2013 COMMUNITY TREE MANAGEMENT PLAN

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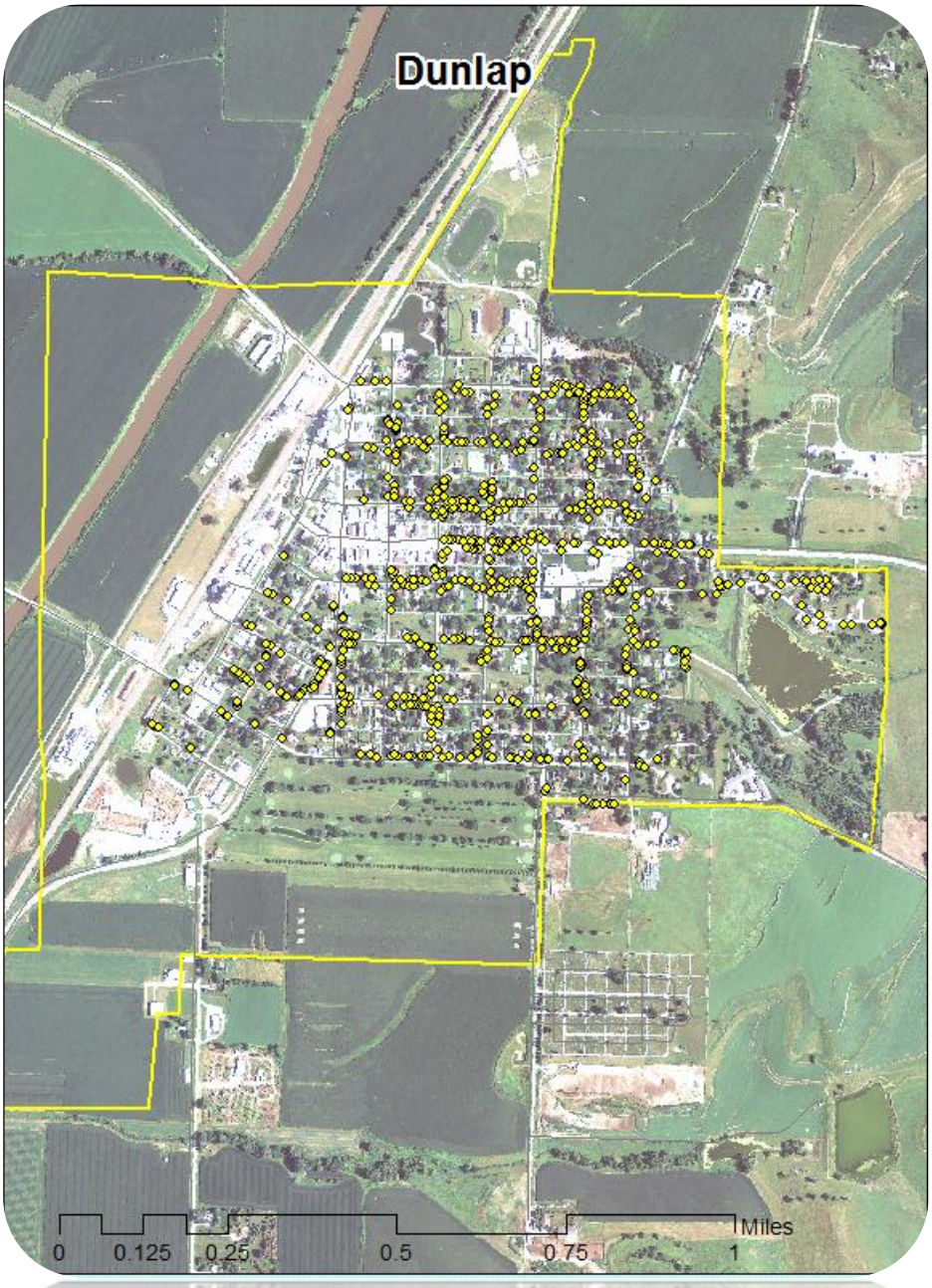

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Executive Summary

Overview

This plan was developed to assist the City of Dunlap 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 20% of Dunlap's city owned trees (ash) will die once EAB becomes established in the community. 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 2013, a tree inventory was conducted using Global Positioning System (GPS) data collectors. The inventory was a complete inventory of street right of way trees. Below are some key findings of the 698 trees inventoried.

- Dunlap's trees provide $133,384 of benefits annually, an average of $191 a tree
- There are over 50 species of trees
- The top three genus are: Maple 34%, Ash 20%, and Spruce 9%
- 5% of trees are in need of some type of management
- 17 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.

- Of the 17 trees needing removal, 8 trees are over 24 inches in diameter at 4.5 ft and must be addressed immediately *City ownership of the trees recommended for removal should be verified prior to any removal*
- 7 of the 137 ash trees are in need of follow up because they are displaying signs and symptoms associated with EAB
- 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 or Siberian elm, elm, evergreen, willow, black walnut, tree of heaven, exotic mulberry trees (white mulberry is very common), and Bradford/Callery Pear. Please also be careful not to plant the following shrubs, as they are considered invasive species: autumn olive, honeysuckles, salt cedar, rhododendron, multiflora rose, buckthorn, Japanese Barberry, Burning Bush, and Oriental bittersweet (a vine). For additional information on invasive species and native alternatives, please read my article at: http://api.ning.com/files/upDJWQuP3By62jwQaDQ*HIqC08KqOZIlyknTyIMIfSpJ1cU3EKH*F7hmZYMBaDhDCj0jivi-px1jKSL8TEKs7YPG9gU*Y9EA/CHECKYOURYARDFORFUGITIVES.pdf.

- Check ash trees with a visual survey yearly
- With the current budget it could take 15 years to remove and replace ash – Suggestion: request a budget increase to $7,500 annually and apply for grants to plant replacement trees. This will allow for ash removal and replacement within 10 years.

Introduction

This plan was developed to assist Dunlap 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 and replacement planting. With proper planning and management of the current canopy in Dunlap, these costs can be extended over years and public safety issues from dead and dying ash trees mitigated.

Trees are an important component of Dunlap'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 Dunlap 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 Dunlap's urban forestry goals.

Inventory

In 2013, a tree inventory was conducted that included 100% of the city owned street right of way trees. 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 of 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 698 city trees was entered into the USDA Forest service program Street Tree Resource Analysis Tool for Urban forestry Management (STRATUM), part of the i-Tree suite. The following are results from the i-Tree STRATUM analysis. Findings

Annual Benefits

Annual Energy Benefits

Trees conserve energy by shading buildings and blocking winds. Dunlap's trees reduce energy related costs by approximately $32,712 annually (Appendix A, Table 1). These savings are both in Electricity (156.2 MWh) and in Natural Gas (21,282.8 Therms).

Annual Stormwater Benefits

Dunlap's trees intercept about 1,814,103 gallons of rainfall or snow melt a year (Appendix A, Table 2). This interception provides $49,166 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 mater (ozone). In Dunlap, it is estimated that trees remove 1,976 lbs of air pollution (ozone (O_3), particulate matter less than 10 microns (PM10), carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2)) per year with a net value of $5,526 (Appendix A, Table 3).

Annual Carbon Benefits

Carbon sequestration and storage reduce the amount of carbon in the atmosphere, mitigating climate change. In Dunlap, trees sequester about 432,007 lbs of carbon a year with an associated value of $3,240 (Appendix A, Table 4). In addition, the trees store 5,963,373 lbs of carbon, with a yearly benefit of $44,725 (Appendix A, Table 5).

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. Dunlap receives $40,991 in annual social benefits from trees (Appendix A, Table 6).

Financial Summary of all Benefits

According to the USDA Forest Service i-Tree STRATUM analysis, Dunlap's trees provide $133,384 of benefits annually. Benefits of individual trees vary based on size, species, health and location, but on average each of the 698 trees in Dunlap provide approximately $191 annually (Appendix A, Table 7).

Forest Structure

Species Distribution

Dunlap has over 50 different tree species along city streets and parks (Appendix A, Figure 1). The distribution of trees by genus is as follows:

Genus	Count	Percentage
Maple	240	34.4%
Ash	137	19.6%
Spruce	62	8.9%
Apple	48	6.9%
Oak	28	4.0%
Pine	25	3.6%
Hackberry	24	3.4%
Conifer Evergreen	23	3.3%
Linden	21	3.0%
Elm	17	2.4%
Honeylocust	17	2.4%
Walnut	10	1.4%
Pear	7	1.0%
Juniper	6	0.9%
Poplar	5	0.7%
Broadleaf Deciduous	4	0.6%
Cherry/plum	4	0.6%
Willow	4	0.6%
Birch	3	0.4%
Mulberry	3	0.4%
Catalpa	2	0.3%
Cedar	2	0.3%
Japanese Tree Lilac	2	0.3%
Sycamore	2	0.3%
K. Coffee Tree	1	0.1%
Magnolia	1	0.1%
	698	100.0%

Age Class

Most of Dunlap's trees (76%) are between 6 and 30 inches in diameter at 4.5 ft (Appendix A, Figure 2). For age, a Bell Curve is preferred and shows the highest amount of trees around 18 inches in diameter at 4.5 ft. Dunlap's size curve heavy in the middle of the bell curve. This means your community should continue planting trees to keep up with this large cohort of trees as they age.

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 Dunlap indicate that 72% of the trees are in good health, with only 2% of the foliage in poor health, dead or dying (Appendix A, Figure 3 & Appendix B, Figure 3). Similarly, 78% of Dunlap'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 5% of the population. This 5% is an estimate of trees that need 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	151	22%
Tree Removal	17	2.4%
Crown Reduction	7	1.0%

Canopy Cover

The canopy cover of Dunlap is approximately 18 acres (Appendix A, Figure 4). According to the 2010 census, Dunlap occupies 704 acres. Thus the canopy cover on city land is about 2%.

Land Use and Location

The majority of Dunlap'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.

