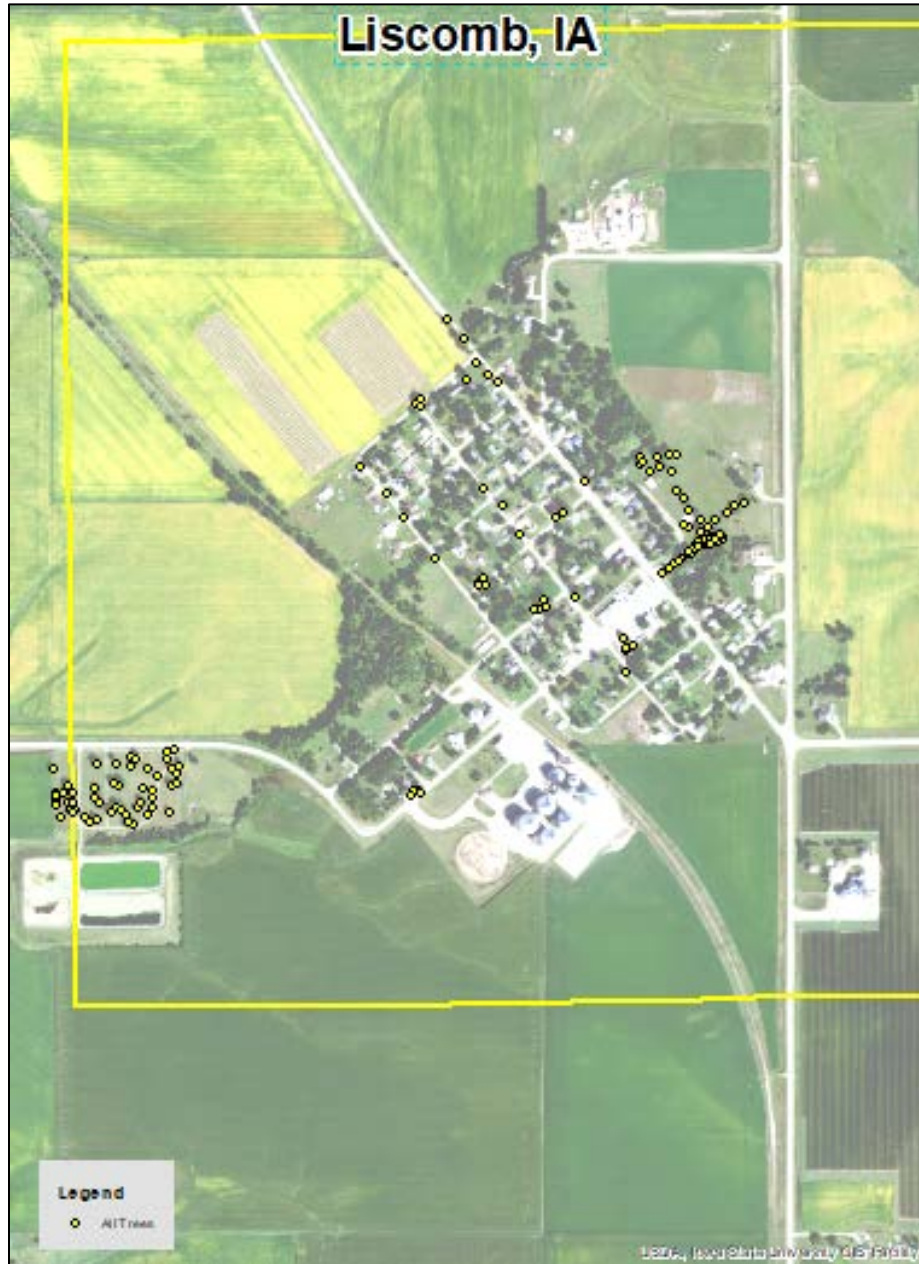


Liscomb, IA



2020 Urban Forest Management Plan
Prepared by Gabriele Edwards
Iowa Department of Natural Resources



Table of Contents

Executive Summary.....	1
Overview	1
Inventory and Results	1
Recommendations	1
Introduction	2
Inventory.....	2
Inventory Results	3
Annual Benefits.....	3
Annual Energy Benefits.....	3
Annual Stormwater Benefits.....	3
Annual Air Quality Benefits.....	3
Annual Carbon Benefits	3
Annual Aesthetics Benefits	3
Financial Summary of all Benefits.....	3
Forest Structure	4
Species Distribution	4
Age Class	4
Condition: Wood and Foliage	4
Management Needs.....	5
Canopy Cover	5
Land Use and Location	5
Recommendations	5
Risk Management	5
Pruning Cycle	6
Planting	6
Continual Monitoring.....	6
Six Year Maintenance Plan with No Additional Funding	Error! Bookmark not defined.
Emerald Ash Borer Plan	7
Ash Tree Removal	7
Treatment of Ash Trees	7
EAB Quarantines	7
Wood Disposal	7
Canopy Replacement	7
Postponed Work	8
Monitoring	8
Private Ash Trees	8
Budget.....	Error! Bookmark not defined.
Works Cited.....	10
Appendix A: i-Tree Data	11
Table 1: Annual Energy Benefits	11
Table 2: Annual Stormwater Benefits.....	12
Table 3: Annual Air Quality Benefits.....	13
Table 4: Annual Carbon Stored.....	14
Table 5: Annual Carbon Sequestered	15

Table 6: Annual Social and Aesthetic Benefits.....	16
Table 7: Summary of Benefits in Dollars.....	17
Figure 1: Species Distribution	18
Figure 2: Relative Age Class	18
Figure 3: Foliage Condition	19
Figure 4: Wood Condition.....	19
Figure 5: Canopy Cover in Acres	20
Figure 6: Land Use of city/park trees.....	21
Figure 7: Location of city/park trees.....	21
Appendix B: ArcGIS Mapping	22
Figure 1: Location of Ash Trees.....	22
Figure 2: Location of EAB symptoms	22
Figure 3: Location of Poor Condition Trees	23
Figure 4: Location of Trees with Recommended Maintenance.....	24
Figure 5: Maintenance Tasks <i>*City ownership of the trees recommended for removal should be verified prior to any removal*</i>	25
Appendix C: Liscomb Tree Ordinances	26

Executive Summary

Overview

This plan was developed to assist the City of Liscomb with managing its urban forest, including budgeting and future planning. Trees can provide a multitude of benefits to the community, and sound management allows a community to best take advantage of these benefits. Management is especially important considering the serious threats posed by forest pests such as the emerald ash borer (EAB). EAB is an invasive insect imported from Eastern Asia on wood shipping crates that kills all species of ash trees (this does not include mountain ash). There is a strong possibility that 11% of Liscomb's city owned trees (ash) will die once EAB becomes established in the community, unless preventative treatment is used. With proper planning and management, the costs of removing dead and dying trees can be extended over years, mitigating public safety issues.

Inventory and Results

In 2019, a tree inventory was conducted using Global Positioning System (GPS) data collectors. The inventory was a complete inventory of street and park trees. Below are some key findings of the 149 trees inventoried.

- Liscomb's trees provide \$29,733 of benefits annually, an average of \$199 a tree
- There are over 31 species of trees
- The top three genera are: maple 20%, spruce 14%, and oak 12%
- 83% of trees are in need of some type of management
- 16 trees are recommended for removal

Recommendations

The core recommendations are detailed in the Recommendations Section. The Emerald Ash Borer Plan includes management recommendations as well. Below are some key recommendations.

- There are 2 trees that are recommended for immediate removal. [*City ownership of the trees recommended for removal should be verified prior to any removal*](#)
- The 17 ash trees should be carefully examined for symptoms that could be related to an EAB infestation
- All trees should be pruned on a routine schedule- one third of the city every other year
- Plant a diverse mix of trees that do not include: ash, maple, cottonwood, poplar, box elder, Chinese elm, evergreen, willow or black walnut
- Check ash trees with a visual survey yearly
- An annual budget of approximately \$4,263 could remove 15 of the 17 ash trees, remove the 2 immediate concern trees, prune the 7 immediate concern trees, and plant 60 trees.

Introduction

This plan was developed to assist Liscomb with the management, budgeting and future planning of their urban forest. Across the state, forestry budgets continue to decrease with more and more of that money spent on tree removal. With the anticipated arrival of Emerald Ash Borer (EAB), an invasive pest that kills native ash trees, it is time to prepare for the increased costs of tree removal or treatment and replacement planting. With proper planning and management of the current canopy in Liscomb, these costs can be extended over years and public safety issues from dead and dying ash trees mitigated.

Trees are an important component of Liscomb's infrastructure and one of the greatest assets to the community. The benefits of trees are immense. Trees provide the community with improved air quality, stormwater runoff interception, energy conservation, lower traffic speeds, increased property values, reduced crime, improved mental health and create a desirable place to live, to name just a few benefits. It is essential that these benefits be maintained for the people of Liscomb and future generations through good urban forestry management.

Good urban forestry management involves setting goals and developing management strategies to achieve these goals. An essential part of developing management strategies is a comprehensive public tree inventory. The inventory supplies information that will be used for maintenance, removal schedules, tree planting and budgeting. Basing actions on this information will help meet Liscomb's urban forestry goals.

Inventory

In 2019, a tree inventory was conducted that included 100% of the city owned trees on both streets and parks. The tree data was collected using a handheld Global Positioning System (GPS) receiver. The data collector gives Geographic Information Systems (GIS) coordinates with an accuracy of 3 meters, which can be used in Arc GIS as an active GIS data layer. Because the inventory is a digital document the data can be updated with new information and become a working document.

The programming used to collect tree information on the data collectors was written to be compatible with a state-of-the-art software suite called i-Tree. i-Tree was developed by the USDA Forest Service to quantify the structure of community trees and the environmental services that trees provide. The i-Tree suite is a public domain which can be accessed for free.

