

City of Durango



2004

Urban Forest Tree Inventory



Completed by:
City of Durango
Parks and Recreation Department, Forestry Division

In coordination with:
City of Durango
Geographic Information Systems Division
and
Fort Lewis College
Department of Geosciences

City of Durango

Urban Forest Tree Inventory

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Executive Summary

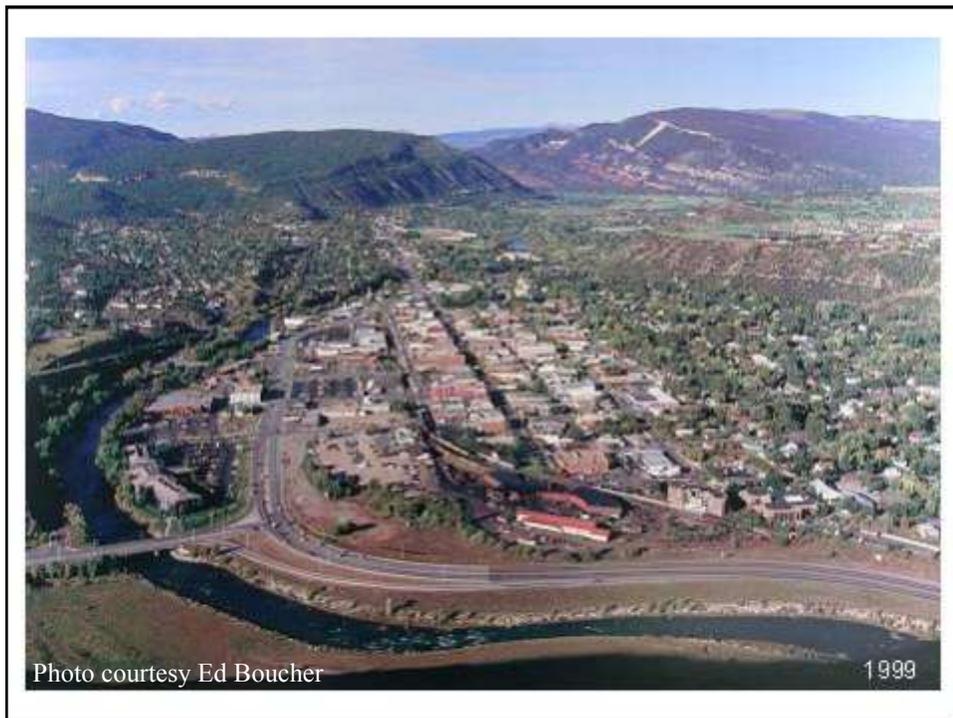
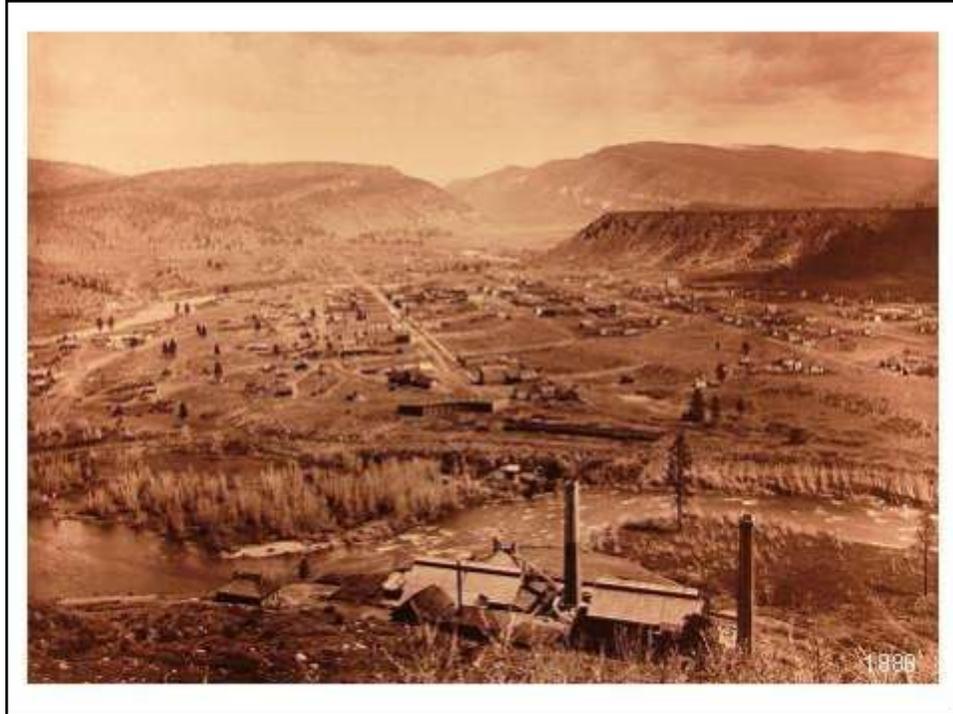


Executive Summary

The City of Durango Urban Forest Tree Inventory completed in 2004 shows the citizens of Durango that their urban forest is one of great diversity and very good health. The information collected has many implications. A total of 7,128 city-owned trees and 154 potential planting sites were recorded. Overall species composition is excellent with 74 different tree types identified. The number of trees accounted for has almost doubled from previous inventories and the dollar value of the city's urban forest has increased substantially from \$3,079,165 in 1988 to \$15,998,710 in 2004. The most dominant varieties in the community have remained constant with Colorado Blue Spruce, Siberian Elm, Rocky Mountain Juniper, American Elm, and Silver Maple composing the bulk of the forest in Durango. There are other species such as Shademaster Honey Locust, Patmore Ash, Aspen and several different varieties of Pear that are accounting for a large piece of the tree canopy gracing Durango. This inventory, unlike others done in the past, covered many additional areas beyond the usual planting strips located between sidewalk and curb, such as riparian areas, carparks, and city right-of-ways. This helps to explain the substantial increase in the numbers of some specific tree types such as Aspen and Pear. Species diversity is a major component in minimizing the impact of any insect or disease infestation that can threaten Durango's urban forest. The Forestry Division strives to promote the use of many different tree types throughout Durango, this inventory shows that not one single specie comprises more than 7.5 % of the total forest. This fact alone will always ensure that overall forest health will be maintained in Durango. Consistent maintenance of all trees, especially the more mature specimens is paramount to sustain the health and vigor of the entire canopy. The 2004 tree inventory confirmed that the vast majority of trees fall into the good category. This shows that a consistent program of maintenance, especially pruning, is vital to a healthy dynamic urban forest. A total of 5,437 trees were identified as in need of form pruning in the inventory; by far the greatest management need. The ultimate goal would be to raise the majority of city maintained trees into an excellent category. The realities of the urban setting, even in a small town like Durango, however, make these possibilities improbable. The ravages of insect and disease, construction around existing trees, and continued new development put enormous pressures on Durango's trees. Another vital component of this inventory was the quantification of invasive and noxious species such as Russian Olive and Tamarisk. These two species alone threaten the complete displacement of native plant and wildlife and have the potential to forever change the riparian corridor running along the Animas River. A plan will be developed to remove the noxious species from public property in the near future.