Land Use	
Single family residential	95%
Park/vacant/other	2.9%
Small commercial	2.1%

Location	
Planting strip	54%
Front yard	45%
Median	<1%
Cutout (surrounded by pavement)	<1%

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

Dunlap has 9 critical concern trees that need immediate removal. These trees can be seen on the Location of Trees with Recommended Maintenance map (Appendix B, Figure 4). It is recommended to start with the large diameter critical concern trees first. There are 8 trees over 24 inches in diameter at 4.5 ft that should be addressed immediately. After all of the critical concern trees are addressed, there should be follow up on the trees marked as needing maintenance that do not include cleaning. There are a total of 14 trees with these needs.

PRIORITY TASK	# BY TASK UNDER CRITICAL CONCERN	# BY TASK UNDER MATURE TREE IMMEDIATE	# BY TASK UNDER MATURE TREE ROUTINE	# BY TASK UNDER YOUNG TREE IMMEDIATE	# BY TASK UNDER YOUNG TREE ROUTINE	NONE	TOTAL
NONE: For immediate and critical concern activities, this means the tree needs follow-up by an arborist, for routine activities this means to treat the trees via routine maintenance	5		450		67	1	**523**
STAKE/TRAIN							
CLEAN	12	86	53				**151**
RAISE							
REDUCE							
REMOVE	9	5		3			**17**
TREAT PEST/DISEASE (For most this means address carpenter ant activity)	1	3	2			1	**7**
TOTAL	**27**	**94**	**505**	**3**	**67**	**2**	**698**

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). Of the 17 removals, 5 are ash trees. There are a total of 137 ash trees, and 7 of those have signs and symptoms that have been associated with EAB. In addition, there are 7 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.

Planting

Planting should occur into the future to 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%. 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 Dunlap.

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 (34%) (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, as outlined in section 151.02 of the city ordinance (Appendix C). All trees planted must meet the restrictions in city ordinance 151.02 (Appendix C).

Recommended Species to plant in Western Iowa:

COMMON NAME	SCIENTIFIC NAME	CULTIVARS/SELECTIONS
LARGE SHADE TREES – Plant 35 feet apart and away from overhead power lines.		
Swamp White Oak	*Quercus bicolor*	
White Oak	*Quercus alba*	
Bur Oak	*Quercus macrocarpa*	
Red Oak	*Quercus rubra*	
Black Oak	*Quercus veluntina*	
Chinkapin Oak	*Quercus muehlenbergii*	
American Basswood (Linden)	*Tilia Americana*	Boulevard, Front Yard, Legend, Redmond
Thornless Honeylocust	*Gleditsia triacanthos var. inermis*	Shademaster, Skyline
American elm	*Ulmus Americana*	Independence, New harmony, Valley Forge
Cottonwood (seedless) - ***Not recommended for planting near any homes or structures	*Populous deltoides*	Siouxland
Sycamore	*Plantanus occidentalis*	
Gingko	*Gingko biloba*	Male only – Shangri-La, Princeton sentry, Emperor
Ohio Buckeye	*Aesculus hippocastanum*	
Yellowwood	*Cladrastis lutea*	
Kentucky coffeetree	*Gymnocladus diocius*	Expresso
Black Cherry	*Prunus serotina*	
Hackberry	*Celtis occidentalis*	Chicagoland, Prairie Pride, Windy City
LOW GROWING TREES (less than 30 feet tall) planted as close as 12 feet.		
Eastern redbud	*Cercis Canadensis*	
Thornless cockspur hawthorn or other native hawthorns	*Crataegus crusgalli var. inermis*	
Ironwood (hop hornbeam)	*Ostrya virginiana*	
American hornbeam	*Carpinus caroliniana*	
Serviceberry	*Amalanchier arborea*	Autumn brilliance, Cumulus, Princess Diana
Flowering crabapple	*Malus*	Prairiefire, Adams, Sentinel, Snowdrift
Red mulberry	*Morus rubra*	
American (wild) plum	*Prunus americana*	
EVERGREEN TREES – planted 25 feet apart and away from overhead power lines.		
Eastern White Pine	*Pinus strobes*	
Jack pine	*Pinus banksiana*	
Junipers (Eastern red cedar)	*Juniperus virginiana*	
Norway spruce	*Picea abies*	
Concolor fir	*Abies concolor*	
Bald cypress	*Taxodium distichum*	
Arborvitae (Northern White cedar)	*Thuja occidentalis*	Techny, Brandon, Holmstrup

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 death 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*

EAB Quarantines

EAB is an extremely destructive plant pest and it is responsible for the death and decline of over 25 million 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 ash trees will be replaced. All trees will meet the restrictions in city ordinance 151.02 (Appendix C). The 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 genus 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. City Code 151.06 states "If it is determined with reasonable certainty that any such condition exists (trees or shrubs in the City reported or suspected to be infected with or damaged by any disease or insect or disease pests) on private property and that the danger to other trees or to adjoining property or passing motorists or pedestrians is imminent, the Council shall notify by certified mail the owner, occupant or person in charge of such property to correct such condition by treatment or removal within fourteen (14) days of said notification. If such owner, occupant or person in charge of said property fails to comply within 14 days of receipt of notice, the Council may cause the condition to be corrected and the cost assessed against the property."

Treating for EAB

Many landowners will want to treat their ash trees with insecticides to prolong the life of their ash tree. This is only recommended when EAB has been found within 15 miles of the tree in question. Insecticidal injections or drenches can have serious environmental side effects (on birds, bees, non-target insects, and can enter groundwater sources). Some insecticides have application limits – like only treating 3 trees per acre, for instance. Within a city scenario – it is likely that these chemicals will be over applied. Please contact me if you have any questions. I would be more than happy to host an informational meeting on EAB and its effects on community ash trees.

My suggestion would be to start increasing the city tree budget for removals and replacements now. I would place all efforts on replanting trees – and removing tree casualties as they arise.

Insecticidal treatments are expensive, environmentally hazardous, and are not a good solution to the potential issue across an entire community.

Maintenance Plan and Budget

The following tasks are placed order of yearly priority. These tasks should be fulfilled as your budget or personnel time allows. Critical concern trees should be treated immediately, and immediate mature tree tasks should be completed within 2-3 years (which is their expected lifetime before they become critical concern trees). If you are interested in creating a scheduled maintenance and replanting plan, based on a set budget, please contact me. For now, a priority list looks like this:

2013/14: Remove the 9 critical concern trees as soon as possible. If there are financial resources left this year, have an arborist look at the critical concern pest/disease tree (indicated on the attached maps), and clean the 12 critical concern trees. Keep an eye out for suspicious looking ash trees this year as well.

2013-2015: Complete 5 Mature Tree immediate removals, inspect the 5 mature tree immediate and mature tree routine trees indicated as having a pest/disease problem, and remove the 3 deteriorating young trees indicated for removal. As the budget allows – complete the tree cleaning the remaining 139 mature tree immediate and mature tree routine "cleaning" trees. Monitor for suspicious ash trees.

2015-2017: Consider budgeting for routine trimming of the remaining city trees. Ideally, this should be done to 1/3 of the city's trees every 2 years. In other words, all of the municipal trees should be trimmed every 6 years. If this isn't a priority, budget for replacing the 17 removal trees. With the replacement factor of 1.2, you should look at planting 20 trees (which at $150/tree would equate to $3000). Continue to look for suspicious ash trees. Also – consider evaluating Dunlap's street trees again for hazards by 2017 (if not before).

Proposed Budget Increase

On top of the immediate hazard trees that need to be addressed in Dunlap – we need to look towards budgeting for likely forest health issues. Emerald Ash Borer is one of these threats, and could potentially kill all ash trees in Dunlap within 4 years of its arrival. To remove all ash trees within 10 years the budget would need to be increased to $7,500 a year (not including maintenance tasks listed above). If the budget were increased to $10,000 a year all ash could be removed within 7.5 years. Additionally, it is recommended that Dunlap 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.

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Appendix A: i-Tree Data

Table 1: Annual Energy Benefits

Dunlap

Annual Energy Benefits of Public Trees by Species

11/10/2013

Species	Total Electricity (MWh)	Electricity ($)	Total Natural Gas (Therms)	Natural Gas ($)	Total ($)	Standard Error	% of Total Trees	% of Total $	Avg. $/tree
Silver maple	57.0	4,328	7,510.5	7,360	11,689	(N/A)	24.5	35.7	68.35
Green ash	33.2	2,521	4,557.8	4,467	6,988	(N/A)	18.8	21.4	53.34
Apple	4.4	336	698.1	684	1,020	(N/A)	6.9	3.1	21.26
Blue spruce	2.8	216	402.8	395	611	(N/A)	4.9	1.9	17.96
Northern hackberry	8.4	637	1,209.7	1,186	1,823	(N/A)	3.4	5.6	75.94
Norway maple	4.9	369	713.0	699	1,068	(N/A)	3.3	3.3	46.44
Maple	2.0	155	270.9	265	420	(N/A)	2.7	1.3	22.11
Sugar maple	2.6	196	336.7	330	526	(N/A)	2.4	1.6	30.96
Honeylocust	5.5	419	716.4	702	1,121	(N/A)	2.4	3.4	65.92
Conifer Evergreen Large	2.1	161	259.3	254	415	(N/A)	2.3	1.3	25.94
Austrian pine	1.5	111	194.2	190	301	(N/A)	2.0	0.9	21.52
Northern red oak	2.0	155	266.8	261	416	(N/A)	2.0	1.3	29.75
Littleleaf linden	2.1	160	278.5	273	433	(N/A)	1.7	1.3	36.06
Black walnut	2.9	216	407.3	399	616	(N/A)	1.4	1.9	61.56
Spruce	0.8	64	112.7	110	174	(N/A)	1.4	0.5	17.43
Red maple	2.0	153	279.1	273	426	(N/A)	1.3	1.3	47.34
Norway spruce	1.1	87	141.8	139	226	(N/A)	1.3	0.7	25.07
Black spruce	0.5	39	82.8	81	120	(N/A)	1.3	0.4	13.34
American basswood	2.3	174	340.1	333	507	(N/A)	1.3	1.6	56.31
Pin oak	2.7	203	366.3	359	562	(N/A)	1.2	1.7	70.22
Siberian elm	2.6	200	357.5	350	550	(N/A)	1.2	1.7	68.75
Conifer Evergreen	0.4	34	71.4	70	104	(N/A)	1.0	0.3	14.80
Scotch pine	0.5	41	76.7	75	116	(N/A)	1.0	0.4	16.60
Pear	0.6	48	99.2	97	145	(N/A)	1.0	0.4	20.73
Other street trees	11.0	833	1,533.4	1,503	2,336	(N/A)	9.3	7.1	35.93
Citywide total	156.2	11,854	21,282.8	20,857	32,712	(N/A)	100.0	100.0	46.86