To quantify the urban forest structure and benefits, specific data is collected for each tree. This data includes: location, land use, species, diameter at 4.5 ft, recommended maintenance, priority of that maintenance, leaf health, and wood condition. Additionally, signs and symptoms associated with EAB were noted for all ash trees. The signs and symptoms noted were canopy dieback, epicormic shoots, bark splitting, D-shaped borer exit holes, and wood pecker damage.

Inventory Results

The data collected for the 149 city trees was entered into the USDA Forest service program Street Tree Resource Analysis Tool for Urban forestry Management as part of the i-Tree suite. The following are results from the i-Tree STREETS analysis.

Annual Benefits

Annual Energy Benefits

Trees conserve energy by shading buildings and blocking winds. Liscomb's trees reduce energy related costs by approximately \$7,693 annually (Appendix A, Table 1). These savings are both in Electricity (36.4 MWh) and in Natural Gas (5,027.8 Therms).

Annual Stormwater Benefits

Liscomb's trees intercept about 459,411 gallons of rainfall or snow melt a year (Appendix A, Table 2). This interception provides \$12,450 of benefits to the city.

Annual Air Quality Benefits

Air quality is a persistent public health issue in Iowa. The urban forest improves air quality by removing pollutants, lowering air temperature, and reducing energy consumption, which in turn reduces emissions from power plants, and emitting volatile organic matter (ozone). In Liscomb, it is estimated that trees remove 447.7 lbs of air pollution (ozone (O₃), particulate matter less than 10 microns (PM₁₀), carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂)) per year with a net value of \$1,228 (Appendix A, Table 3).

Annual Carbon Benefits

Carbon sequestration and storage reduce the amount of carbon in the atmosphere, mitigating climate change. In Liscomb, trees sequester about 83,222 lbs of carbon a year with an associated value of \$624 (Appendix A, Table 5). In addition, the trees store 1,785,459 lbs of carbon, with a yearly benefit of \$13,391 (Appendix A, Table 4).

Annual Aesthetics Benefits

Social benefits of trees are hard to capture. The analysis does have a calculation for this area that includes: aesthetic value, property values, lowered rates of mental illness and crime, city livability and much more. Liscomb receives \$7,347 in annual social benefits from trees (Appendix A, Table 6).

Financial Summary of all Benefits

According to the USDA Forest Service i-Tree STREETS analysis, Liscomb's trees provide \$29,733 of benefits annually. Benefits of individual trees vary based on size, species, health and location, but on average each of the 149 trees in Liscomb provide approximately \$199 annually (Appendix A, Table 7).

Forest Structure

Species Distribution

Liscomb has over 31 different tree species along city streets and parks (Appendix A, Figure 1). The distribution of trees by genera is as follows:

Maple	30	20%
Spruce	22	14%
Oak	18	12%
Black walnut	18	12%
Ash	17	11%
Mulberry	8	5%
Linden/Basswood	8	5%
Hackberry	6	4%
Cedar	6	4%
Cherry	5	3%
Cottonwood	2	1%
Pine	2	1%
Apple	1	<1%
Elm	1	<1%
Honeylocust	1	<1%
Kentucky Coffeetree	1	<1%
Lilac	1	<1%
Other Broadleaf	2	1%

Age Class

Most of Liscomb's trees (54%) are over 18 inches in diameter at 4.5 ft (Appendix A, Figure 2). For age, it is preferred that the highest amounts of trees are in the smallest size category (a downward slope) to prepare for natural mortality and to maintain canopy cover. Liscomb's size curve is on the smaller side, indicating a younger than average stand.

Condition: Wood and Foliage

Both wood condition and leaf condition are good indicators of the overall health of the urban forest. The foliage condition results for Liscomb indicate that 85% of the trees are in good health, with only 3% of the foliage in poor health, dead or dying (Appendix A, Figure 3 & Appendix B, Figure 3). Only 26% of Liscomb's trees are in good health for wood condition (appendix A, Figure 4 & Appendix B, Figure 3). Wood condition that is in poor health, dead or dying is about 14% of the population. This 14% is an estimate of trees that need management follow up.

Management Needs

The following outlines the specific management needs of the street and park trees by number of trees and percent of canopy (Appendix B, Figure 3).

Crown Cleaning	61	10%
Crown Reduction	23	15%
Crown Raising	18	12%
Tree Removal	16	10%
Tree Staking	7	4%

Canopy Cover

The total canopy with both private and public trees is 7%, 42.52 acres. The canopy cover included in the Liscomb inventory includes approximately 4.25 acres (Appendix A, Figure 4). The City's Canopy goal is to increase canopy by 3%, in 30 years. To achieve this goal it is estimated that 46 trees need to be planted annually on public and private lands.

Land Use and Location

The majority of Liscomb's city and park trees are in planting strips in single family residential neighborhoods (Appendix A, Figure 6 & Appendix A, Figure7). The following describes the land use and locations for the street and park trees.

<u>Land Use</u>	
Park/vacant/other	81%
Single family residential	18%
<u>Location</u>	
Front yard	87%
Planting strip	12%

Recommendations

Risk Management

Hazardous trees can be a significant threat to both people and property. Trees that are dead or dying, or that have large issues such as trunk cracks longer than 18 inches should be removed. Broken branches and branches that interfere with motorist's vision of pedestrians, vehicles, traffic signs and signals, etc should be removed.

Hazardous trees

Liscomb has 9 immediate concern trees, 8 of which over 18 inches in diameter at 4.5 ft that should be addressed immediately. Please refer to the six year maintenance plan at the end of this section. After all of the immediate concern trees are addressed, there should be follow up on the trees marked as needing maintenance. There are a total of 116 trees with these needs.

Poor tree species

After the removal of the critical concern trees, ash trees in poor health should be assessed for removal (Appendix B, Figure 3 & Appendix B, Figure 4). There are 16 trees identified as needing removal. There are a total of 17 ash trees, and none of those have signs and symptoms that have been associated with EAB. In addition, there are 22 trees that are in poor health. [*City ownership of the trees recommended for removal should be verified prior to any removal*](#)

Pruning Cycle

Proper pruning can extend the life and good health of trees, as well as reduce public safety issues. In the Management Needs section of the Findings there are four main maintenance issues to be addressed: routine pruning, crown cleaning, crown raising, and crown reduction. Crown cleaning removes dead, diseased, and damaged limbs. Crown raising is the removal of lower branches that are 2 inches in diameter or larger in the case of providing clearance for pedestrians or vehicles. Crown reduction is removing individual limbs from structures or utility wires. It is recommended that all trees be pruned on a routine schedule every five to seven years. Please refer to the six year maintenance plan for further information.

Planting

Most of the planting over the next 5 years will replace the trees that are removed. It is recommended to plant 1.2 trees for every tree removed, since survival rates will not be 100%. Please refer to the six year maintenance plan at the end of this section. It is not essential that the new trees be planted in the same location of the trees being removed. However, maintaining the same number of trees helps ensure continuation of the benefits of the existing forest in Liscomb.

It is important to plant a diverse mix of species in the urban forest to maintain canopy health, since most insects and diseases target a genus (ash) or species (green ash) of trees. Current diversity recommendations advise that a genus (i.e. maple, oak) not make up more than 20% of the urban forest and a single species (i.e. silver maple, sugar maple, white oak, bur oak) not make up more than 10% of the total urban forest. Presently, the forest is heavily planted with maple (21%) (Appendix A, Figure 1). Maples should not be planted until this percentage can be lowered. Also, ash trees have not been recommended since 2002, due to the threat of EAB. Other species to avoid because they are public nuisances include: cottonwood, poplar, box elder, Chinese elm, evergreen, willow or black walnut.

Continual Monitoring

Due to the threat of EAB, it is important to continuously check the health of ash trees. It is recommended that ash trees be checked with a visual survey every year for tree decline and for the following signs and symptoms: canopy dieback, epicormic shoots, bark splitting, D-shaped borer exit holes, and wood pecker damage.

Emerald Ash Borer Plan

Ash Tree Removal

Tree removal will be prioritized with dead, dying, hazardous trees to be removed first (Appendix B, Figure 4). Next will be all ash in poor condition and displaying signs and symptoms of EAB (Appendix B, Figure 2 & Appendix B, Figure 3). **City ownership of the tree recommended for removal should be verified prior to any removal**

Treatment of Ash Trees

Chemical treatment can be effective tool for communities to spread removal costs out over several years while allowing trees to continue to provide benefits. However, treatment is not recommended if EAB is more than 15 miles away from the community. For more information on the cost of treatment strategies visit <http://extension.entm.purdue.edu/treecomputer/>

EAB Quarantines

EAB is an extremely destructive plant pest and it is responsible for the death and decline of millions of ash trees. Ash in both forested and urban settings constitute a significant portion of the canopy cover in the United States. Current tools to detect, control, suppress and eradicate this pest are not as robust as the USDA would desire. In order to stay ahead of this hard to detect beetle, the USDA is attempting to contain the beetle before it spreads beyond its known positions by regulating articles.

A regulated article under the USDA's quarantine includes any of the following items:

- emerald ash borer
- firewood of all hardwood species (for example ash, oak, maple and hickory)
- nursery stock and green lumber of ash
- any other ash material, whether living, dead, cut or fallen, including logs, stumps, roots, branches, as well as composted and not composted chips of the genus ash (Mountain ash is not included)

In addition, any other article, product or means of conveyance not listed above may be designated as a regulated article if a USDA inspector determines that it presents a risk of spreading EAB once a quarantine is in effect for your county.