The intent of using geographic information systems (GIS) and global positioning systems (GPS) in the inventory process was to produce information that can be rapidly and easily updated in the field and office. Using current technology; the city was able to effectively create a mark-in-time to better asses where Durango's Urban Forest is as of 2004. Future objectives such as real time forestry management and public web access to the tree inventory data are currently in development. Durango is growing and the urban forest is growing along with it. The City of Durango owns 2,961 more trees than 17 years ago. With future annexations and development being inevitable, this inventory will help forestry personnel manage our future.

Introduction



Introduction

In 2004, the City of Durango Parks and Recreation Department initiated a tree inventory to create an up-to-date count of all existing city owned and managed trees. Two previous tree inventories were completed by the Colorado State Forest Service. The first was completed in 1977 and the second was completed in 1988. The original survey counted 2,921 trees. The later survey showed city maintenance of 4,167 trees. In 2004, the inventory counted 7,128 trees and 154 potential planting sites. This confirms that a proactive tree planting program combined with significant new development has added substantial numbers of new trees to Durango's urban forest. The 2004 inventory was intended to give an accurate estimate of condition, number of trees, and reevaluate tree management needs. The city was subdivided into 20 management units for inventory purposes. The location of counted trees included street, park, cemetery, street medians, city parking lots, right-of-way (designated by specific measurements behind curb lines), and the riparian corridor that runs through Durango along the Animas River Trail. The 2004 inventory did not include designated city open space or Durango 9R school property.

Techniques

To undertake the immensity of a city-wide tree inventory, the City of Durango Forestry Division worked in conjunction with the Geographic Information Systems (GIS) Division. In order to implement the process, it was essential that the latest technology be used for all data collection. Enlisting the help of Fort Lewis College students, Durango's City Arborist Ron Stoner and GIS Analyst Rick Szmajter developed a mobile GIS based inventory system to compute tree count, assess species diversity, evaluate tree maturity and health and identify management needs. Tree attributes were gathered in the field utilizing ArcPad 6.0.2 running on a Hewlett Packard (HP) 5500 iPAQ pocket PC and a custom data-entry form built in ArcPad Application Builder. The spatial data was then converted to a data base and statistically summarized within predefined management units. Utilizing simple spatial queries, the diversity of the urban forest was quantified and management needs evaluated and prioritized.

An integral component of the City of Durango Tree Inventory System (CodTree) design was the custom configuration and data-entry form running in ArcPad on the HP IPAQs. The default configuration file embedded in the portable GIS software was modified in Application Builder to better serve Durango's forestry personnel in the field. Custom menus and submenus were added to extend editing, selection, query, and navigation options (Fig 1).



Figure 1. The standard toolbar (1st row) embedded in ArcPad was supplemented with a custom toolbar (2nd row) allowing enhanced editing, selection, query, and navigation options. Activation of the second 'pine tree' button from the left added a tree at a location while the adjacent 'pine tree-with-satellite' button added a tree while recording its GPS coordinate.

A layer definition file (i.e., data-entry form) was launched whenever a tree point was selected for editing or added via the custom AddTree and GPSTree buttons. The form would then step the user through a series of four custom pages designed to input field variables. Page one recorded the tree index, date, and general site information (GSI) for the field investigations. Page two of the form allowed input of specific tree information such as tree type, tree species (by common name), trunk diameter, and tree health as living biomass (Fig 2).

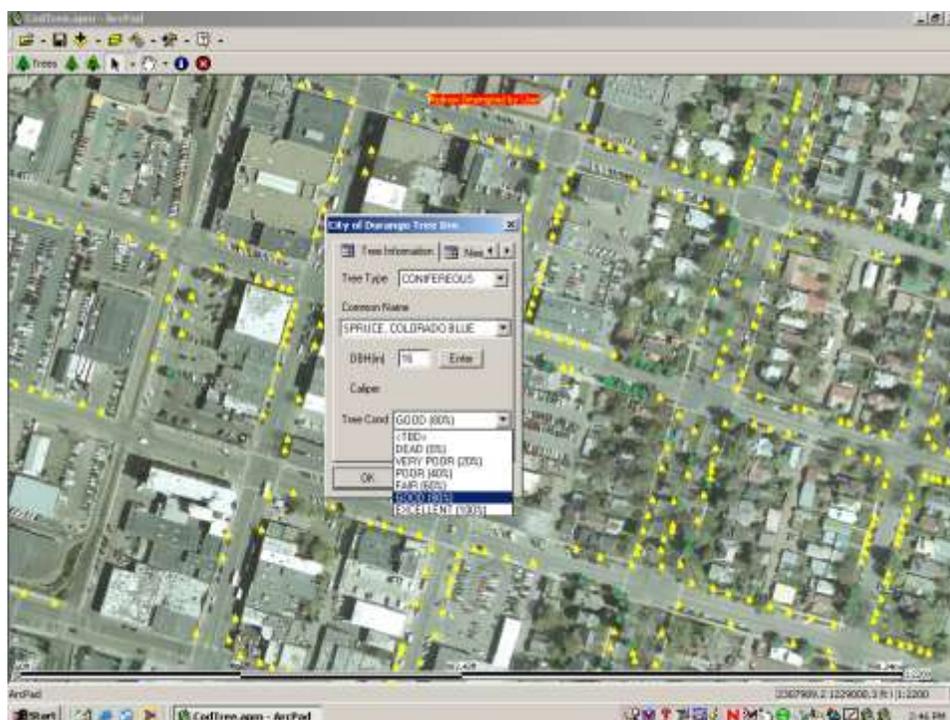


Figure 2. Page 2 of 4 in CodTree custom data entry form showing dropdown domains for tree type, tree species, and tree condition. Diameter at breast height (DBH) measurements are entered as text and instantly validated in the form. If the entered diameter value is greater than the minimum 4 inches, the caliper is inactivated. If less than 4” in diameter the DBH reverts to zero and the user is prompted to use the caliper range.

