709)	32.59 (±7.75)	0.00(±0.00)
Aesthetic/Other	68,313 (±14,244)	29.90 (±6.23)	0.00(±0.00)
Total Benefits	226,007 (±49,739)	98.93 (±21.77)	0.00(±0.00)
Costs			
Planting	0	0.00	0.00
Contract Pruning	0	0.00	0.00
Pest Management	0	0.00	0.00
Irrigation	0	0.00	0.00
Removal	0	0.00	0.00
Administration	0	0.00	0.00
Inspection/Service	0	0.00	0.00
Infrastructure Repairs	0	0.00	0.00
Litter Clean-up	0	0.00	0.00
Liability/Claims	0	0.00	0.00
Other Costs	0	0.00	0.00
Total Costs	0	0.00	0.00
Net Benefits	226,007 (±49,739)	98.93 (±21.77)	0.00(±0.00)
Benefit-cost ratio	0.00 (±0.00)		