Table 2: Annual Stormwater Benefits

Dunlap

Annual Stormwater Benefits of Public Trees by Species

11/10/2013

Species	Total rainfall interception (Gal)	Total ($)	Standard Error	% of Total Trees	% of Total $	Avg. $/tree
Silver maple	812,403	22,018	(N/A)	24.5	44.8	128.76
Green ash	342,613	9,285	(N/A)	18.8	18.9	70.88
Apple	17,664	479	(N/A)	6.9	1.0	9.97
Blue spruce	37,065	1,005	(N/A)	4.9	2.0	29.54
Northern hackberry	78,433	2,126	(N/A)	3.4	4.3	88.57
Norway maple	42,495	1,152	(N/A)	3.3	2.3	50.07
Maple	11,876	322	(N/A)	2.7	0.7	16.94
Sugar maple	18,543	503	(N/A)	2.4	1.0	29.56
Honeylocust	63,377	1,718	(N/A)	2.4	3.5	101.04
Conifer Evergreen Large	32,461	880	(N/A)	2.3	1.8	54.98
Austrian pine	21,808	591	(N/A)	2.0	1.2	42.22
Northern red oak	13,529	367	(N/A)	2.0	0.8	26.19
Littleleaf linden	16,961	460	(N/A)	1.7	0.9	38.31
Black walnut	32,231	874	(N/A)	1.4	1.8	87.35
Spruce	13,485	365	(N/A)	1.4	0.7	36.55
Red maple	17,813	483	(N/A)	1.3	1.0	53.64
Norway spruce	17,195	466	(N/A)	1.3	1.0	51.78
Black spruce	6,081	165	(N/A)	1.3	0.3	18.31
American basswood	24,153	655	(N/A)	1.3	1.3	72.73
Pin oak	28,881	783	(N/A)	1.2	1.6	97.84
Siberian elm	26,230	711	(N/A)	1.2	1.5	88.86
Conifer Evergreen	5,288	143	(N/A)	1.0	0.3	20.47
Scotch pine	6,054	164	(N/A)	1.0	0.3	23.44
Pear	2,710	73	(N/A)	1.0	0.2	10.49
Other street trees	124,756	3,381	(N/A)	9.3	6.9	52.02
Citywide total	1,814,103	49,166	(N/A)	100.0	100.0	70.44

Table 3: Annual Air Quality Benefits

Dunlap

Annual Air Quality Benefits of Public Trees by Species

11/10/2013

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								
Silver maple	136.5	23.2	67.3	6.0	737	268.8	39.4	37.6	257.9	1,682	-68.9	-258	767.8	2,160	(N/A)	24.5	12.63
Green ash	39.2	6.3	19.3	1.8	210	158.7	23.1	22.0	150.6	988	0.0	0	420.9	1,199	(N/A)	18.8	9.15
Apple	4.7	0.8	2.3	0.2	25	22.0	3.1	3.0	20.1	135	0.0	0	56.1	160	(N/A)	6.9	3.33
Blue spruce	4.4	0.9	3.9	0.5	30	13.7	2.0	1.9	12.9	85	-12.9	-48	27.2	66	(N/A)	4.9	1.95
Northern hackberry	11.8	2.0	6.1	0.5	64	40.7	5.9	5.6	38.1	252	0.0	0	110.6	316	(N/A)	3.4	13.18
Norway maple	8.2	1.4	4.1	0.4	44	23.7	3.4	3.3	22.1	147	-2.0	-7	64.5	184	(N/A)	3.3	7.98
Maple	1.9	0.3	1.0	0.1	11	9.6	1.4	1.3	9.2	60	-0.8	-3	24.2	68	(N/A)	2.7	3.58
Sugar maple	1.9	0.3	1.1	0.1	11	12.2	1.8	1.7	11.7	76	-1.6	-6	29.2	81	(N/A)	2.4	4.76
Honeylocust	12.5	2.1	5.7	0.6	66	25.9	3.8	3.6	25.0	162	-9.8	-37	69.3	191	(N/A)	2.4	11.26
Conifer Evergreen Large	3.7	0.7	3.1	0.5	24	9.8	1.5	1.4	9.6	62	-14.0	-52	16.2	34	(N/A)	2.3	2.12
Austrian pine	2.4	0.5	2.1	0.3	16	6.9	1.0	1.0	6.6	43	-9.3	-35	11.4	24	(N/A)	2.0	1.73
Northern red oak	2.4	0.4	1.2	0.1	13	9.6	1.4	1.3	9.3	60	-3.3	-12	22.4	61	(N/A)	2.0	4.35
Littleleaf linden	2.5	0.4	1.3	0.1	14	10.0	1.5	1.4	9.6	62	-1.3	-5	25.5	71	(N/A)	1.7	5.95
Black walnut	3.9	0.6	1.9	0.2	21	13.8	2.0	1.9	12.9	85	0.0	0	37.1	106	(N/A)	1.4	10.60
Spruce	1.5	0.3	1.3	0.2	10	4.0	0.6	0.6	3.8	25	-5.6	-21	6.5	14	(N/A)	1.4	1.36
Red maple	4.3	0.7	2.0	0.2	23	9.6	1.4	1.3	9.1	60	-1.4	-5	27.3	77	(N/A)	1.3	8.60
Norway spruce	1.9	0.4	1.6	0.2	13	5.3	0.8	0.7	5.2	33	-7.0	-26	9.2	20	(N/A)	1.3	2.21
Black spruce	0.6	0.1	0.6	0.1	4	2.6	0.4	0.3	2.3	16	-1.9	-7	5.0	12	(N/A)	1.3	1.38
American basswood	3.1	0.5	1.5	0.1	17	11.2	1.6	1.5	10.4	69	-2.7	-10	27.3	76	(N/A)	1.3	8.41
Pin oak	4.9	0.9	2.5	0.2	27	12.7	1.9	1.8	12.1	79	-9.1	-34	27.8	72	(N/A)	1.1	9.00
Siberian elm	4.1	0.7	2.0	0.2	22	12.5	1.8	1.7	11.9	78	0.0	0	35.0	100	(N/A)	1.1	12.51
Conifer Evergreen	0.5	0.1	0.5	0.1	3	2.2	0.3	0.3	2.0	14	-1.6	-6	4.3	11	(N/A)	1.0	1.53
Scotch pine	0.6	0.1	0.6	0.1	4	2.6	0.4	0.4	2.4	16	-1.9	-7	5.2	13	(N/A)	1.0	1.86
Pear	0.8	0.1	0.4	0.0	4	3.1	0.4	0.4	2.9	19	0.0	0	8.2	23	(N/A)	1.0	3.34
Other street trees	18.0	3.0	9.6	1.0	99	52.7	7.7	7.3	49.7	328	-10.8	-41	138.2	386	(N/A)	9.3	5.95
Citywide total	276.1	46.9	142.7	13.7	1,512	743.9	108.4	103.4	707.3	4,637	-166.1	-623	1,976.2	5,526	(N/A)	100.0	7.92

Table 4: Annual Carbon Stored

Dunlap

Stored CO2 Benefits of Public Trees by Species

11/10/2013

Species	Total Stored CO2 (lbs)	Total ($)	Standard Error	% of Total Trees	% of Total $	Avg. $/tree
Silver maple	2,905,840	21,794	(N/A)	24.5	48.7	127.45
Green ash	1,268,382	9,513	(N/A)	18.8	21.3	72.62
Apple	77,054	578	(N/A)	6.9	1.3	12.04
Blue spruce	26,973	202	(N/A)	4.9	0.5	5.95
Northern	170,998	1,282	(N/A)	3.4	2.9	53.44
Norway maple	134,785	1,011	(N/A)	3.3	2.3	43.95
Maple	24,025	180	(N/A)	2.7	0.4	9.48
Sugar maple	54,840	411	(N/A)	2.4	0.9	24.19
Honeylocust	161,010	1,208	(N/A)	2.4	2.7	71.03
Conifer Evergreen	32,820	246	(N/A)	2.3	0.6	15.38
Austrian pine	21,567	162	(N/A)	2.0	0.4	11.55
Northern red oak	43,143	324	(N/A)	2.0	0.7	23.11
Littleleaf linden	55,307	415	(N/A)	1.7	0.9	34.57
Black walnut	123,899	929	(N/A)	1.4	2.1	92.92
Spruce	12,925	97	(N/A)	1.4	0.2	9.69
Red maple	46,653	350	(N/A)	1.3	0.8	38.88
Norway spruce	16,136	121	(N/A)	1.3	0.3	13.45
Black spruce	2,276	17	(N/A)	1.3	0.0	1.90
American	110,574	829	(N/A)	1.3	1.9	92.14
Pin oak	124,603	935	(N/A)	1.2	2.1	116.82
Siberian elm	98,215	737	(N/A)	1.2	1.7	92.08
Conifer Evergreen	1,989	15	(N/A)	1.0	0.0	2.13
Scotch pine	3,624	27	(N/A)	1.0	0.1	3.88
Pear	12,695	95	(N/A)	1.0	0.2	13.60
Other street trees	196,424	3,248	(N/A)	9.3	7.3	49.97
Citywide total	5,963,373	44,725	(N/A)	100.0	100.0	64.08