Page three of the form was dedicated to management needs and allowed the field inspector to add up to four specific variables. The last page of the form allowed free text entry to describe unique site or tree characteristics observed in the field.

Equipped with the PDAs, customized GIS software, aerial imagery, measurement tools, and location maps, field personnel proceeded with the tree count by individual management unit. The girth of each tree was measured on-site using standard forestry protocol. Caliper measurements taken 6 inches above grade were made for immature trees 4” diameter or less while mature trees were measured using “diameter-at-breast-height” (DBH) taken approximately 4.5 feet above grade (Fig 3). The physical condition of each tree and its related management needs were then evaluated through visual inspection.



Caliper



DBH

Figure 3. Field personnel demonstrate data collection techniques. The DBH and caliper measurement of mature and immature trees is illustrated.

The custom GIS interface streamlined entry of the on-site botanical data. It generally took less than one minute-per-tree to enter all relevant field data on the four-page custom form. Most of the trees inventoried were captured in Durango's 2001 aerial photography that served as the base layer for the ArcPad interface (see Fig 2). However some of the newer residential developments within the city, such as Skyridge, were not previously mapped. In addition, park crews replaced or added trees to many of the more-established areas of the city since 2001. Therefore one of the two PDA devices used in the inventory was equipped with a Navman 3450 GPS to facilitate entry of new trees not captured in the most recent orthorectified aerial images (Fig 4).



Figure 4. Using GPS and the hand-held computer, forestry personnel collected location data and attributes of recently planted trees in the Skyridge subdivision.

photos courtesy of Scott White

The tree values were estimated by using a protocol described in the Council of Tree and Landscape Appraisers' book *Guide for Plant Appraisal*.* The attributes assigned during data collection for each tree were used within the formula. Diameter values were used to calculate trunk area (in.²). The condition value was converted to a percent form based on approximate living or healthy biomass (Table 1).

ConditionLiving/Healthy Biomass	
Dead	0.00
Very Poor	0.20
Poor	0.40
Fair	0.60
Good	0.80
Excellent	1.00

Table 1. The condition of each tree was assessed in the field by percent of living/ healthy biomass.

Species rating values (%) were assigned from an appraisal brochure prepared by the Rocky Mountain Chapter of the International Society of Arboriculture (Appendix A.). Base values of mature trees were calculated by multiplying the cross-sectional area of the tree trunk (i.e., [Diameter]² x .7854) by a unit tree cost value renewed yearly by regional councils. Base values of immature trees 0-2 in. and 2-4 in. in caliper diameter were determined by substituting 1 in.² and 2 in.² in the trunk area formula, respectively. Individual tree values were then calculated by multiplying the base values times the species, location, and condition factors. As an example, a Colorado Blue Spruce located in a city park with a diameter of 12 inches and in fair condition would be valued as follows:

$$\text{Base Value} = \text{Tree Trunk Area} \times \text{2004 Unit Tree Cost Value} \\ (144 \text{ in.}^2 \times .7854) \times \$40/\text{in.}^2 = \$4,524$$

$$\text{Tree Value} = \text{Base Value} \times \text{Species Rating} \times \text{Condition Factor} \times \text{Location Factor} \\ \$4,524 \times .875 \times .60 \times .75 = \$1,781$$

The one major modification the city made in the 2004 tree inventory that differed from previous inventories was the substitution of the location factor or general site information (GSI) variable for the placement code. Previous inventories relied on the qualitative ranking to describe the placement of each individual tree within the city (Table 2).

Placement Code
0 — Liability
1 — Very Poor
2 — Poor
3 — Fair
4 — Good
5 — Excellent

Table 2. Codes used for placement in the 1998 inventory.

*Council of Tree and Landscape Appraisers. 2000. *Guide for Plant Appraisal* 9th Edition. International Society of Arboriculture, Champaign, Illinois.

However city park maintenance crews removed trees previously identified as having a poor or very poor placement leaving the majority of the city trees with fair to mostly good placements. In addition, the first priority or hazardous pruning option in the management needs menu addressed city maintained trees that were potentially troublesome. The City Arborist and GIS Analyst conferred on a better method of evaluating tree placement and how it impacts the value of Durango’s urban forest. It was decided that city-owned trees within each management unit be separated by their general site information (Table 3).

GSI_LIST
CITY BUILDING/PARK
CITY CEMETERY
MEDIAN OR ISLAND
RIPARIAN ZONE
ROW OR EASEMENT
STREET OR SIDEWALK
TREEBOX/PARKING LOT
<OTHER>

Table 3. General site information (GSI) list used to attribute site characteristics to each tree counted.

The GSI variable was then assigned a weighted factor based on its respective management unit. Hence trees within the median that divides East 3rd Avenue in Durango’s Historic District (Unit 2) were weighted heavier than median trees in the Bodo Industrial District (Unit 11). The overall value of a Blue Spruce in the historic district would always be greater than a similarly placed Blue Spruce in Bodo if all other variables remained constant. Table 4 lists the location factor for each management and the type of tree placement found within each.