Wood Disposal

A very important aspect of planning is determining how wood infested with EAB will be handled, keeping in mind that quarantines will restrict its movement. Consider who will cut and haul the dead and dying trees? Is there an accessible, secured site big enough to store and sort the hundreds of trees and the associated brush and chips? How will wood be disposed of or utilized? Do you have equipment capable of handling the amount and size of ash trees your tree inventory has identified? Once your county is under quarantine for EAB, contact USDA-APHIS-PPQ at 515-251-4083 or visit the website http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/regulatory.shtml. Wood waste can be disposed of as you normally would if your county is not part of a quarantine.

Canopy Replacement

As budget permits, all removed trees will be replaced. new plantings will be a diverse mix and will not include ash, maple, cottonwood, poplar, box elder, Chinese elm, evergreen, willow or black walnut.

Postponed Work

While finances, staffing and equipment are focused on the management of ash, usual services may be delayed. Tree removal requests on genera other than ash will be prioritized by hazardous or emergency situations only.

Monitoring

It is recommended that ash trees be checked with a visual survey every year for tree death and for the following signs and symptoms: canopy dieback, epicormic shoots, bark splitting, D-shaped borer exit holes, and wood pecker damage.

Private Ash Trees

It is strongly recommended that private property owners start removing ash trees on their property upon arrival of EAB if preventative treatments are not being used.

PROPOSED WORK SCHEDULE AND ESTIMATED COSTS

YEAR 1

ESTIMATED COSTS

Remove 2 immediate concern trees	\$1,400
Prune 7 immediate concern trees	\$210
Plant 10 trees in open locations	\$1,000
Water & Maintenance	\$500
Inspect ash trees for signs of Emerald Ash Borer	

YEAR 2

Remove 3 ash trees	\$2,100
Plant 10 trees in open locations	\$1,000
Water & Maintenance	\$500
Prune 1/3 of city owned trees	\$1,500
Inspect ash trees for signs of Emerald Ash Borer	

YEAR 3

Remove 3 ash trees	\$2,100
Plant 10 trees in open locations	\$1,000
Water & Maintenance	\$500
Inspect ash trees for signs of EAB	

YEAR 4

Remove 3 ash trees	\$2,100
Plant 10 trees in open locations	\$1,000

Water & Maintenance	\$500
Prune 1/3 of city owned trees	\$1,500
Inspect ash trees for signs of EAB	

YEAR 5

Remove 3 ash trees	\$2,100
Plant 10 trees in open locations	\$1,000
Water & Maintenance	\$500
Inspect ash trees for signs of EAB	

YEAR 6

Remove 3 ash trees	\$2,100
Plant 10 trees in open locations	\$1,000
Water & Maintenance	\$500
Prune 1/3 of city owned trees	\$1,470

Average annual budget: \$4,263

Estimated costs based on average costs of \$700/tree for removal, \$100/tree for planting, \$50/tree for water and maintenance, and \$30/tree for pruning.

This plan removes 15 ash trees, or 88% of all ash trees in the city.

Purposed Budget Increase

EAB could potentially kill all ash trees in Liscomb within 4 years of its arrival. To remove all ash trees within 6 years the budget would need to be increased to \$4,600 a year. Additionally, it is recommended that Liscomb apply for grants to fund replacement trees. Utility Company grants are usually between \$500 and \$10,000 for community-based, tree-planting projects that include parks, gateways, cemeteries, nature trails, libraries, nursing homes, and schools.

Another option being considered by many communities is treating a number of selected trees, either to maintain those trees in the landscape or to delay their removal – to spread out the costs and number of trees needing removed all at once. Trunk injection is administered every two years for the life of the tree. If treatment is discontinued, the tree dies. For instance, in this treatment scenario, the average ash diameter is 20 inches and at \$15 per inch, about 4 trees could be treated per year (every other year treatment). This would be 8 trees selected for treatment, and Liscomb would still need to find \$5,400 for removal. Alternatively, if there are 15 treatable trees, it would cost approximately \$2,250 a year for treatment and leave \$1,400 for removal. These are alternatives to straight removal of ash trees. However, whether or not the treatment option is selected, there will be an increased cost of dealing with ash trees if EAB is found in Liscomb. It is suggested to consider increasing the budget to plan for this.

Works Cited

Census Bureau. 2010. <http://censtats.census.gov/data/IA/1601964290.pdf> (April, 2013)

USDA Forest Service, et al. 2006. i-Tree Software Suite v1.0 User's Manual. Pp. 27-40.

McPherson EG, Simpson JR, Peper PJ, Gardner SL, Vargas KE, Ho J, Maco S, Xiao Q. 2005b. City of Charleston, South Carolina, municipal forest resource analysis. Internal Tech Rep. Davis, CA: U.S. Department of Agriculture, Center for Urban Forest Research. p. 57

Nowak, DJ and JF Dwyer. 2007. Understanding the benefits and costs of urban forest ecosystems. In: Kuser, J. (ed.) Urban and Community Forestry in the Northeast. New York: Springer. Pp. 25-46.

Peper, Paula J; McPherson, E Gregory; Simpson, James R; Vargas, Kelaine E; Xiao, Qingfu 2009. Lower Midwest community tree guide: benefits, costs, and strategic planting. Gen. Tech. Rep. PSW-GTR-219. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. p.115

Appendix A: i-Tree Data

Table 1: Annual Energy Benefits

Annual Energy Benefits of Public Trees

4/9/2020

Species	Total Electricity (MWh)	Electricity (\$)	Total Natural Gas (Therms)	Natural Gas (\$)	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Black walnut	5.1	388	719.3	705	1,093	(N/A)	12.1	14.2	60.74
Green ash	5.8	444	783.6	768	1,212	(N/A)	11.4	15.8	71.27
Spruce	2.1	161	264.8	260	421	(N/A)	9.4	5.5	30.05
Sugar maple	2.3	178	316.2	310	488	(N/A)	6.7	6.3	48.79
Pin oak	3.1	234	417.4	409	643	(N/A)	6.0	8.4	71.43
Mulberry	1.1	86	173.7	170	256	(N/A)	5.4	3.3	32.06
Silver maple	2.7	208	364.2	357	565	(N/A)	4.7	7.3	80.70
Northern hackberry	1.6	120	219.7	215	335	(N/A)	4.0	4.4	55.82
Northern white cedar	0.6	42	72.4	71	113	(N/A)	4.0	1.5	18.86
Blue spruce	0.6	45	79.6	78	123	(N/A)	3.4	1.6	24.62
Maple	1.2	93	166.3	163	256	(N/A)	3.4	3.3	51.12
Black cherry	0.2	15	33.9	33	48	(N/A)	3.4	0.6	9.61
Littleleaf linden	1.1	86	167.6	164	251	(N/A)	2.7	3.3	62.69
Northern red oak	0.7	54	101.1	99	153	(N/A)	2.7	2.0	38.17
American basswood	1.4	107	204.3	200	307	(N/A)	2.7	4.0	76.84
Black maple	0.9	65	119.7	117	182	(N/A)	2.0	2.4	60.68
Norway maple	0.6	49	95.6	94	143	(N/A)	2.0	1.9	47.59
Norway spruce	0.6	42	73.8	72	115	(N/A)	2.0	1.5	38.17
Swamp white oak	0.8	64	126.5	124	188	(N/A)	2.0	2.4	62.74
Cottonwood	0.7	50	93.7	92	142	(N/A)	1.3	1.8	70.91
Broadleaf Deciduous Medium	0.6	49	94.8	93	142	(N/A)	1.3	1.8	70.84
Boxelder	0.5	39	72.5	71	110	(N/A)	1.3	1.4	55.14
Bur oak	0.3	20	38.1	37	57	(N/A)	0.7	0.7	57.32
Apple	0.2	15	31.6	31	46	(N/A)	0.7	0.6	46.14
Elm	0.1	7	13.7	13	21	(N/A)	0.7	0.3	20.64
Oak	0.3	25	46.9	46	71	(N/A)	0.7	0.9	70.91
Honeylocust	0.4	28	47.4	46	74	(N/A)	0.7	1.0	74.28
Kentucky coffeetree	0.2	18	27.0	26	44	(N/A)	0.7	0.6	44.23
Red pine	0.2	14	24.6	24	38	(N/A)	0.7	0.5	38.17
Eastern white pine	0.2	14	24.6	24	38	(N/A)	0.7	0.5	38.17
Lilac	0.1	6	12.8	13	18	(N/A)	0.7	0.2	18.19
Total	36.4	2,766	5,027.8	4,927	7,693	(N/A)	100.0	100.0	51.63