Table 5: Annual Carbon Sequestered

Dunlap

Annual CO_2 Benefits of Public Trees by Species

11/10/2013

Species	Sequestered (lb)	Sequestered ($)	Decomposition Release (lb)	Maintenance Release (lb)	Total Released ($)	Avoided (lb)	Avoided ($)	Net Total (lb)	Total ($)	Standard Error	% of Total Trees	% of Total $	Avg. $/tree
Silver maple	227,188	1,704	-13,948	-33	-105	95,653	717	308,861	2,316	(N/A)	24.5	46.4	13.55
Green ash	79,832	599	-6,088	-26	-46	55,721	418	129,440	971	(N/A)	18.8	19.5	7.41
Apple	7,412	56	-370	-9	-3	7,431	56	14,464	108	(N/A)	6.9	2.2	2.26
Blue spruce	2,129	16	-129	-7	-1	4,769	36	6,761	51	(N/A)	4.9	1.0	1.49
Northern hackberry	10,690	80	-821	-5	-6	14,079	106	23,944	180	(N/A)	3.4	3.6	7.48
Norway maple	8,194	61	-647	-4	-5	8,164	61	15,707	118	(N/A)	3.3	2.4	5.12
Maple	3,382	25	-115	-4	-1	3,416	26	6,680	50	(N/A)	2.7	1.0	2.64
Sugar maple	4,288	32	-263	-3	-2	4,341	33	8,362	63	(N/A)	2.4	1.3	3.69
Honeylocust	15,655	117	-773	-3	-6	9,251	69	24,129	181	(N/A)	2.4	3.6	10.65
Conifer Evergreen	2,214	17	-158	-3	-1	3,556	27	5,609	42	(N/A)	2.3	0.8	2.63
Austrian pine	1,524	11	-104	-3	-1	2,453	18	3,871	29	(N/A)	2.0	0.6	2.07
Northern red oak	2,997	22	-207	-3	-2	3,427	26	6,214	47	(N/A)	2.0	0.9	3.33
Littleleaf linden	6,247	47	-265	-2	-2	3,530	26	9,509	71	(N/A)	1.7	1.4	5.94
Black walnut	7,235	54	-595	-2	-4	4,783	36	11,421	86	(N/A)	1.4	1.7	8.57
Spruce	924	7	-62	-2	0	1,411	11	2,270	17	(N/A)	1.4	0.3	1.70
Red maple	4,672	35	-224	-2	-2	3,372	25	7,819	59	(N/A)	1.3	1.2	6.52
Norway spruce	1,192	9	-77	-2	-1	1,916	14	3,029	23	(N/A)	1.3	0.5	2.52
Black spruce	311	2	-11	-2	0	860	6	1,158	9	(N/A)	1.3	0.2	0.96
American basswood	6,858	51	-531	-2	-4	3,835	29	10,160	76	(N/A)	1.3	1.5	8.47
Pin oak	12,023	90	-598	-2	-4	4,480	34	15,904	119	(N/A)	1.2	2.4	14.91
Siberian elm	4,951	37	-471	-2	-4	4,413	33	8,891	67	(N/A)	1.2	1.3	8.33
Conifer Evergreen	270	2	-10	-1	0	743	6	1,003	8	(N/A)	1.0	0.2	1.07
Scotch pine	494	4	-17	-1	0	905	7	1,380	10	(N/A)	1.0	0.2	1.48
Pear	1,134	9	-61	-1	0	1,059	8	2,131	16	(N/A)	1.0	0.3	2.28
Other street trees	20,190	151	-2,079	-13	-16	18,410	138	36,509	274	(N/A)	9.3	5.5	4.21
Citywide total	432,007	3,240	-28,624	-136	-216	261,978	1,965	665,225	4,989	(N/A)	100.0	100.0	7.15

Table 6: Annual Social and Aesthetic Benefits

Dunlap

Annual Aesthetic/Other Benefits of Public Trees by Species

11/10/2013

Species	Total ($)	Standard Error	% of Total Trees	% of Total $	Avg. $/tree
Silver maple	17,979	(N/A)	24.5	43.9	105.14
Green ash	6,850	(N/A)	18.8	16.7	52.29
Apple	426	(N/A)	6.9	1.0	8.88
Blue spruce	693	(N/A)	4.9	1.7	20.39
Northern hackberry	1,423	(N/A)	3.4	3.5	59.31
Norway maple	795	(N/A)	3.3	1.9	34.58
Maple	524	(N/A)	2.7	1.3	27.59
Sugar maple	515	(N/A)	2.4	1.3	30.28
Honeylocust	3,901	(N/A)	2.4	9.5	229.46
Conifer Evergreen Large	553	(N/A)	2.3	1.4	34.57
Austrian pine	375	(N/A)	2.0	0.9	26.75
Northern red oak	273	(N/A)	2.0	0.7	19.50
Littleleaf linden	665	(N/A)	1.7	1.6	55.39
Black walnut	588	(N/A)	1.4	1.4	58.83
Spruce	255	(N/A)	1.4	0.6	25.51
Red maple	592	(N/A)	1.3	1.4	65.74
Norway spruce	318	(N/A)	1.3	0.8	35.36
Black spruce	174	(N/A)	1.3	0.4	19.30
American basswood	517	(N/A)	1.3	1.3	57.49
Pin oak	938	(N/A)	1.2	2.3	117.30
Siberian elm	357	(N/A)	1.2	0.9	44.66
Conifer Evergreen	148	(N/A)	1.0	0.4	21.08
Scotch pine	142	(N/A)	1.0	0.4	20.25
Pear	66	(N/A)	1.0	0.2	9.37
Other street trees	1,923	(N/A)	9.3	4.7	29.58
Citywide total	40,991	(N/A)	100.0	100.0	58.73

Table 7: Summary of Benefits in Dollars

Species	Energy	CO2	Air Quality	Stormwater	Aesthetic/Other	Total ($)	Standard Error	% of Total $
Silver maple	11688.60	2316.45	2160.26	22017.64	17979.28	$56,162.23	(±0)	4210.58%
Green ash	6987.96	970.80	1198.77	9285.45	6849.88	$25,292.86	(±0)	1896.25%
Apple	1020.38	108.48	159.75	478.72	426.39	$2,193.72	(±0)	164.47%
Blue spruce	610.55	50.71	66.35	1004.52	693.30	$2,425.44	(±0)	181.84%
Northern hackberry	1822.59	179.58	316.33	2125.69	1423.47	$5,867.65	(±0)	439.91%
Norway maple	1068.13	117.80	183.59	1151.70	795.37	$3,316.60	(±0)	248.65%
Maple	420.08	50.10	68.01	321.85	524.24	$1,384.28	(±0)	103.78%
Sugar maple	526.40	62.71	80.87	502.54	514.84	$1,687.37	(±0)	126.50%
Honeylocust	1120.63	180.97	191.45	1717.64	3900.80	$7,111.49	(±0)	533.16%
Conifer Evergreen Large	414.99	42.07	33.88	879.75	553.17	$1,923.86	(±0)	144.23%
Austrian pine	301.27	29.03	24.28	591.03	374.53	$1,320.14	(±0)	98.97%
Northern red oak	416.47	46.60	60.86	366.65	273.01	$1,163.60	(±0)	87.24%
Littleleaf linden	432.66	71.32	71.37	459.68	664.68	$1,699.71	(±0)	127.43%
Black walnut	615.58	85.66	105.97	873.51	588.27	$2,269.00	(±0)	170.11%
Spruce	174.30	17.03	13.59	365.47	255.07	$825.46	(±0)	61.89%
Red maple	426.10	58.64	77.38	482.78	591.70	$1,636.60	(±0)	122.70%
Norway spruce	225.67	22.72	19.91	466.02	318.25	$1,052.57	(±0)	78.91%
Black spruce	120.03	8.68	12.46	164.81	173.70	$479.69	(±0)	35.96%
American basswood	506.79	76.20	75.66	654.58	517.42	$1,830.65	(±0)	137.25%
Pin oak	561.72	119.28	72.00	782.73	938.40	$2,474.12	(±0)	185.49%
Siberian elm	550.00	66.68	100.09	710.87	357.31	$1,784.96	(±0)	133.82%
Conifer Evergreen Medium	103.59	7.52	10.74	143.30	147.59	$412.75	(±0)	30.94%
Scotch pine	116.17	10.35	13.03	164.09	141.74	$445.37	(±0)	33.39%
Pear	145.12	15.98	23.36	73.44	65.58	$323.48	(±0)	24.25%
Other street trees	2335.75	273.82	386.44	3381.12	1923.00	$8,300.12	(±0)	622.27%
Citywide total	32711.54	4989.18	5526.40	49165.59	40991.01	$133,383.75	(±0)	10000.00%

Figure 8: Priority Task by size class

Dunlap

Priority Task Summary for Public Trees (None)

11/10/2013

	DBH Class (in)									
Zone	0-3	3-6	6-12	12-18	18-24	24-30	30-36	36-42	>42	Total
1	34	31	127	95	79	92	56	9	0	523
Citywide total	34	31	127	95	79	92	56	9	0	523

	DBH Class (in)										
Maintenance Type	0-3	3-6	6-12	12-18	18-24	24-30	30-36	36-42	>42	Total	% of Total Population
None	34	31	127	95	79	92	56	9	0	523	74.93
Stake/Train	0	0	0	0	0	0	0	0	0	0	0.00
Clean	0	0	10	20	31	55	27	8	0	151	21.63
Raise	0	0	0	0	0	0	0	0	0	0	0.00
Reduce	0	0	0	0	0	0	0	0	0	0	0.00
Remove	0	2	3	0	1	8	1	2	0	17	2.44
Treat pest/disease	0	0	0	2	2	2	0	1	0	7	1.00
Citywide total	34	33	140	117	113	157	84	20	0	698	100.00

Figure 9: Recommended Maintenance by size class.