Unit	City Park/Building	Cemetery	Street Median	Riparian Zone	Right-Of-Way	Street/Sidewalk	Treebox/Parking Lot	Other
1	0.75	----	0.7	----	0.6	0.75	----	----
2	0.75	----	0.7	----	0.6	0.75	0.6	----
3	0.75	----	----	----	0.6	0.75	----	----
4	0.75	----	----	----	0.6	0.75	----	----
5	0.75	----	----	----	0.6	0.75	----	----
6	0.75	----	----	0.5	0.6	0.75	----	----
7	0.75	----	0.7	----	0.6	0.75	----	----
8	----	----	0.7	----	0.6	0.75	----	----
9	0.75	----	----	----	0.6	0.75	----	----
10	----	----	0.55	----	0.6	0.75	----	----
11	0.75	----	0.55	----	0.6	----	----	----
12	----	----	0.7	0.5	0.6	----	----	----
13	----	----	----	----	0.6	0.75	----	----
14	----	----	----	----	0.6	0.75	----	----
15	0.75	----	----	----	0.6	0.75	----	----
16	0.75	----	----	----	0.6	----	----	----
17	----	----	----	0.5	----	----	----	----
18	0.75	----	----	----	----	----	----	----
19	0.75	0.8	----	0.55	----	----	----	----
20	0.75	----	----	0.60	----	----	----	----

Table 4. GSI weighted factors for the City of Durango’s 20 individual urban forest management units.

Management Tool

Durango’s growing urban forest undergoes continuous change. This includes tree planting, pruning, and removal of trees due to death, disease or safety concerns. The city must have an easy and efficient way to keep track of these changes in order to properly manage this valuable city resource.

The development of the mobile tree inventory data base enables the City’s Forestry Division to continuously track and update trees in the field. Each tree has a unique identification number that is geo-referenced to a specific location. Each original attribute that was recorded in the inventory can be updated throughout the life of the tree. New trees can be added and updated. This creates efficient and systematic management possibilities that save personnel time and tax payers’ money.

Inventories Compared

Significant changes have occurred since the previous inventories were done in 1977 and 1988. Durango has seen extensive expansion and new development. The number and appraised value of city-owned trees has increased proportionally.

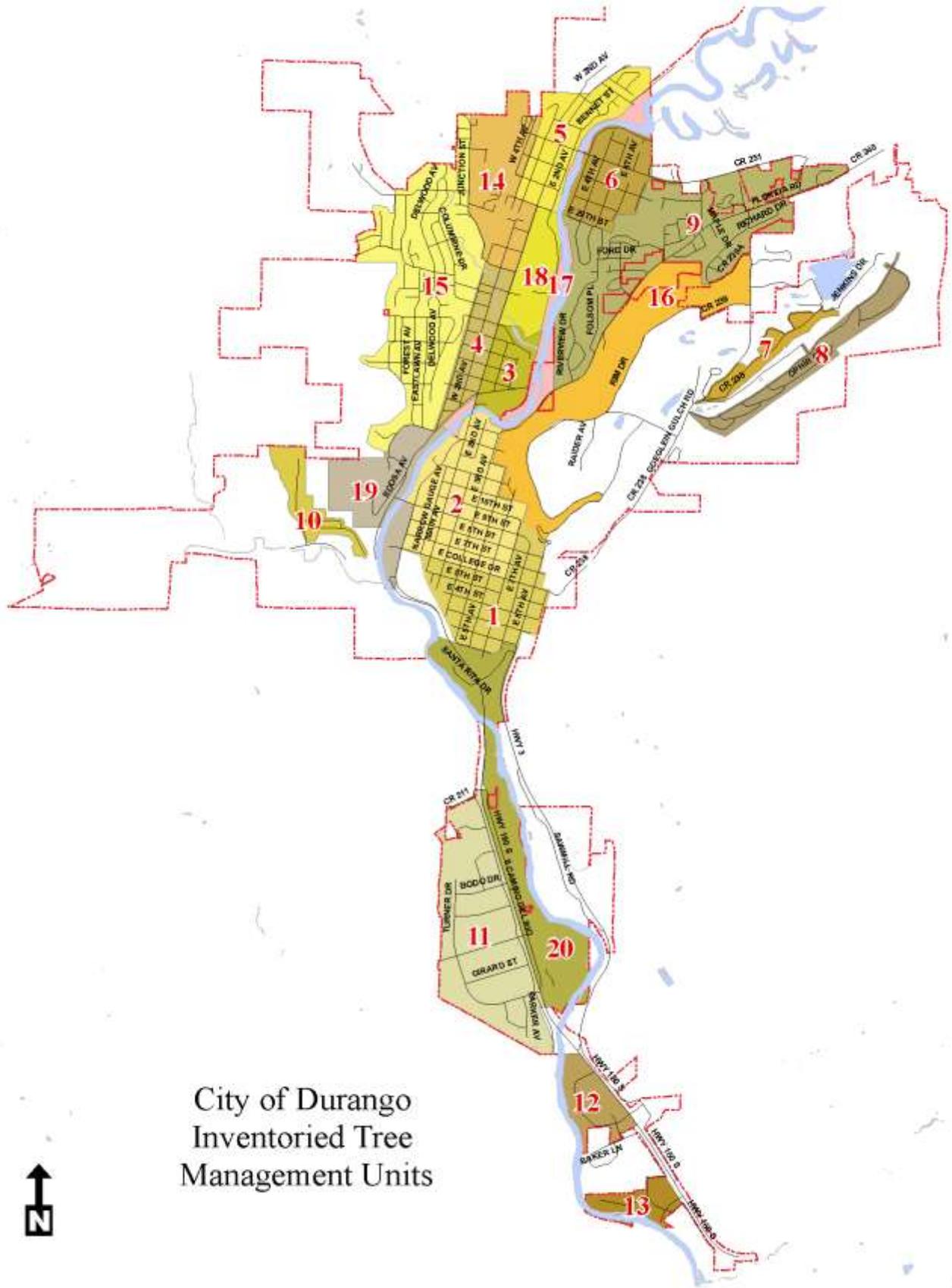
	1977	1988	2004
Total number of trees	2,921	4,167	7,128
Total value of trees	\$2,472,326	\$3,079,165	\$15,998,710