Table 2: Annual Stormwater Benefits

Annual Stormwater Benefits of Public Trees						
4/9/2020						
Species	Total rainfall interception (Gal)	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Black walnut	64,374	1,745	(N/A)	12.1	14.0	96.92
Green ash	73,790	2,000	(N/A)	11.4	16.1	117.63
Spruce	39,732	1,077	(N/A)	9.4	8.6	76.91
Sugar maple	30,521	827	(N/A)	6.7	6.6	82.71
Pin oak	35,728	968	(N/A)	6.0	7.8	107.58
Mulberry	5,453	148	(N/A)	5.4	1.2	18.47
Silver maple	45,841	1,242	(N/A)	4.7	10.0	177.47
Northern hackberry	12,691	344	(N/A)	4.0	2.8	57.32
Northern white cedar	6,402	174	(N/A)	4.0	1.4	28.92
Blue spruce	8,469	230	(N/A)	3.4	1.8	45.90
Maple	10,830	293	(N/A)	3.4	2.4	58.70
Black cherry	674	18	(N/A)	3.4	0.1	3.65
Littleleaf linden	14,975	406	(N/A)	2.7	3.3	101.46
Northern red oak	7,118	193	(N/A)	2.7	1.5	48.22
American basswood	18,599	504	(N/A)	2.7	4.0	126.01
Black maple	8,601	233	(N/A)	2.0	1.9	77.70
Norway maple	7,541	204	(N/A)	2.0	1.6	68.12
Norway spruce	13,814	374	(N/A)	2.0	3.0	124.79
Swamp white oak	8,723	236	(N/A)	2.0	1.9	78.80
Cottonwood	7,886	214	(N/A)	1.3	1.7	106.85
Broadleaf Deciduous Medium	7,529	204	(N/A)	1.3	1.6	102.01
Boxelder	6,179	167	(N/A)	1.3	1.3	83.73
Bur oak	2,591	70	(N/A)	0.7	0.6	70.21
Apple	1,174	32	(N/A)	0.7	0.3	31.82
Elm	608	16	(N/A)	0.7	0.1	16.47
Oak	3,943	107	(N/A)	0.7	0.9	106.85
Honeylocust	4,685	127	(N/A)	0.7	1.0	126.96
Kentucky coffeetree	1,466	40	(N/A)	0.7	0.3	39.72
Red pine	4,605	125	(N/A)	0.7	1.0	124.79
Eastern white pine	4,605	125	(N/A)	0.7	1.0	124.79
Lilac	264	7	(N/A)	0.7	0.1	7.17
Citywide total	459,411	12,450	(N/A)	100.0	100.0	83.56

Table 3: Annual Air Quality Benefits

Annual Air Quality Benefits of Public Trees

4/9/2020

Species	Deposition (lb)				Total Depos. (\$)	Avoided (lb)				Total Avoided (\$)	BVOC Emissions (lb)	BVOC Emissions (\$)	Total (lb)	Total Standard (\$) Error	% of Total Trees	Avg. \$/tree
	O ₃	NO ₂	PM ₁₀	SO ₂		NO ₂	PM ₁₀	VOC	SO ₂							
Black walnut	8.5	1.4	4.0	0.4	45	24.6	3.6	3.4	23.2	153	0.0	0	69.0	198 (N/A)	12.1	11.00
Green ash	11.1	1.8	5.1	0.5	58	27.8	4.1	3.9	26.5	173	0.0	0	80.6	232 (N/A)	11.4	13.64
Spruce	4.7	0.9	3.8	0.6	31	9.9	1.5	1.4	9.6	62	-20.9	-78	11.5	15 (N/A)	9.4	1.05
Sugar maple	4.7	0.8	2.3	0.2	25	11.1	1.6	1.6	10.6	70	-3.7	-14	29.3	81 (N/A)	6.7	8.11
Pin oak	6.4	1.1	3.3	0.3	35	14.7	2.1	2.0	13.9	91	-11.9	-45	32.0	82 (N/A)	6.0	9.10
Mulberry	1.8	0.3	0.8	0.1	10	5.6	0.8	0.8	5.2	34	0.0	0	15.3	44 (N/A)	5.4	5.49
Silver maple	8.8	1.5	4.2	0.4	47	12.9	1.9	1.8	12.4	81	-4.6	-17	39.3	111 (N/A)	4.7	15.82
Northern hackberry	1.8	0.3	0.9	0.1	10	7.6	1.1	1.0	7.1	47	0.0	0	19.9	57 (N/A)	4.0	9.46
Northern white cedar	0.7	0.1	0.6	0.1	5	2.6	0.4	0.4	2.5	16	-2.1	-8	5.2	13 (N/A)	4.0	2.15
Blue spruce	1.2	0.2	1.0	0.1	8	2.8	0.4	0.4	2.7	18	-3.1	-12	5.7	14 (N/A)	3.4	2.70
Maple	2.6	0.5	1.2	0.1	14	5.8	0.8	0.8	5.5	36	-0.9	-3	16.6	47 (N/A)	3.4	9.40
Black cherry	0.1	0.0	0.1	0.0	1	1.0	0.1	0.1	0.9	6	0.0	0	2.3	7 (N/A)	3.4	1.32
Littleleaf linden	2.9	0.5	1.4	0.1	16	5.6	0.8	0.8	5.2	34	-1.3	-5	15.8	45 (N/A)	2.7	11.21
Northern red oak	1.5	0.3	0.7	0.1	8	3.4	0.5	0.5	3.2	21	-2.1	-8	7.9	21 (N/A)	2.7	5.27
American basswood	2.8	0.5	1.3	0.1	15	6.8	1.0	0.9	6.4	42	-2.3	-9	17.6	49 (N/A)	2.7	12.16
Black maple	2.2	0.4	1.0	0.1	12	4.1	0.6	0.6	3.9	25	-0.7	-3	12.1	35 (N/A)	2.0	11.54
Norway maple	1.7	0.3	0.8	0.1	9	3.2	0.5	0.4	2.9	19	-0.4	-1	9.5	27 (N/A)	2.0	9.10
Norway spruce	1.7	0.3	1.3	0.2	11	2.6	0.4	0.4	2.5	16	-8.6	-32	0.9	-5 (N/A)	2.0	-1.58
Swamp white oak	1.8	0.3	0.9	0.1	10	4.1	0.6	0.6	3.8	26	-0.4	-2	11.9	34 (N/A)	2.0	11.30
Cottonwood	1.0	0.2	0.5	0.0	5	3.2	0.5	0.4	3.0	20	0.0	0	8.7	25 (N/A)	1.3	12.48
Broadleaf Deciduous Medium	1.7	0.3	0.8	0.1	9	3.1	0.5	0.4	2.9	19	-0.4	-1	9.5	27 (N/A)	1.3	13.58
Bowelder	0.9	0.1	0.4	0.0	5	2.5	0.4	0.3	2.3	15	-0.4	-1	6.6	19 (N/A)	1.3	9.31
Bur oak	0.3	0.0	0.1	0.0	1	1.3	0.2	0.2	1.2	8	0.0	0	3.3	9 (N/A)	0.7	9.34
Apple	0.4	0.1	0.2	0.0	2	1.0	0.1	0.1	0.9	6	0.0	0	2.9	8 (N/A)	0.7	8.35
Elm	0.0	0.0	0.0	0.0	0	0.5	0.1	0.1	0.4	3	0.0	0	1.1	3 (N/A)	0.7	2.99
Oak	0.5	0.1	0.2	0.0	3	1.6	0.2	0.2	1.5	10	0.0	0	4.4	12 (N/A)	0.7	12.48
Honeylocust	0.9	0.2	0.4	0.0	5	1.7	0.3	0.2	1.7	11	-0.8	-3	4.7	13 (N/A)	0.7	12.87
Kentucky coffeetree	0.1	0.0	0.1	0.0	1	1.1	0.2	0.2	1.1	7	0.0	0	2.6	7 (N/A)	0.7	7.42
Red pine	0.6	0.1	0.4	0.1	4	0.9	0.1	0.1	0.8	5	-2.9	-11	0.3	-2 (N/A)	0.7	-1.58
Eastern white pine	0.6	0.1	0.4	0.1	4	0.9	0.1	0.1	0.8	5	-2.9	-11	0.3	-2 (N/A)	0.7	-1.58
Lilac	0.0	0.0	0.0	0.0	0	0.4	0.1	0.1	0.3	2	0.0	0	0.9	3 (N/A)	0.7	2.55
Citywide total	74.1	12.7	38.4	4.0	407	174.2	25.3	24.2	165.1	1,085	-70.3	-264	447.7	1,228 (N/A)	100.0	8.24

Table 4: Annual Carbon Stored

Stored CO2 Benefits of Public Trees						
4/9/2020						
Species	Total Stored CO2 (lbs)	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Black walnut	279,645	2,097	(N/A)	12.1	15.7	116.52
Green ash	373,175	2,799	(N/A)	11.4	20.9	164.64
Spruce	52,329	392	(N/A)	9.4	2.9	28.03
Sugar maple	141,762	1,063	(N/A)	6.7	7.9	106.32
Pin oak	170,554	1,279	(N/A)	6.0	9.6	142.13
Mulberry	28,296	212	(N/A)	5.4	1.6	26.53
Silver maple	217,289	1,630	(N/A)	4.7	12.2	232.81
Northern hackberry	25,765	193	(N/A)	4.0	1.4	32.21
Northern white cedar	4,281	32	(N/A)	4.0	0.2	5.35
Blue spruce	7,843	59	(N/A)	3.4	0.4	11.76
Maple	28,561	214	(N/A)	3.4	1.6	42.84
Black cherry	2,185	16	(N/A)	3.4	0.1	3.28
Littleleaf linden	60,956	457	(N/A)	2.7	3.4	114.29
Northern red oak	32,527	244	(N/A)	2.7	1.8	60.99
American basswood	102,758	771	(N/A)	2.7	5.8	192.67
Black maple	23,836	179	(N/A)	2.0	1.3	59.59
Norway maple	28,577	214	(N/A)	2.0	1.6	71.44
Norway spruce	22,471	169	(N/A)	2.0	1.3	56.18
Swamp white oak	30,171	226	(N/A)	2.0	1.7	75.43
Cottonwood	31,546	237	(N/A)	1.3	1.8	118.30
Broadleaf Deciduous	28,560	214	(N/A)	1.3	1.6	107.10
Boxelder	28,560	214	(N/A)	1.3	1.6	107.10
Bur oak	8,458	63	(N/A)	0.7	0.5	63.43
Apple	6,743	51	(N/A)	0.7	0.4	50.57
Elm	1,035	8	(N/A)	0.7	0.1	7.76
Oak	15,773	118	(N/A)	0.7	0.9	118.30
Honeylocust	12,245	92	(N/A)	0.7	0.7	91.84
Kentucky coffeetree	3,672	28	(N/A)	0.7	0.2	27.54
Red pine	7,490	56	(N/A)	0.7	0.4	56.18
Eastern white pine	7,490	56	(N/A)	0.7	0.4	56.18
Lilac	908	7	(N/A)	0.7	0.1	6.81
Citywide total	1,785,459	13,391	(N/A)	100.0	100.0	89.87