Dunlap

Recommended Maintenance for Public Trees (None)

11/10/2013

	DBH Class (in)									
Zone	0-3	3-6	6-12	12-18	18-24	24-30	30-36	36-42	>42	Total
1	0	0	0	1	0	0	0	1	0	2
Citywide total	0	0	0	1	0	0	0	1	0	2

	DBH Class (in)										
Maintenance Type	0-3	3-6	6-12	12-18	18-24	24-30	30-36	36-42	>42	Total	% of Total Population
None	0	0	0	1	0	0	0	1	0	2	0.29
Young tree (routine)	34	27	6	0	0	0	0	0	0	67	9.60
Young tree (immediate)	0	1	2	0	0	0	0	0	0	3	0.43
Mature tree (routine)	0	4	129	106	89	107	60	10	0	505	72.35
Mature tree (immediate)	0	1	3	8	21	39	19	3	0	94	13.47
Critical concern (public safety)	0	0	0	2	3	11	5	6	0	27	3.87
Citywide total	34	33	140	117	113	157	84	20	0	698	100.00

Figure 1: Species

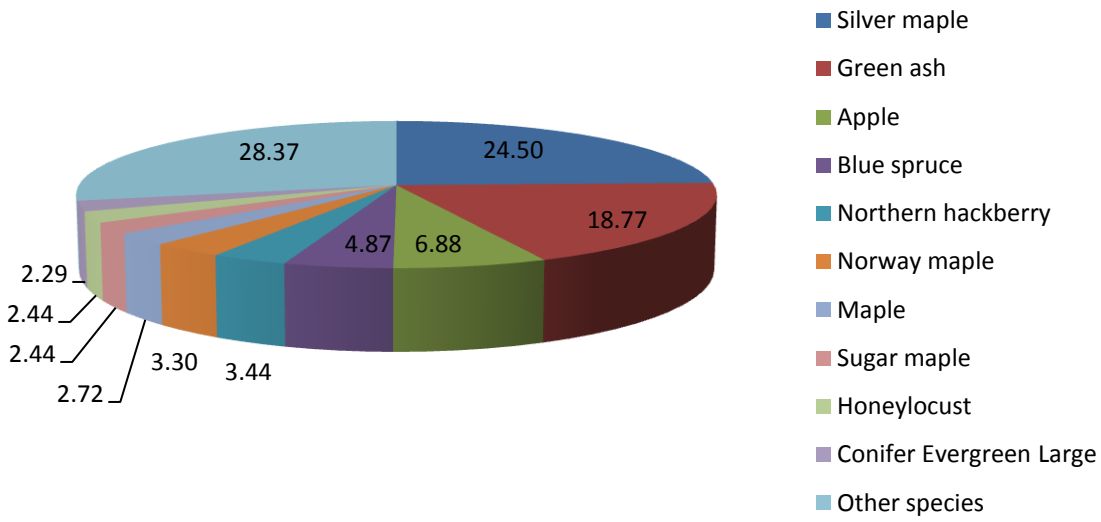


Figure 2: Relative Age Class

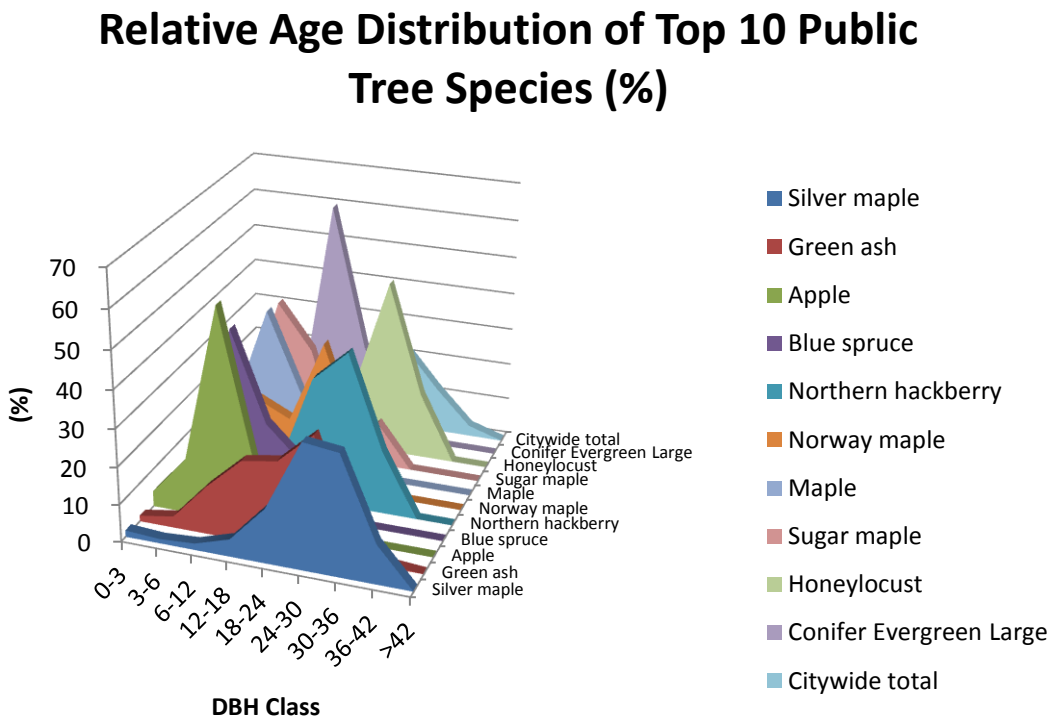


Figure 3: Foliage Condition

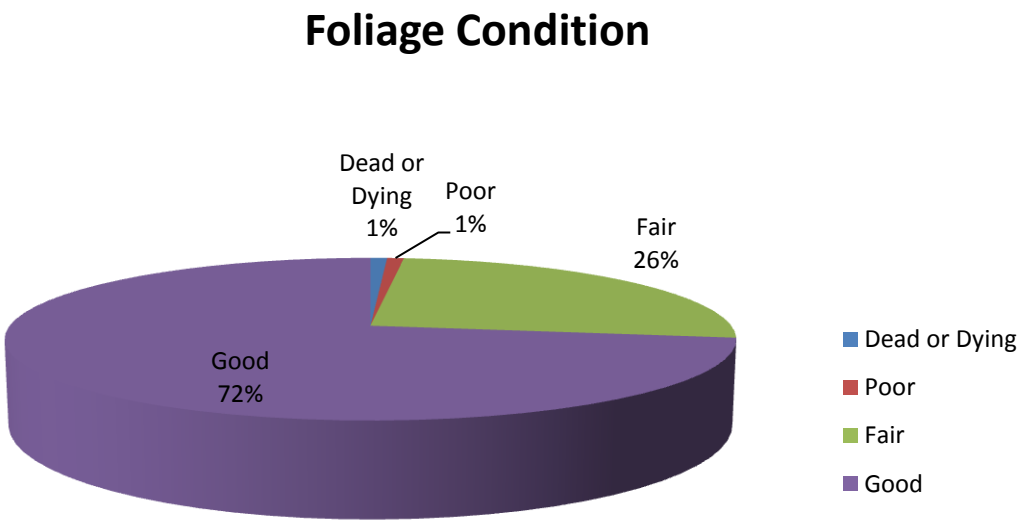


Figure 4: Wood Condition

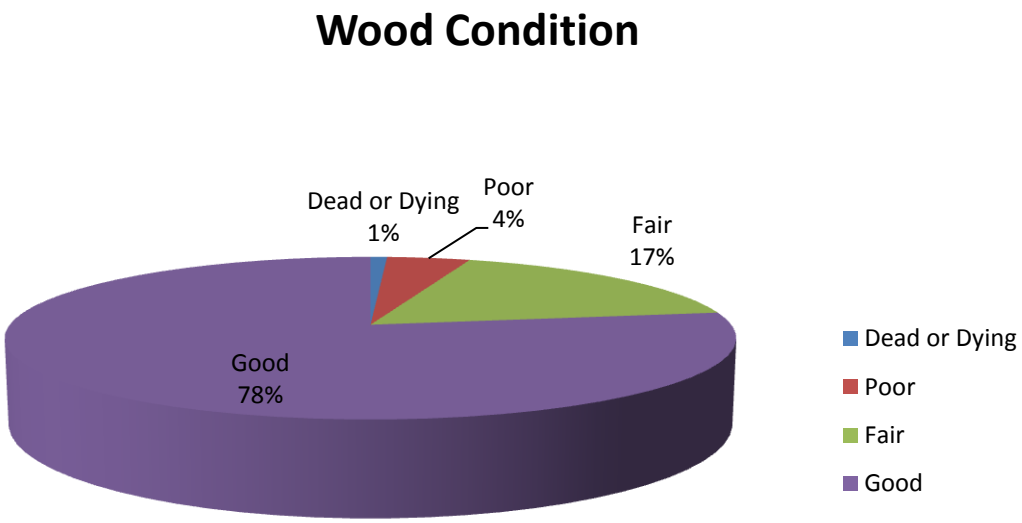


Figure 5: Canopy Cover in Acres

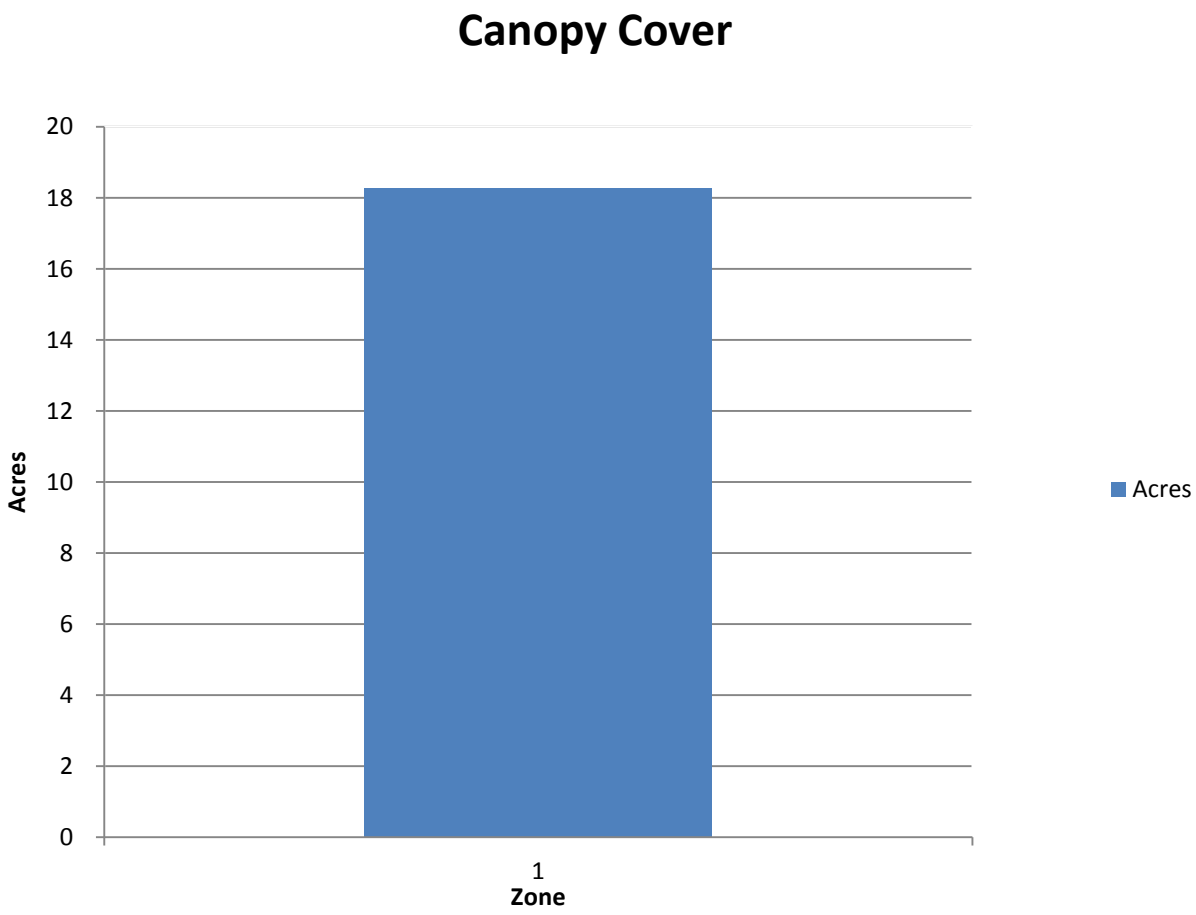


Figure 6: Land Use of city/park trees

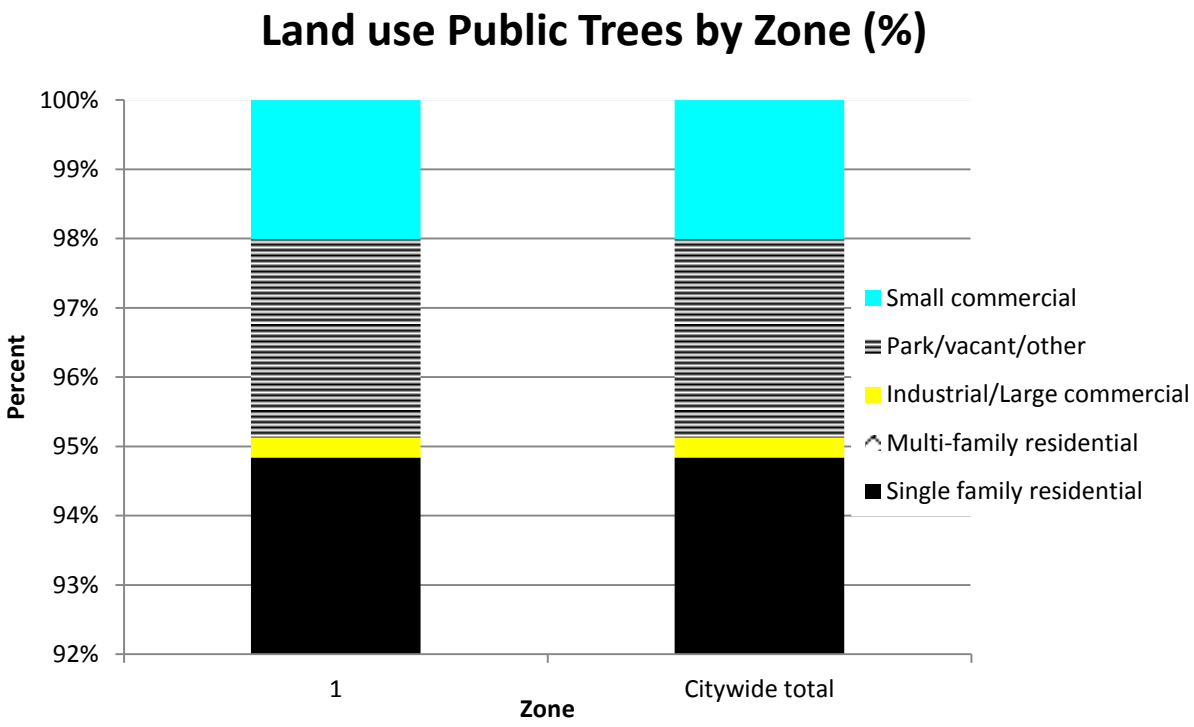
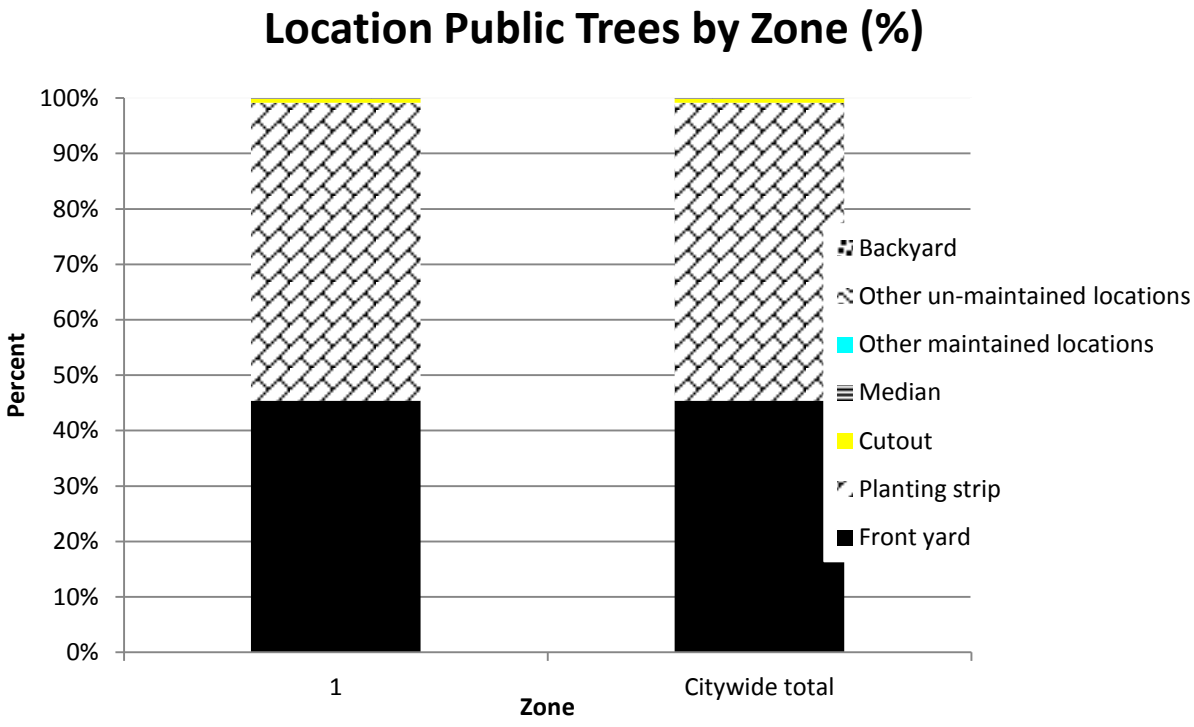