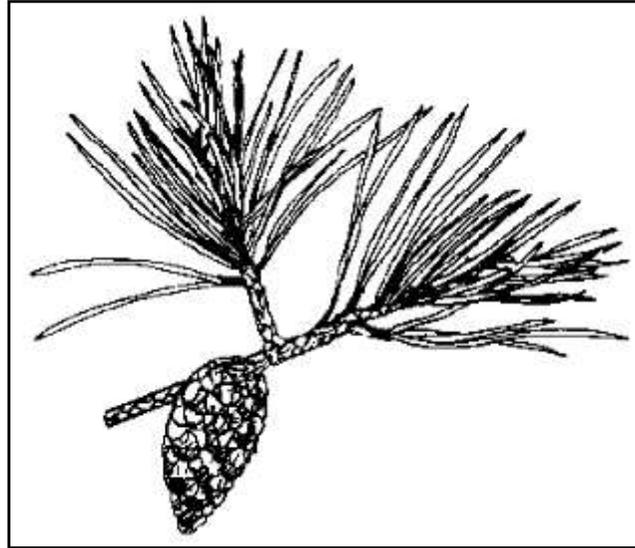


Figure 5. Downtown Durango as pictured from Main Street facing north in the early 1900’s compared with today. The mature street trees shown in the modern photo reflect Durango’s efforts to adorn the city with living flora.