Table 5: Annual Carbon Sequestered

Annual CO₂ Benefits of Public Trees

4/9/2020

Species	Sequestered (lb)	Sequestered (\$)	Decomposition Release (lb)	Maintenance Release (lb)	Total Released (\$)	Avoided (lb)	Avoided (\$)	Net Total (lb)	Total Standard (\$)	Total Error	% of Total Trees	% of Total \$	Avg. \$/tree
Black walnut	12,524	94	-1,342	-56	-10	8,581	64	19,707	148 (N/A)		12.1	14.6	8.21
Green ash	12,292	92	-1,791	-63	-14	9,806	74	20,243	152 (N/A)		11.4	15.0	8.93
Spruce	1,952	15	-251	-40	-2	3,563	27	5,224	39 (N/A)		9.4	3.9	2.80
Sugar maple	6,203	47	-683	-28	-5	3,934	30	9,427	71 (N/A)		6.7	7.0	7.07
Pin oak	15,134	114	-819	-33	-6	5,166	39	19,448	146 (N/A)		6.0	14.4	16.21
Mulberry	801	6	-136	-17	-1	1,907	14	2,555	19 (N/A)		5.4	1.9	2.39
Silver maple	13,839	104	-1,043	-33	-8	4,595	34	17,358	130 (N/A)		4.7	12.8	18.60
Northern hackberry	1,672	13	-124	-14	-1	2,644	20	4,178	31 (N/A)		4.0	3.1	5.22
Northern white cedar	505	4	-21	-9	0	933	7	1,407	11 (N/A)		4.0	1.0	1.76
Blue spruce	514	4	-38	-11	0	997	7	1,463	11 (N/A)		3.4	1.1	2.19
Maple	1,572	12	-137	-11	-1	2,047	15	3,471	26 (N/A)		3.4	2.6	5.21
Black cherry	312	2	-11	-4	0	328	2	626	5 (N/A)		3.4	0.5	0.94
Littleleaf linden	0	0	-293	-17	-2	1,911	14	1,601	12 (N/A)		2.7	1.2	3.00
Northern red oak	665	5	-156	-9	-1	1,184	9	1,683	13 (N/A)		2.7	1.2	3.16
American basswood	5,594	42	-493	-17	-4	2,367	18	7,451	56 (N/A)		2.7	5.5	13.97
Black maple	0	0	-114	-8	-1	1,431	11	1,308	10 (N/A)		2.0	1.0	3.27
Norway maple	5	0	-137	-9	-1	1,084	8	944	7 (N/A)		2.0	0.7	2.36
Norway spruce	512	4	-108	-12	-1	933	7	1,325	10 (N/A)		2.0	1.0	3.31
Swamp white oak	1,310	10	-145	-9	-1	1,419	11	2,575	19 (N/A)		2.0	1.9	6.44
Cottonwood	1,714	13	-151	-7	-1	1,105	8	2,660	20 (N/A)		1.3	2.0	9.97
Broadleaf Deciduous Medi	0	0	-137	-9	-1	1,077	8	932	7 (N/A)		1.3	0.7	3.49
Boxelder	2,076	16	-137	-7	-1	866	6	2,798	21 (N/A)		1.3	2.1	10.49
Bur oak	660	5	-41	-3	0	441	3	1,058	8 (N/A)		0.7	0.8	7.93
Apple	0	0	-32	-4	0	335	3	299	2 (N/A)		0.7	0.2	2.24
Elm	209	2	-5	-1	0	159	1	361	3 (N/A)		0.7	0.3	2.71
Oak	857	6	-76	-4	-1	552	4	1,330	10 (N/A)		0.7	1.0	9.97
Honeylocust	1,486	11	-59	-3	0	615	5	2,039	15 (N/A)		0.7	1.5	15.29
Kentucky coffeetree	445	3	-18	-2	0	393	3	819	6 (N/A)		0.7	0.6	6.14
Red pine	256	2	-36	-4	0	311	2	528	4 (N/A)		0.7	0.4	3.96
Eastern white pine	0	0	-36	-5	0	311	2	270	2 (N/A)		0.7	0.2	2.02
Lilac	114	1	-4	-1	0	124	1	232	2 (N/A)		0.7	0.2	1.74
Citywide total	83,222	624	-8,572	-449	-68	61,118	458	135,318	1,015 (N/A)		100.0	100.0	6.81

Table 6: Annual Social and Aesthetic Benefits

Annual Aesthetic/Other Benefits of Public Trees					
4/9/2020					
Species	Total (\$)	Standard Error	% of Total Trees	% of Total \$	Avg. \$/tree
Black walnut	983	(N/A)	12.1	13.4	54.64
Green ash	936	(N/A)	11.4	12.7	55.05
Spruce	399	(N/A)	9.4	5.4	28.51
Sugar maple	604	(N/A)	6.7	8.2	60.43
Pin oak	1,167	(N/A)	6.0	15.9	129.66
Mulberry	46	(N/A)	5.4	0.6	5.73
Silver maple	984	(N/A)	4.7	13.4	140.52
Northern hackberry	264	(N/A)	4.0	3.6	43.98
Northern white cedar	143	(N/A)	4.0	1.9	23.87
Blue spruce	111	(N/A)	3.4	1.5	22.30
Maple	205	(N/A)	3.4	2.8	40.96
Black cherry	17	(N/A)	3.4	0.2	3.39
Littleleaf linden	0	(N/A)	2.7	0.0	0.00
Northern red oak	56	(N/A)	2.7	0.8	14.08
American basswood	377	(N/A)	2.7	5.1	94.35
Black maple	0	(N/A)	2.0	0.0	0.00
Norway maple	3	(N/A)	2.0	0.0	0.91
Norway spruce	53	(N/A)	2.0	0.7	17.50
Swamp white oak	118	(N/A)	2.0	1.6	39.19
Cottonwood	131	(N/A)	1.3	1.8	65.59
Broadleaf Deciduous Medium	0	(N/A)	1.3	0.0	0.00
Boxelder	131	(N/A)	1.3	1.8	65.43
Bur oak	58	(N/A)	0.7	0.8	57.69
Apple	0	(N/A)	0.7	0.0	0.00
Elm	29	(N/A)	0.7	0.4	28.56
Oak	66	(N/A)	0.7	0.9	65.59
Honeylocust	389	(N/A)	0.7	5.3	388.90
Kentucky coffeetree	46	(N/A)	0.7	0.6	45.86
Red pine	26	(N/A)	0.7	0.4	26.25
Eastern white pine	0	(N/A)	0.7	0.0	0.00
Lilac	6	(N/A)	0.7	0.1	6.40
Citywide total	7,347	(N/A)	100.0	100.0	49.31

Table 7: Summary of Benefits in Dollars

Total Annual Benefits of Public Trees by Species (\$)								
4/9/2020								
Species	Energy	CO ₂	Air Quality	Stormwater	Aesthetic/Other	Total (\$)	Standard Error	% of Total \$
Black walnut	1,093	148	198	1,745	983	4,167	(N/A)	14.0
Green ash	1,212	152	232	2,000	936	4,531	(N/A)	15.2
Spruce	421	39	15	1,077	399	1,951	(N/A)	6.6
Sugar maple	488	71	81	827	604	2,071	(N/A)	7.0
Pin oak	643	146	82	968	1,167	3,006	(N/A)	10.1
Mulberry	256	19	44	148	46	513	(N/A)	1.7
Silver maple	565	130	111	1,242	984	3,032	(N/A)	10.2
Northern hackberry	335	31	57	344	264	1,031	(N/A)	3.5
Northern white cedar	113	11	13	174	143	453	(N/A)	1.5
Blue spruce	123	11	14	230	111	489	(N/A)	1.6
Maple	256	26	47	293	205	827	(N/A)	2.8
Black cherry	48	5	7	18	17	95	(N/A)	0.3
Littleleaf linden	251	12	45	406	0	713	(N/A)	2.4
Northern red oak	153	13	21	193	56	436	(N/A)	1.5
American basswood	307	56	49	504	377	1,293	(N/A)	4.3
Black maple	182	10	35	233	0	460	(N/A)	1.5
Norway maple	143	7	27	204	3	384	(N/A)	1.3
Norway spruce	115	10	-5	374	53	547	(N/A)	1.8
Swamp white oak	188	19	34	236	118	595	(N/A)	2.0
Cottonwood	142	20	25	214	131	532	(N/A)	1.8
Broadleaf Deciduous M	142	7	27	204	0	380	(N/A)	1.3
Boxelder	110	21	19	167	131	448	(N/A)	1.5
Bur oak	57	8	9	70	58	202	(N/A)	0.7
Apple	46	2	8	32	0	89	(N/A)	0.3
Elm	21	3	3	16	29	71	(N/A)	0.2
Oak	71	10	12	107	66	266	(N/A)	0.9
Honeylocust	74	15	13	127	389	618	(N/A)	2.1
Kentucky coffeetree	44	6	7	40	46	143	(N/A)	0.5
Red pine	38	4	-2	125	26	192	(N/A)	0.6
Eastern white pine	38	2	-2	125	0	163	(N/A)	0.5
Lilac	18	2	3	7	6	36	(N/A)	0.1
Citywide Total	7,693	1,015	1,228	12,450	7,347	29,733	(N/A)	100.0