Figure 7: Location of city/park trees



Appendix B: ArcGIS Mapping

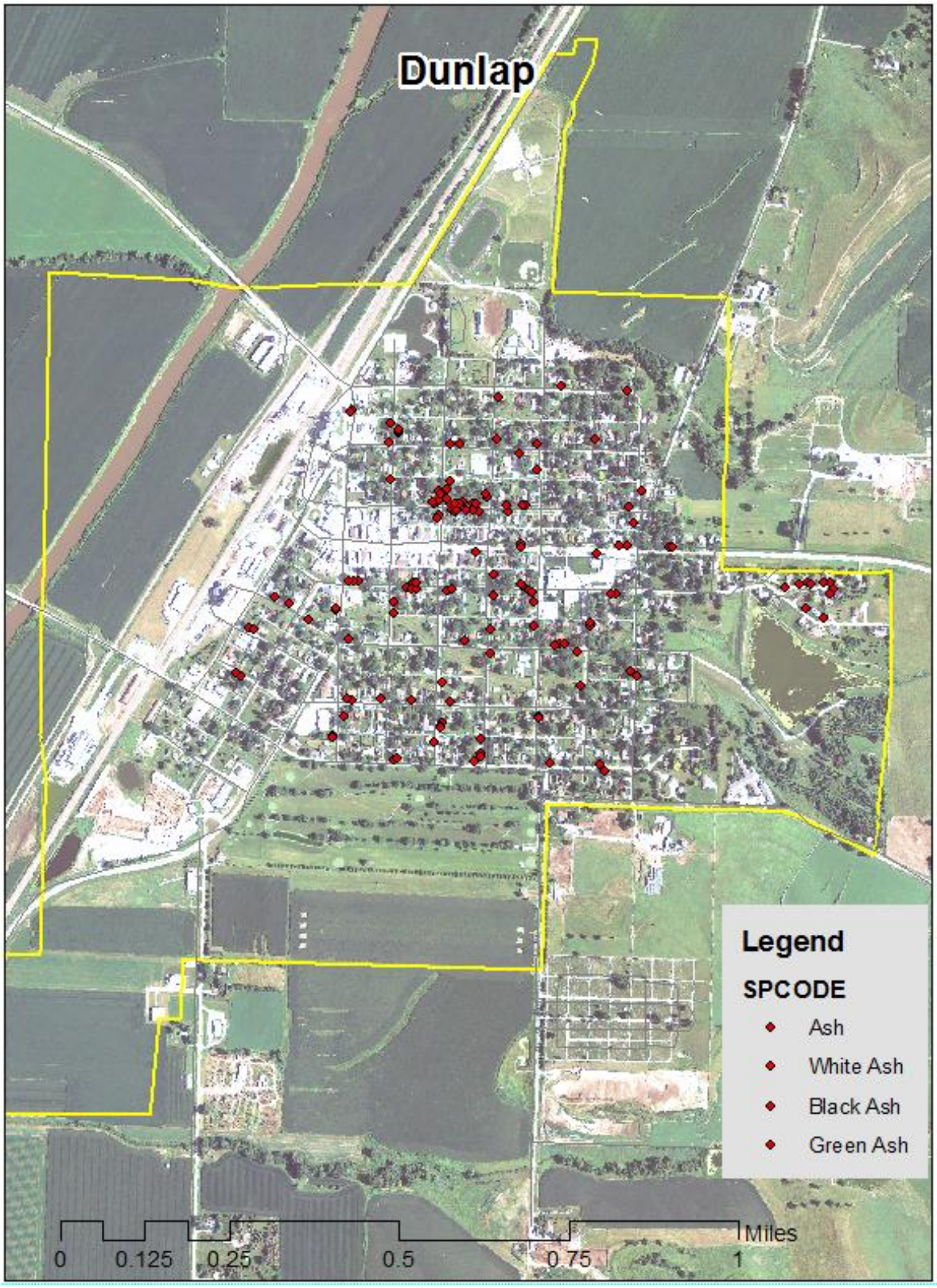


Figure 1: Location of Ash Trees

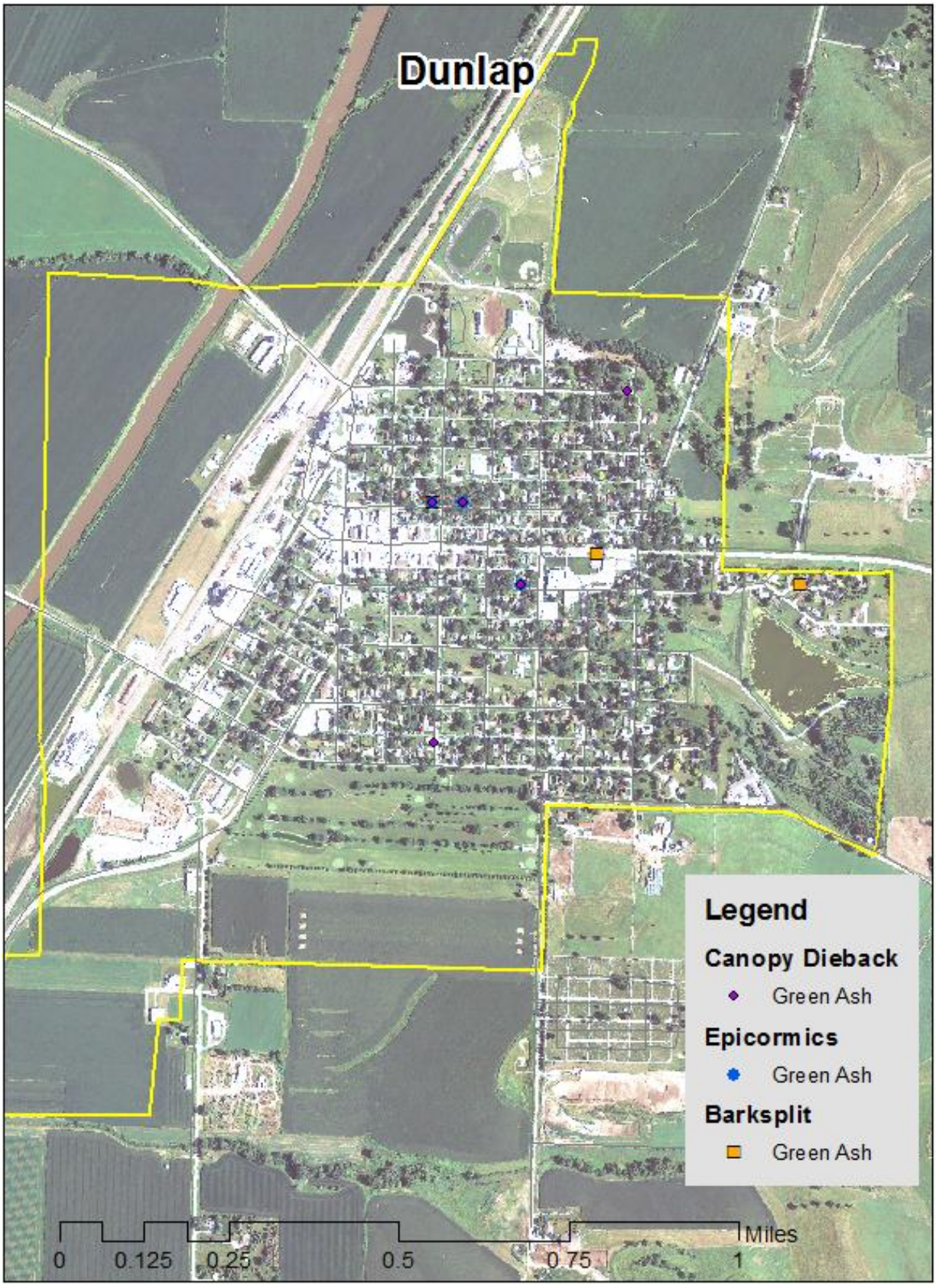


Figure 2: Location of EAB symptoms

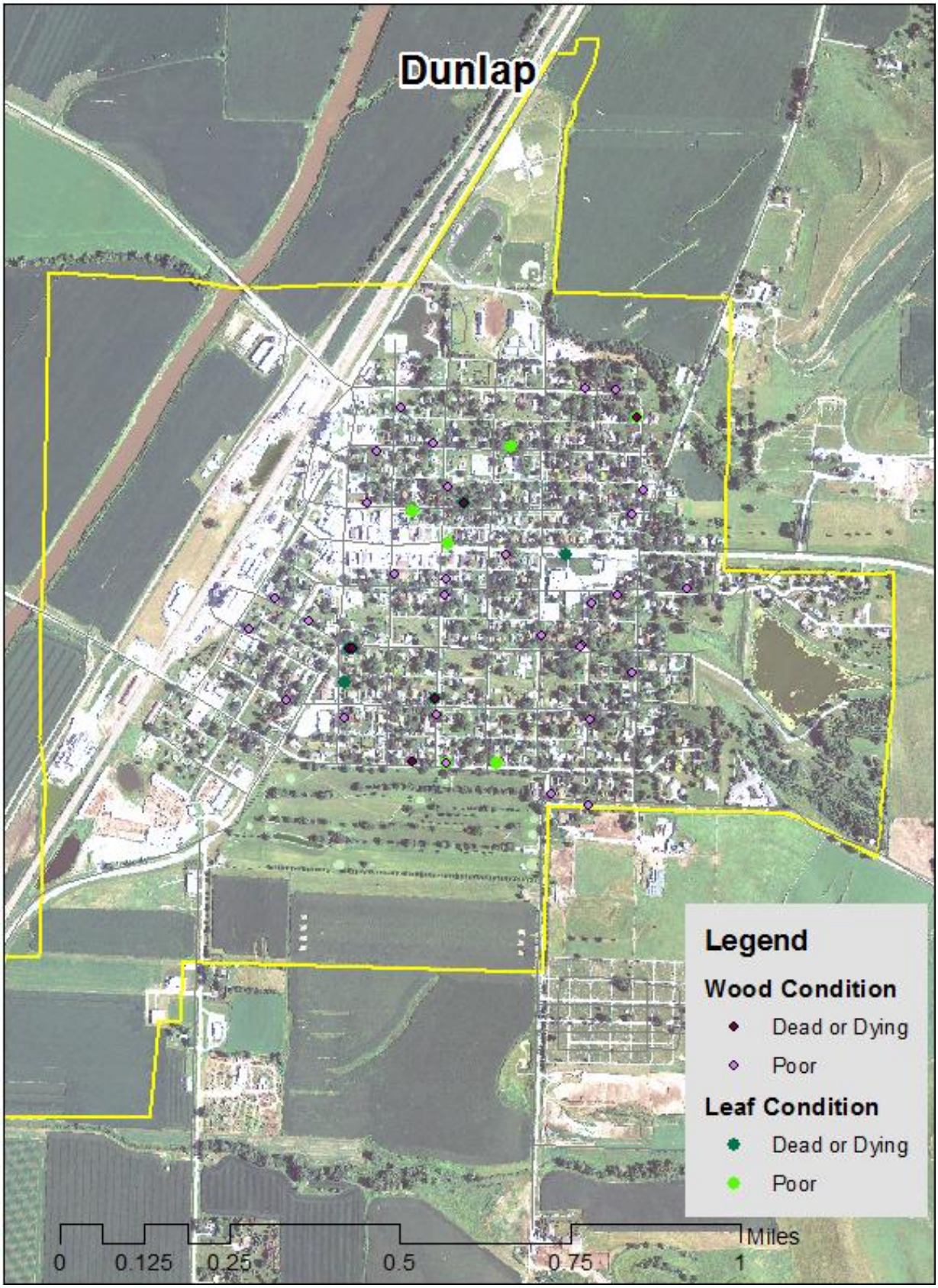


Figure 3: Location of Poor Condition Trees

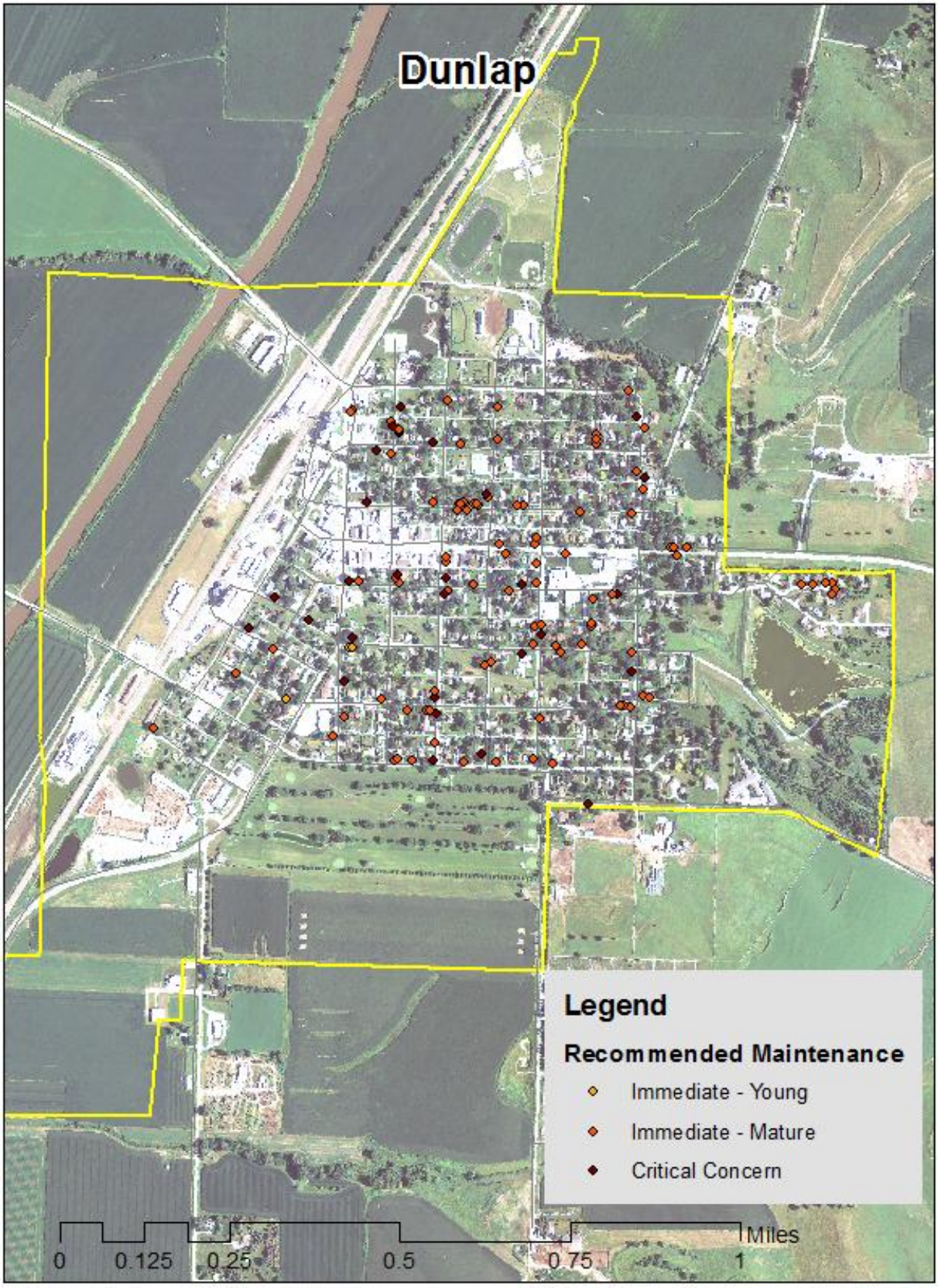


Figure 4: Location of Trees with Recommended Maintenance

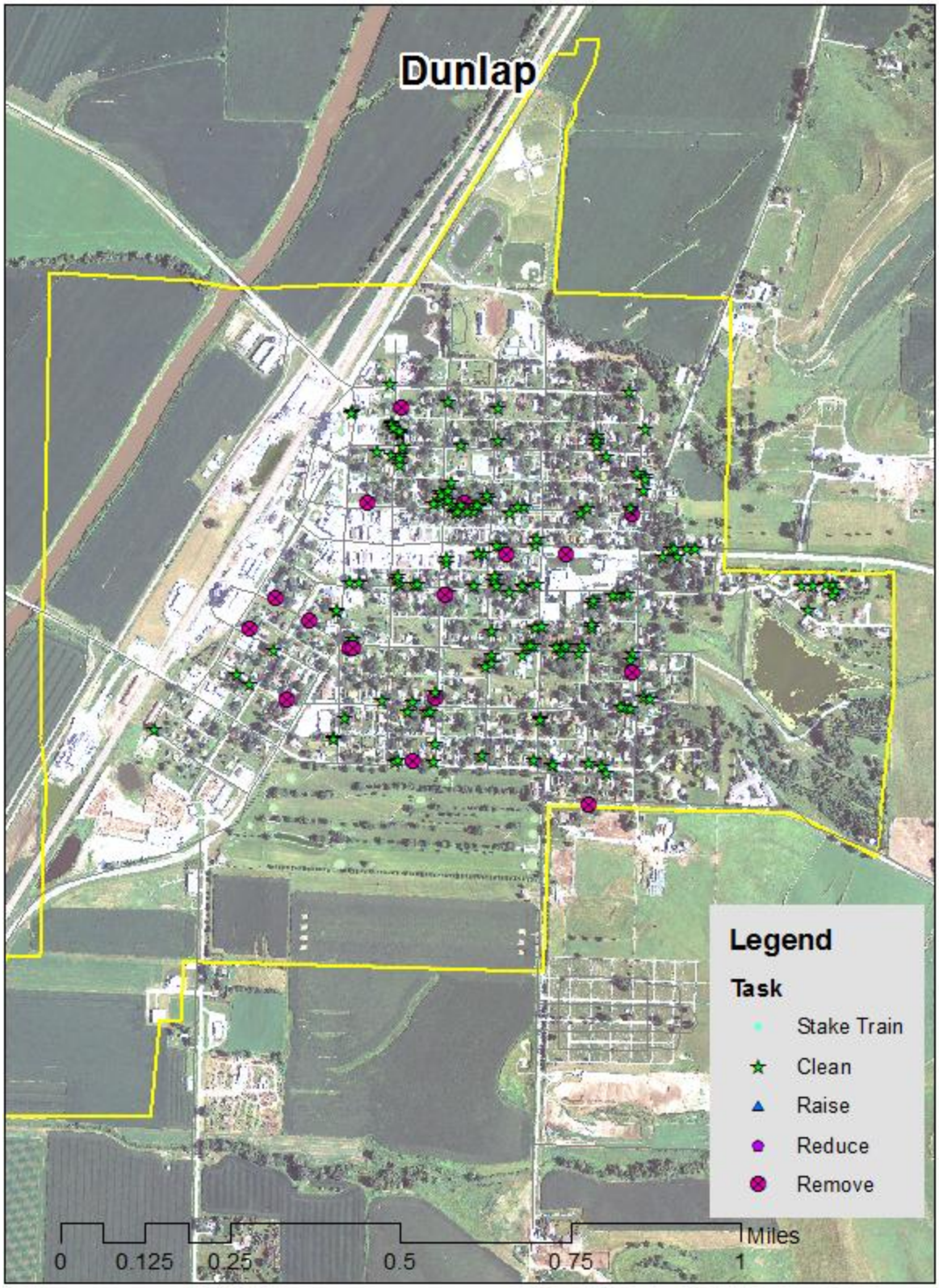


Figure 5: Maintenance Tasks *City ownership of the trees recommended for removal should be verified prior to any removal*

Appendix C: Dunlap Tree Ordinances

CHAPTER 151
TREES AND GRASS

151.01 Definition 151.05 Disease Control
151.02 Planting Restrictions 151.06 Inspection and Removal
151.03 Duty to Trim Trees 151.07 Cutting or Mowing of Grass
151.04 Trimming Trees to be Supervised

151.01 DEFINITION. For use in this chapter, "boulevard" means that part of the street, avenue or highway in the City not covered by sidewalk and lying between the lot line and the curb line; or, on unpaved streets, that part of the street, avenue or highway lying between the lot line and that portion of the street usually traveled by vehicular traffic.

151.02 PLANTING RESTRICTIONS. No tree shall be planted in any boulevard or street except in accordance with the following:
1. Alignment. All tress planted in any street shall be planted in the boulevard midway between the outer line of the sidewalk and the curb. In the event a curb line is not established, trees shall be planted on a line ten (10) feet from the property line.
2. Spacing. Trees shall not be planted on any boulevard which is less than nine (9) feet in width, or contains less than eighty-one (81) square feet of exposed soil surface per tree. Trees shall not be planted closer than twenty (20) feet from street intersections (property lines extended) and ten (10) feet from driveways. If it is at all possible trees should be planted inside the property lines and not between the sidewalk and the curb.
3. Prohibited Trees. No person shall plant in any street any fruit-bearing tree or any tree of the kinds commonly known as cottonwood, poplar, box elder, Chinese elm, evergreen, willow or black walnut.

151.03 DUTY TO TRIM TREES. The owner or agent of the abutting property shall keep the trees on, or overhanging the street, trimmed so that all branches will be at least eighteen (18) feet above the surface of a street, twenty (20) feet above the surface of a primary highway, and eight (8) feet above the sidewalks. If the abutting property owner fails to trim the trees, the City may serve notice on the abutting property owner requiring that such action be taken within five (5) days. If such action is not taken within that time, the