Statistical Summaries of Management Units

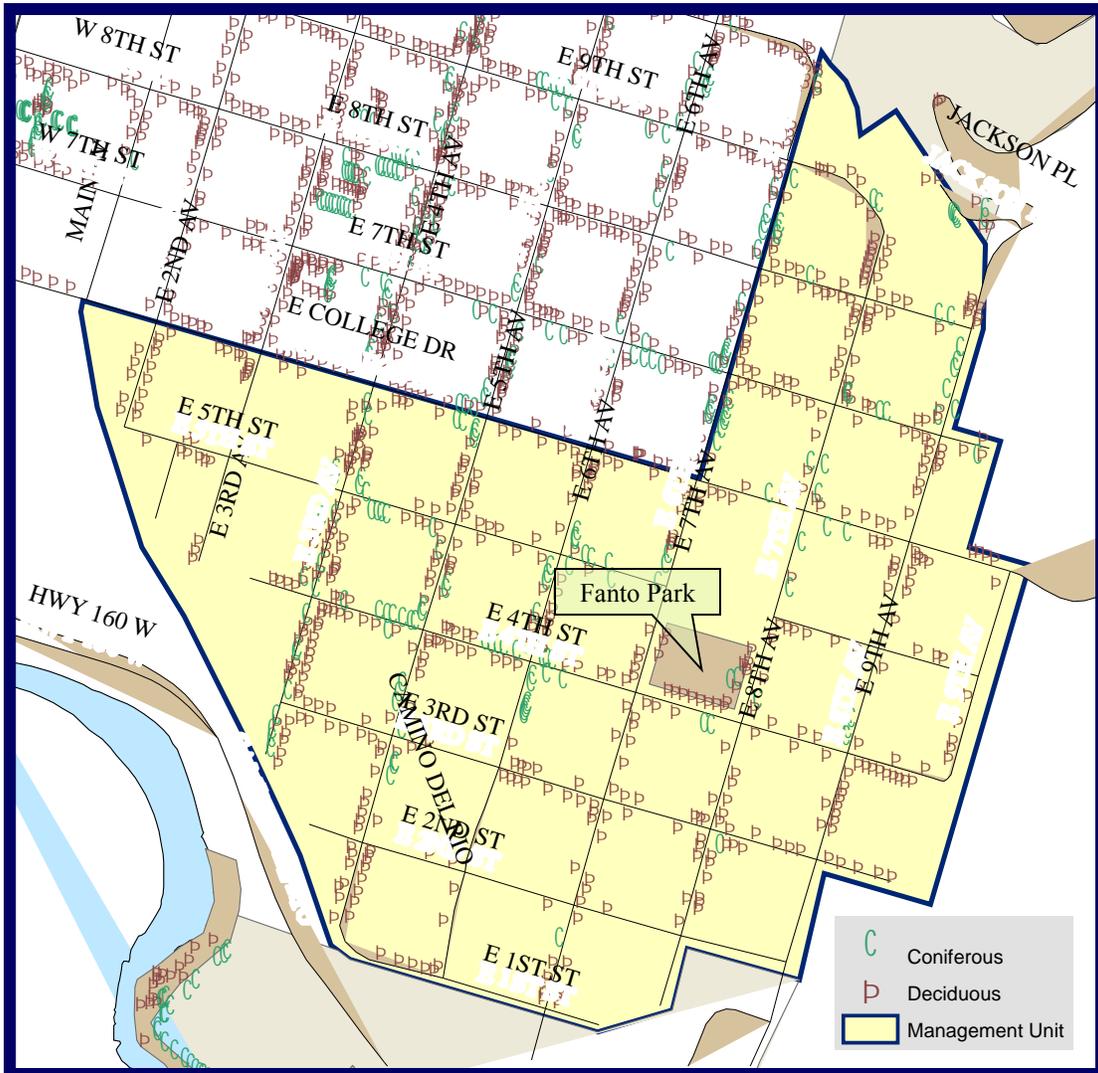






Pinus sylvestrus
Scotch Pine

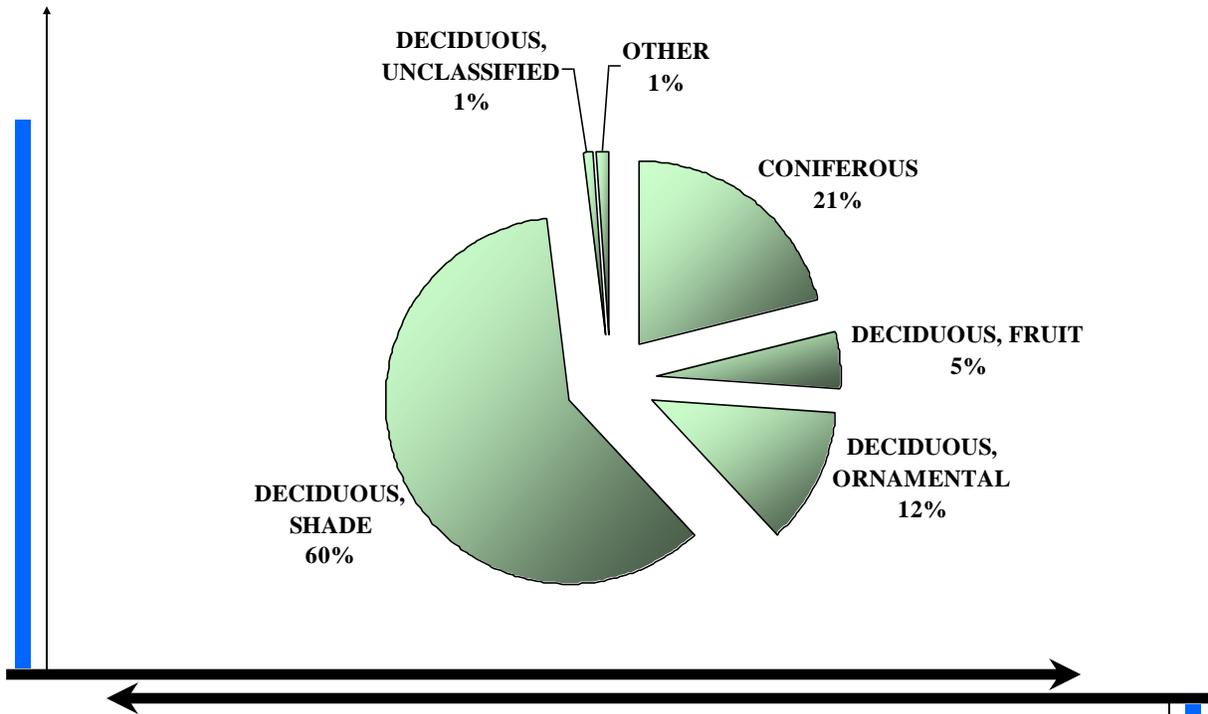
Management Unit 1



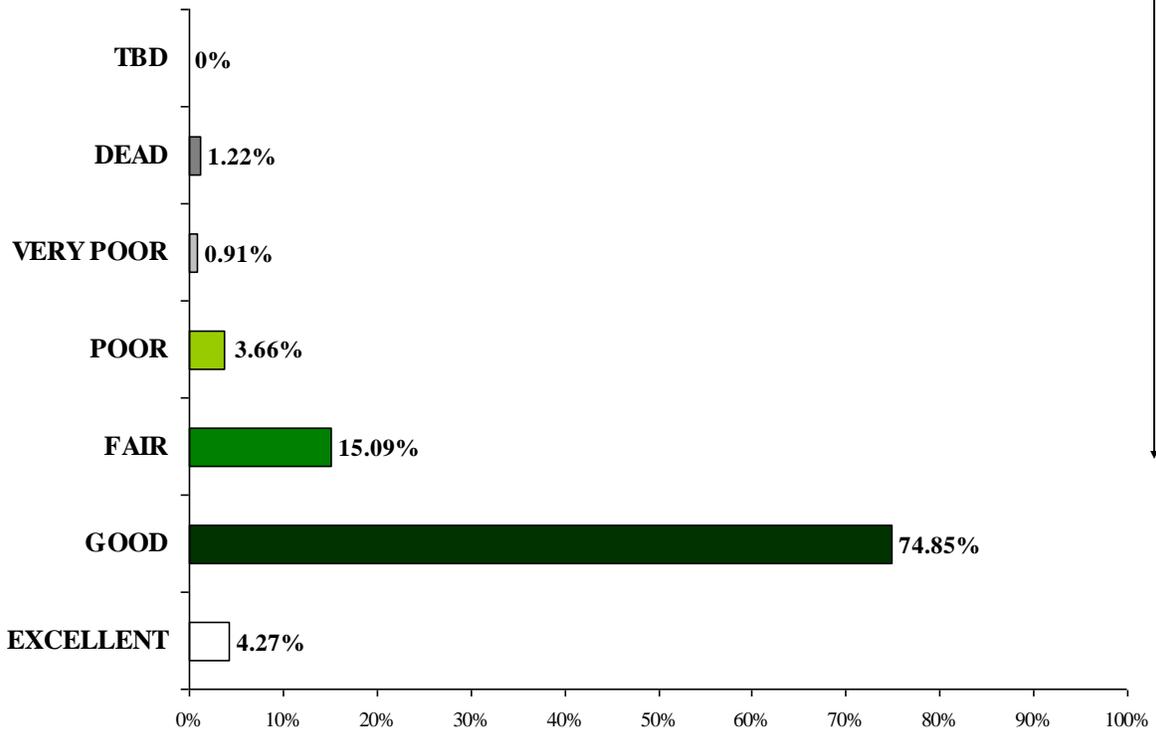
Unit 1- The South Side

Unit 1 includes all streets from 1st Street north to College Drive in an area informally referred to as “The South Side”. The unit then extends north of College Drive and East of E. 6th Avenue to 10th Street. This older section of town includes Fanto Park and contains many mature street trees. New development is occurring along its southern boundary. This management unit has 656 city-owned trees valued at \$2,440,700 and 59 recommended plant sites.

Urban Forest Tree Types (Unit 1)