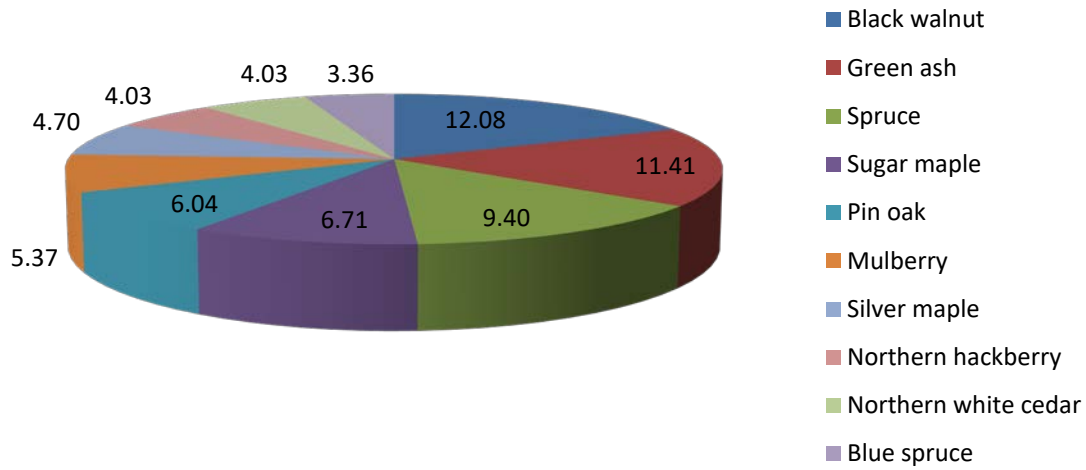


Figure 1: Species Distribution

Relative Age Distribution of Top 10 Public Tree Species (%)

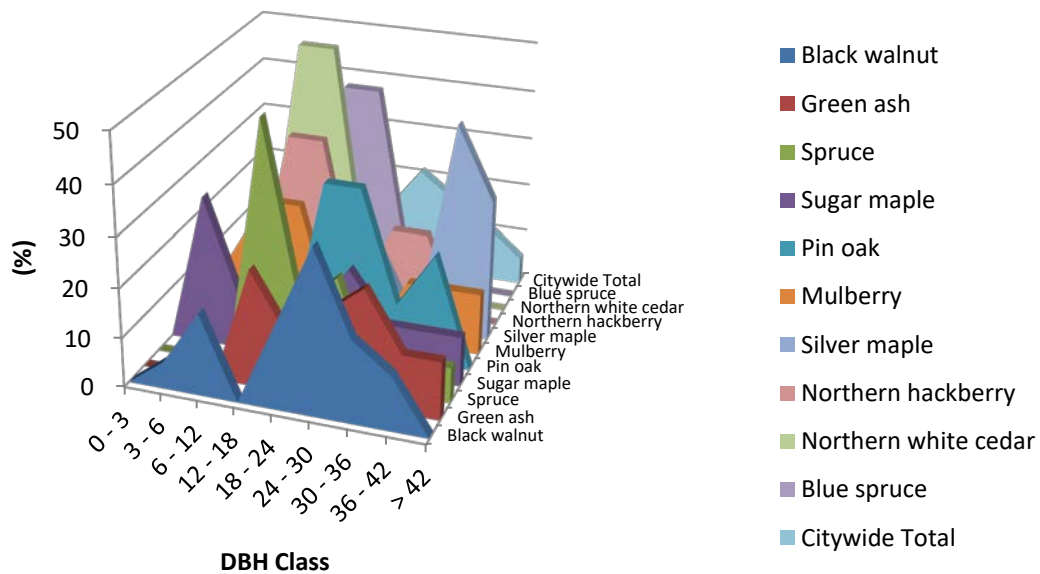


Figure 2: Relative Age Class

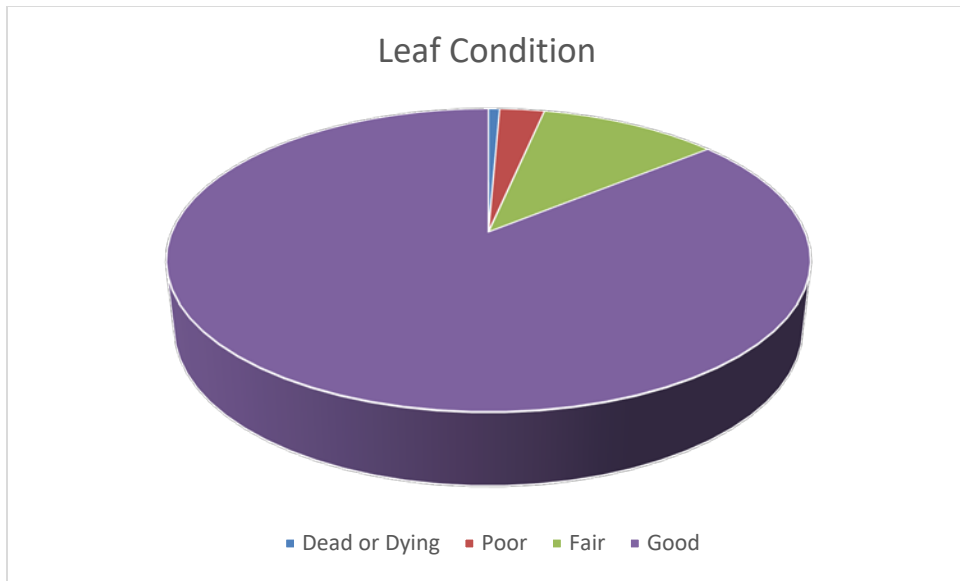


Figure 3: Foliage Condition

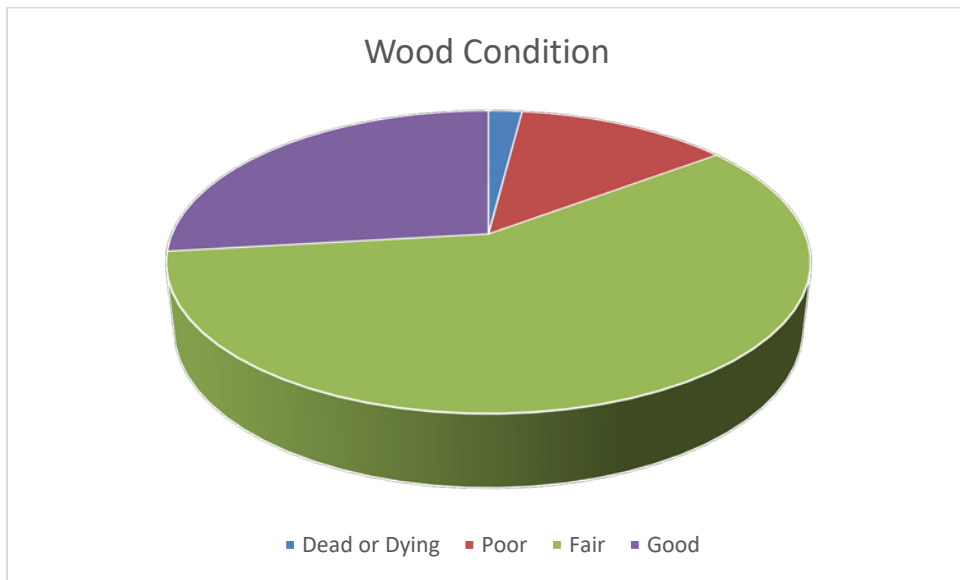


Figure 4: Wood Condition

Canopy Cover of Public Trees (Acres)