City may perform the required action and assess the costs against the abutting property for collection in the same manner as a property tax.
(Code of Iowa, Sec. 364.12[2c, d, & e])

151.04 TRIMMING TREES TO BE SUPERVISED. Except as allowed in Section 151.03, it is unlawful for any person to trim or cut any tree in a street or public place unless the work is done under the supervision of the City.

151.05 DISEASE CONTROL. Any dead, diseased or damaged tree or shrub which may harbor serious insect or disease pests or disease injurious to other trees is hereby declared to be a nuisance.

151.06 INSPECTION AND REMOVAL. The Council shall inspect or cause to be inspected any trees or shrubs in the City reported or suspected to be infected with or damaged by any disease or insect or disease pests, and such trees and shrubs shall be subject to removal as follows:
1. City Property. If it is determined that any such condition exists on any public property, including the strip between the curb and the lot line of private property, the Council may cause such condition to be corrected by treatment or removal. The Council may also order the removal of any trees on the streets of the City which interfere with the making of improvements or with travel thereon.
2. Private Property. If it is determined with reasonable certainty that any such condition exists on private property and that the danger to other trees or to adjoining property or passing motorists or pedestrians is imminent, the Council shall notify by certified mail the owner, occupant or person in charge of such property to correct such condition by treatment or removal within fourteen (14) days of said notification. If such owner, occupant or person in charge of said property fails to comply within 14 days of receipt of notice, the Council may cause the condition to be corrected and the cost assessed against the property.
(Code of Iowa, Sec. 364.12[3b & h])

151.07 CUTTING OR MOWING OF GRASS.
1. Duty to Cut and Mow Lawns and Lots. The owner of any property shall cut and mow all lawns and lots so that such growth shall be less than four (4) inches at all times.
2. Cutting and Mowing by City. If a property owner refuses or fails to cut and mow lawns and lots within forty-eight (48) hours after being delivered a notice from the City to perform such action, the Council may require said work to be done and the cost and expenses thereof shall be assessed to the property owner after due notice is given. The amount of such assessment shall be certified to the County Auditor as provided by law and the same shall be collected with and in the same manner as general property taxes.

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 Director Chuck Gipp at 515-281-5918.