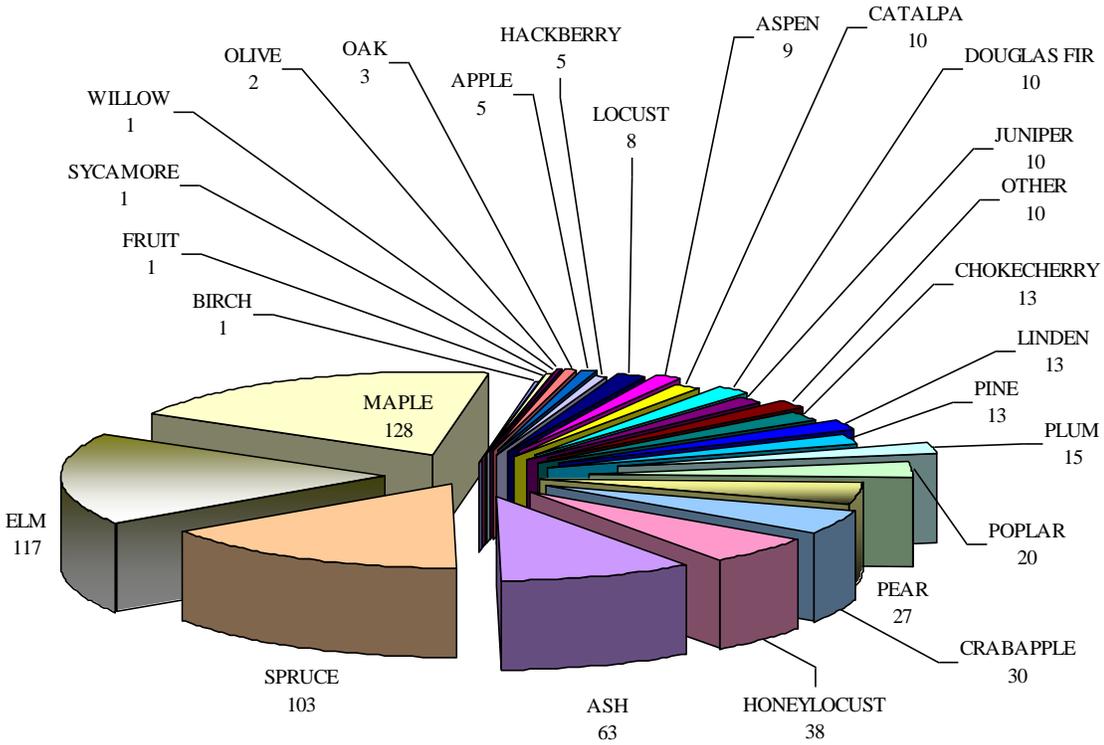


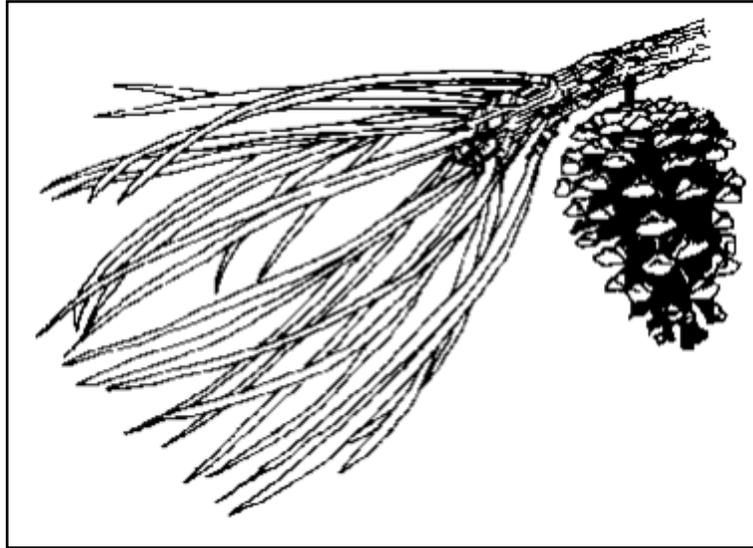
Urban Forest Health (Unit 1)



MANAGEMENT NEED DESCRIPTIONS UNIT 1	
DEAD TREE, REMOVE	17
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	2
CLEARANCE PRUNE, 2ND PRIORITY	162
FORM PRUNE, 3RD PRIORITY	453
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	3
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	9
TREAT DISEASE	2
PLANT NEW TREE	59
OK, NO MANAGEMENT NEEDS	20

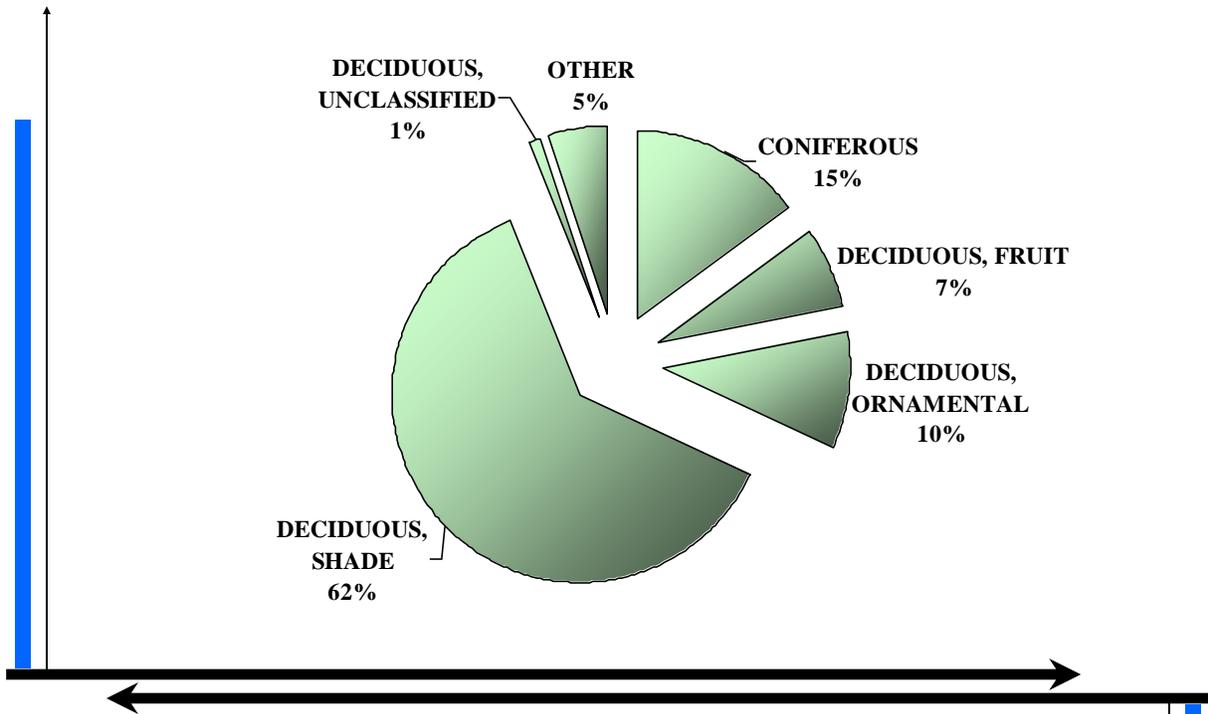
Urban Forest Diversity (Unit 1)