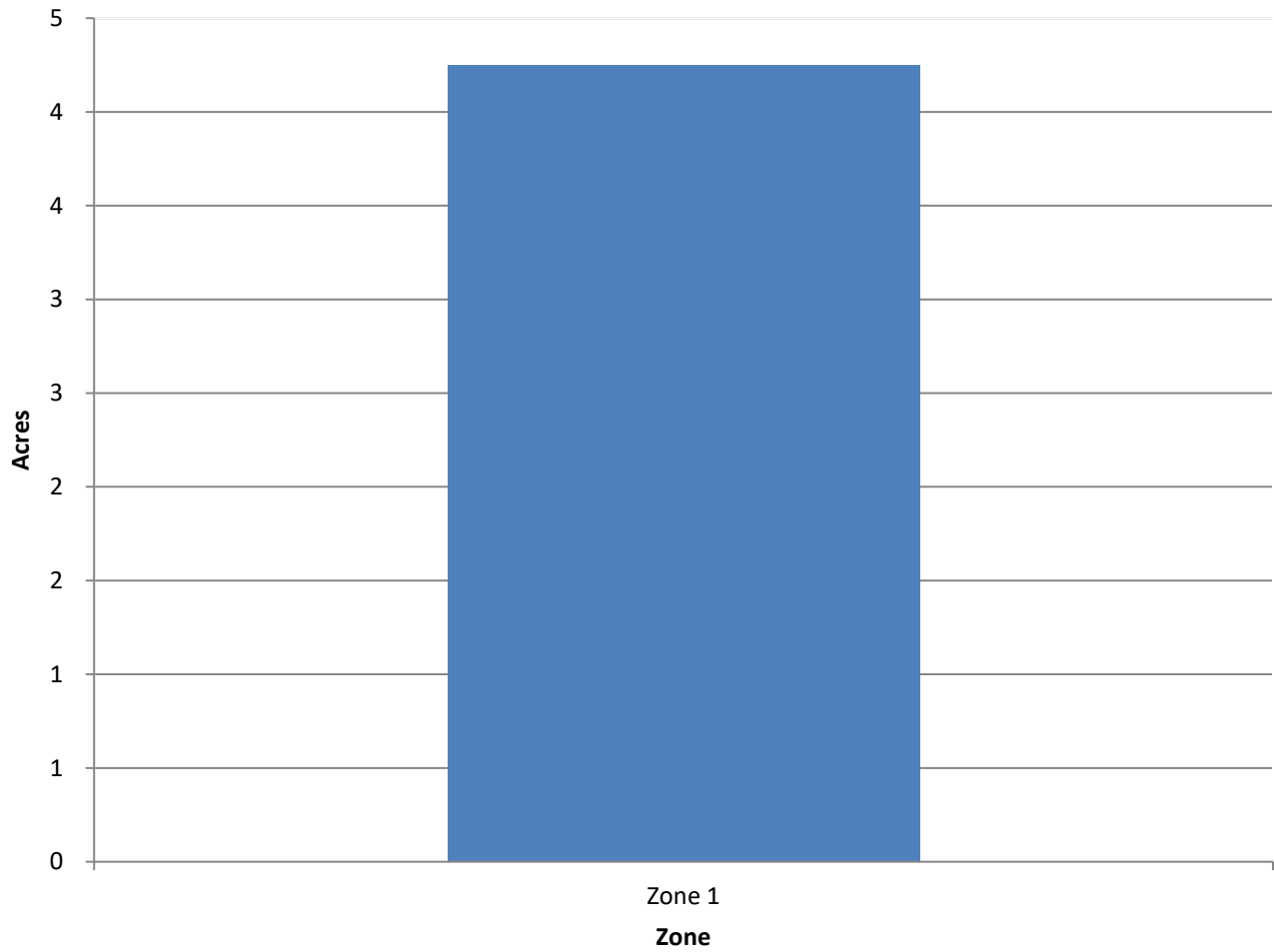


Figure 5: Canopy Cover in Acres

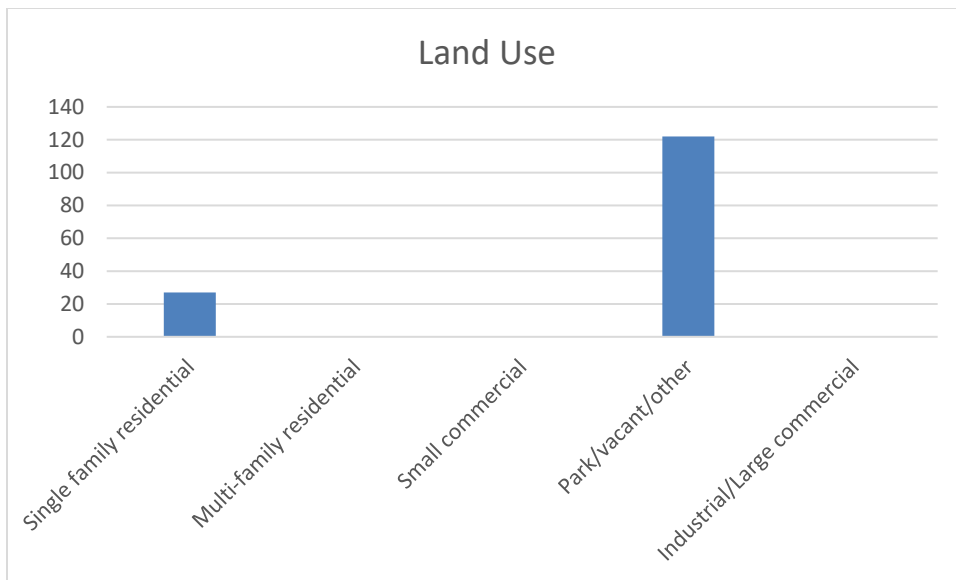


Figure 6: Land Use of city/park trees

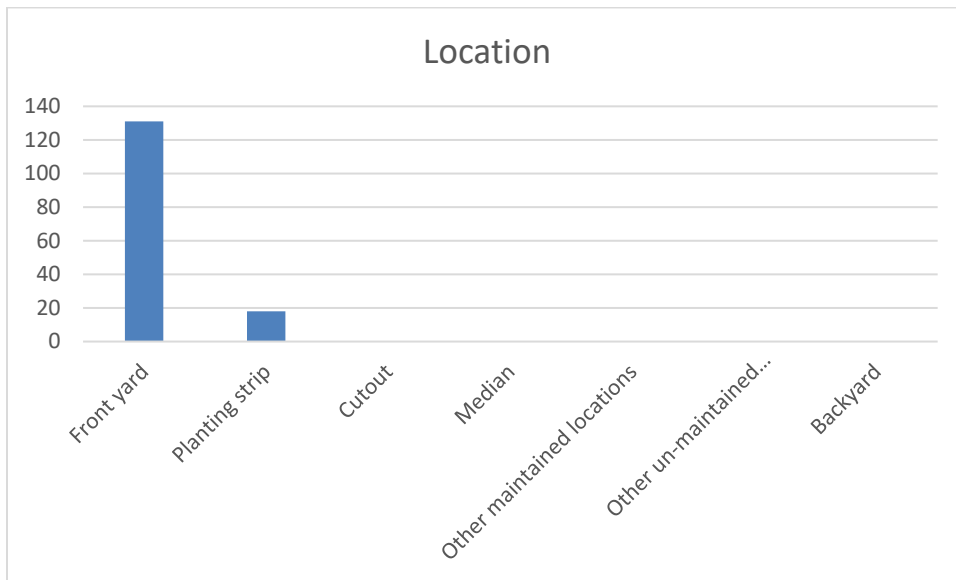


Figure 7: Location of city/park trees

Appendix B: ArcGIS Mapping



Figure 1: Location of Ash Trees

None

Figure 2: Location of EAB symptoms

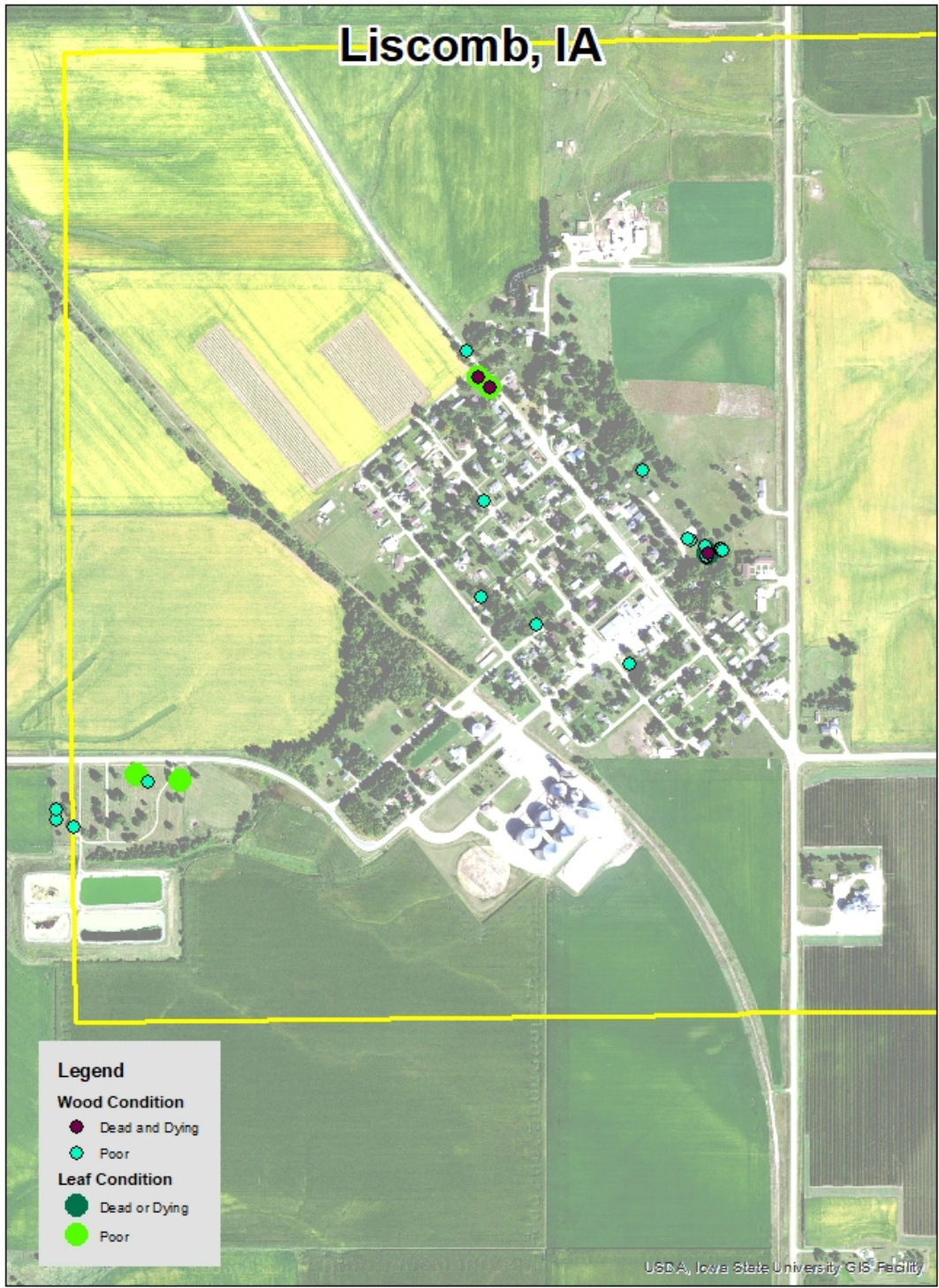


Figure 3: Location of Poor Condition Trees



Figure 4: Location of Trees with Recommended Maintenance

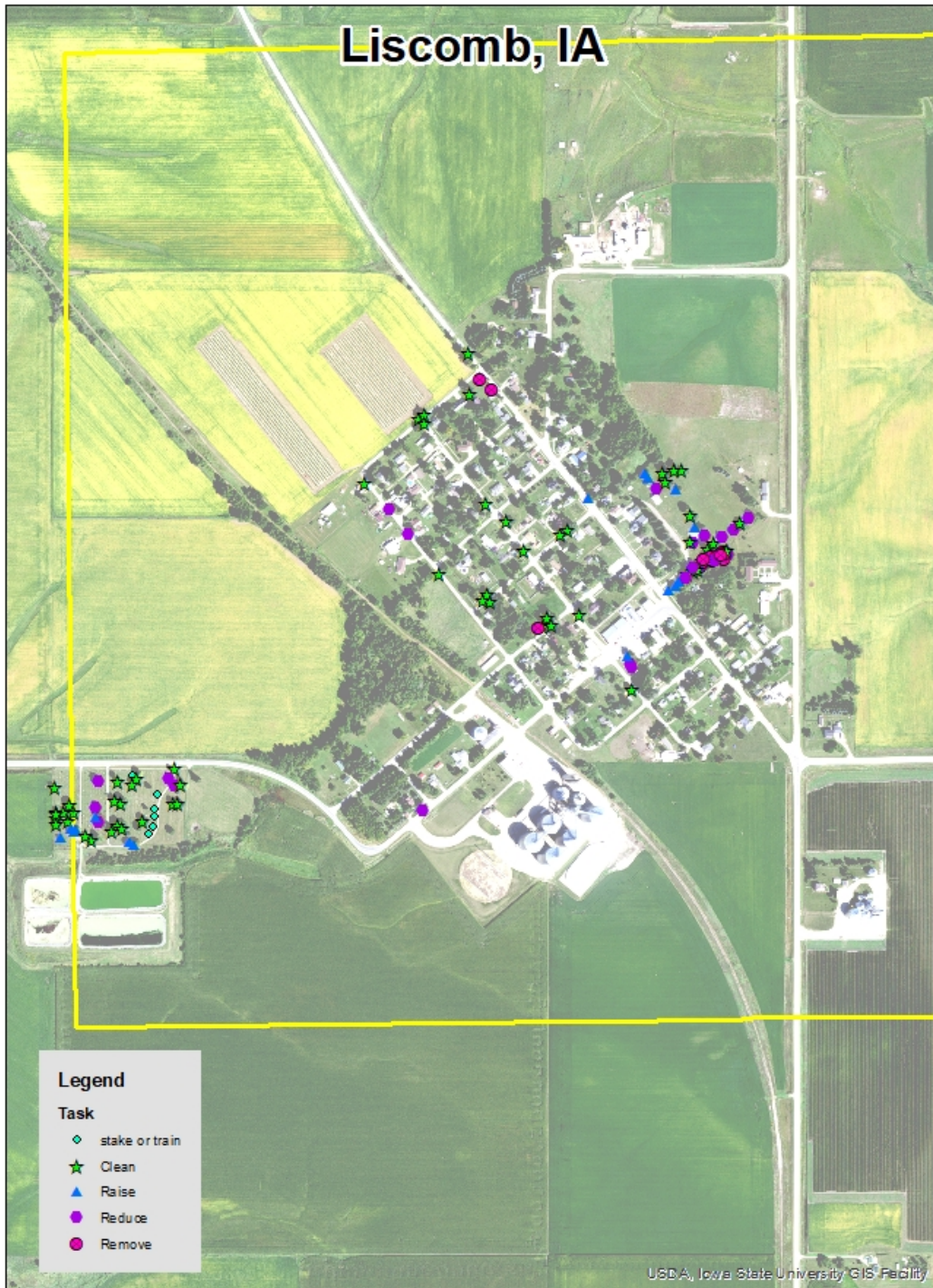


Figure 5: Maintenance Tasks *City ownership of the trees recommended for removal should be verified prior to any removal*

Appendix C: Liscomb Tree Ordinances

8. Completion by the City. Should any excavation in any street or alley be discontinued or left open and unfinished for a period of twenty-four (24) hours after the approved completion date, or in the event the work is improperly done, the City has the right to finish or correct the excavation work and charge any expenses therefor to the permit holder/property owner.

9. Responsibility for Costs. All costs and expenses incident to the excavation shall be borne by the permit holder and/or property owner. The permit holder and owner shall indemnify the City from any loss or damage that may directly or indirectly be occasioned by such excavation.

10. Notification. At least forty-eight (48) hours prior to the commencement of the excavation, excluding Saturdays, Sundays and legal holidays, the person performing the excavation shall contact the Statewide Notification Center and provide the center with the information required under Section 480.4 of the *Code of Iowa*.

11. Permit Issued. Upon approval of the application and filing of bond and insurance certificate, a permit shall be issued. A separate permit shall be required for each excavation.

135.10 PROPERTY OWNER'S RESPONSIBILITY FOR MAINTENANCE. The abutting property owner shall maintain all property outside the lot and property lines and inside the curb lines upon public streets and shall keep such area in a safe condition, free from nuisances, obstructions, and hazards. In the absence of a curb, such property shall extend from the property line to that portion of the public street used or improved for vehicular purposes. The abutting property owner shall not be required to remove diseased trees or dead wood on the publicly owned property or right-of-way. Maintenance includes, but is not limited to, timely mowing, trimming trees and shrubs, and picking up litter and debris. The abutting property owner may be liable for damages caused by failure to maintain the publicly owned property or right-of-way.[†]

(Code of Iowa, Sec. 364.12[2c])

135.11 FAILURE TO MAINTAIN. If the abutting property owner does not perform an action required under the above section within a reasonable time, the City may perform the required action and assess the cost against the abutting property for collection in the same manner as a property tax.

(Code of Iowa, Sec. 364.12[2e])

135.12 DUMPING OF SNOW. It is unlawful for any person to throw, push, or place or cause to be thrown, pushed or placed, any ice or snow from private property, sidewalks, or driveways onto the traveled way of a street or alley so as to obstruct gutters, or impede the passage of vehicles upon the street or alley or to create a hazardous condition therein; except where, in the cleaning of large commercial drives in the business district it is absolutely necessary to move the snow onto the street or alley temporarily, such accumulation shall be removed promptly by the property owner or agent. Arrangements for the prompt removal of such accumulations shall be made prior to moving the snow.

(Code of Iowa, Sec. 364.12[2])

135.13 DRIVEWAY CULVERTS. The property owner shall, at the owner's expense, install any culvert deemed necessary under any driveway or any other access to the owner's

[†] **EDITOR'S NOTE:** See also Section 136.04 relating to property owner's responsibility for maintenance of sidewalks.

10. Dutch Elm Disease. Trees infected with Dutch elm disease.
11. Airport Air Space. Any object or structure hereafter erected within one thousand (1,000) feet of the limits of any municipal or regularly established airport or landing place, which may endanger or obstruct aerial navigation including take-off and landing, unless such object or structure constitutes a proper use or enjoyment of the land on which the same is located.
12. Houses of Ill Fame. Houses of ill fame, kept for the purpose of prostitution and lewdness; gambling houses; places resorted to by persons participating in criminal gang activity prohibited by Chapter 723A of the *Code of Iowa* or places resorted to by persons using controlled substances, as defined in Section 124.101 of the *Code of Iowa*, in violation of law, or houses where drunkenness, quarreling, fighting, or breaches of the peace are carried on or permitted to the disturbance of others.
13. Unkempt Lawns. Lawns or yards in which the grass or weeds have been allowed to grow eight (8) inches or taller.
14. Rodent Harborage. All structures and exterior property shall be kept free from rodent harborage and infestation. Wherever rodents are found, they shall be promptly exterminated by approved processes. After extermination, proper precautions shall be taken to eliminate rodent harborage and prevent re-infestation.
15. Unkept Yard Areas. Yards must be maintained free of litter, garbage, and other things not being used for the original purpose for which they were manufactured (including building materials, auto parts, plastic, appliances, furniture designed for interior use and yard waste). Tree and shrubs shall be maintained such that they do not encroach on any public right-of-way or cross property lines without express permission of the affected property owner.
 - A. Organized construction materials staged for a project will be exempt from this paragraph for reasonable periods of time (up to 6 months for large projects).
 - B. Brush and yard debris following significant weather events will be exempt from the paragraph for reasonable periods (up to 1 month or with permission).
 - C. Trees hanging over streets kept trimmed to allow vehicle traffic without contact shall be considered in compliance with this paragraph. (Iowa DOT specifies legal vehicle height of thirteen (13) feet six (6) inches.)
 - D. Trees and shrubs adjacent to sidewalks and pedestrian right of ways that allow unimpeded foot traffic shall be considered in compliance with this paragraph.

(Subsections 14 and 15 – Ord. 103 – Jan. 16 Supp.)

50.03 NUISANCES PROHIBITED. The creation or maintenance of a nuisance is prohibited, and a nuisance, public or private, may be abated in the manner provided for in this chapter or State law.

(Code of Iowa, Sec. 657.3)

50.04 NUISANCE ABATEMENT. Whenever any authorized municipal officer finds that a nuisance exists, such officer has the authority to determine on a case-by-case basis whether

The State of Iowa is an Equal Opportunity Employer and provider of ADA services.

Federal law prohibits employment discrimination on the basis of race, color, age, religion, national origin, sex or disability. State law prohibits employment discrimination on the basis of race, color, creed, age, sex, sexual orientation, gender identity, national origin, religion, pregnancy, or disability. State law also prohibits public accommodation (such as access to services or physical facilities) discrimination on the basis of race, color, creed, religion, sex, sexual orientation, gender identity, religion, national origin, or disability. If you believe you have been discriminated against in any program, activity or facility as described above, or if you desire further information, please contact the Iowa Civil Rights Commission, 1-800-457-4416, or write to the Iowa Department of Natural Resources, Wallace State Office Bldg., 502 E 9th St, Des Moines IA 50319.

If you need accommodations because of disability to access the services of this Agency, please contact the Director at 515-725-8200.