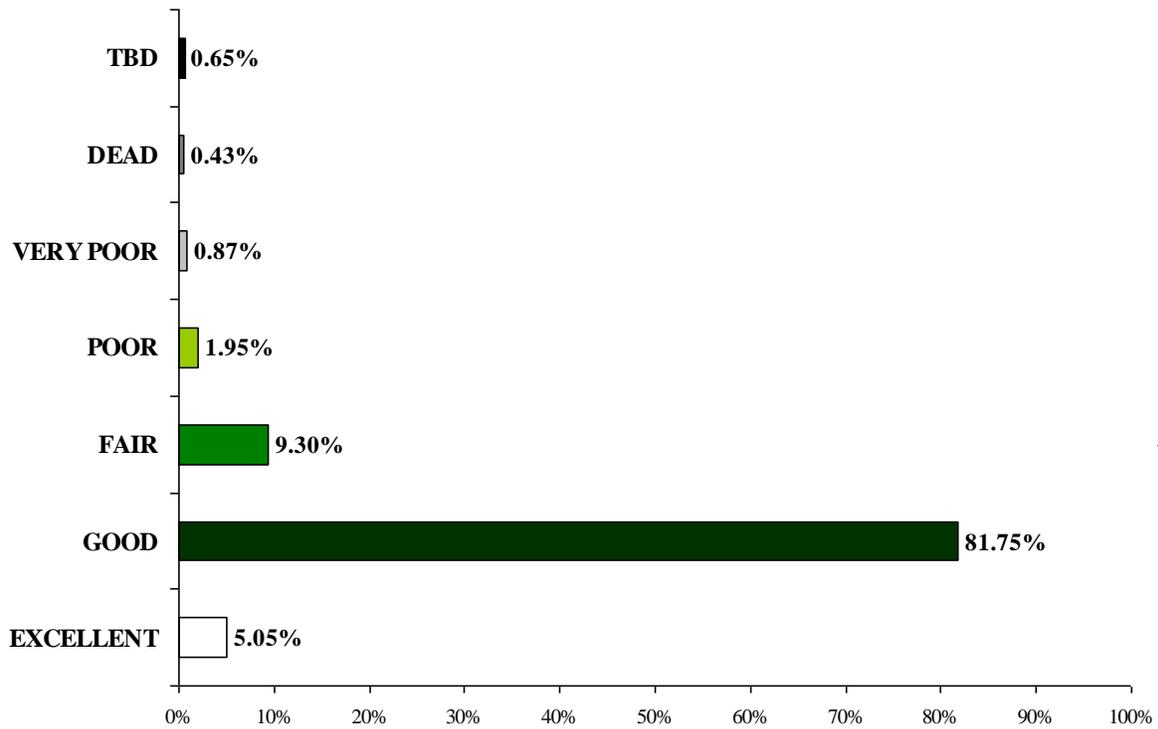


Pinus nigra
Austrian Pine

Urban Forest Tree Types (Unit 2)

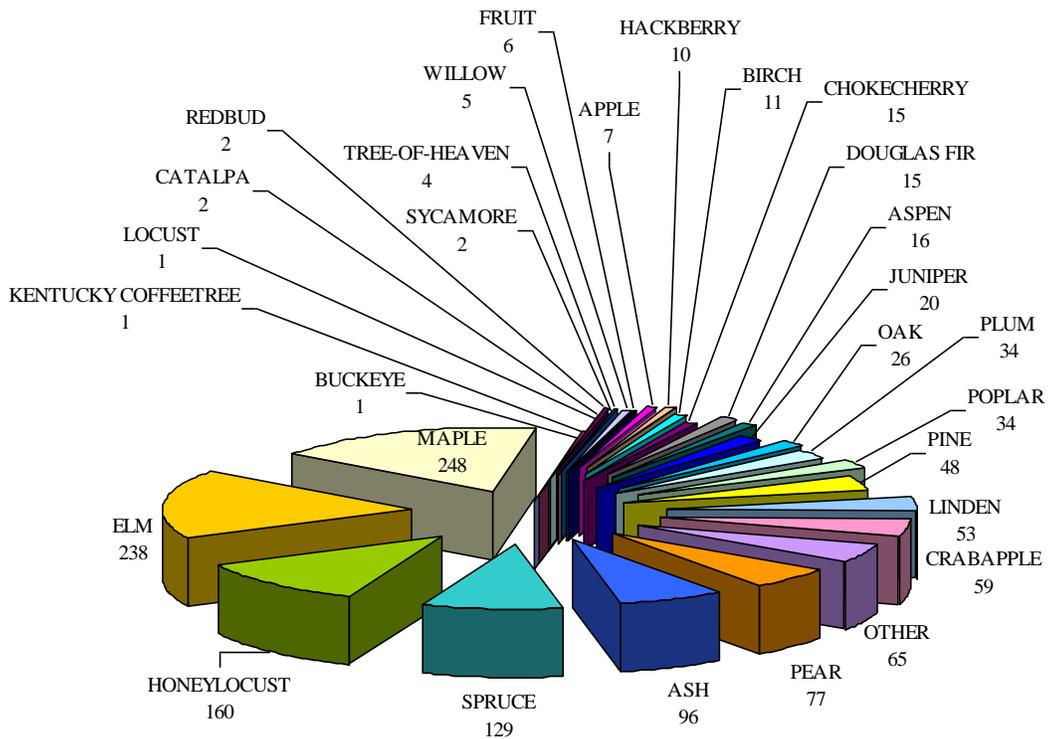


Urban Forest Health (Unit 2)



MANAGEMENT NEED DESCRIPTIONS UNIT 2	
DEAD TREE, REMOVE	20
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	7
CLEARANCE PRUNE, 2ND PRIORITY	298
FORM PRUNE, 3RD PRIORITY	987
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	1
TREAT INSECTS	11
TREAT DISEASE	18
PLANT NEW TREE	48
OK, NO MANAGEMENT NEEDS	66

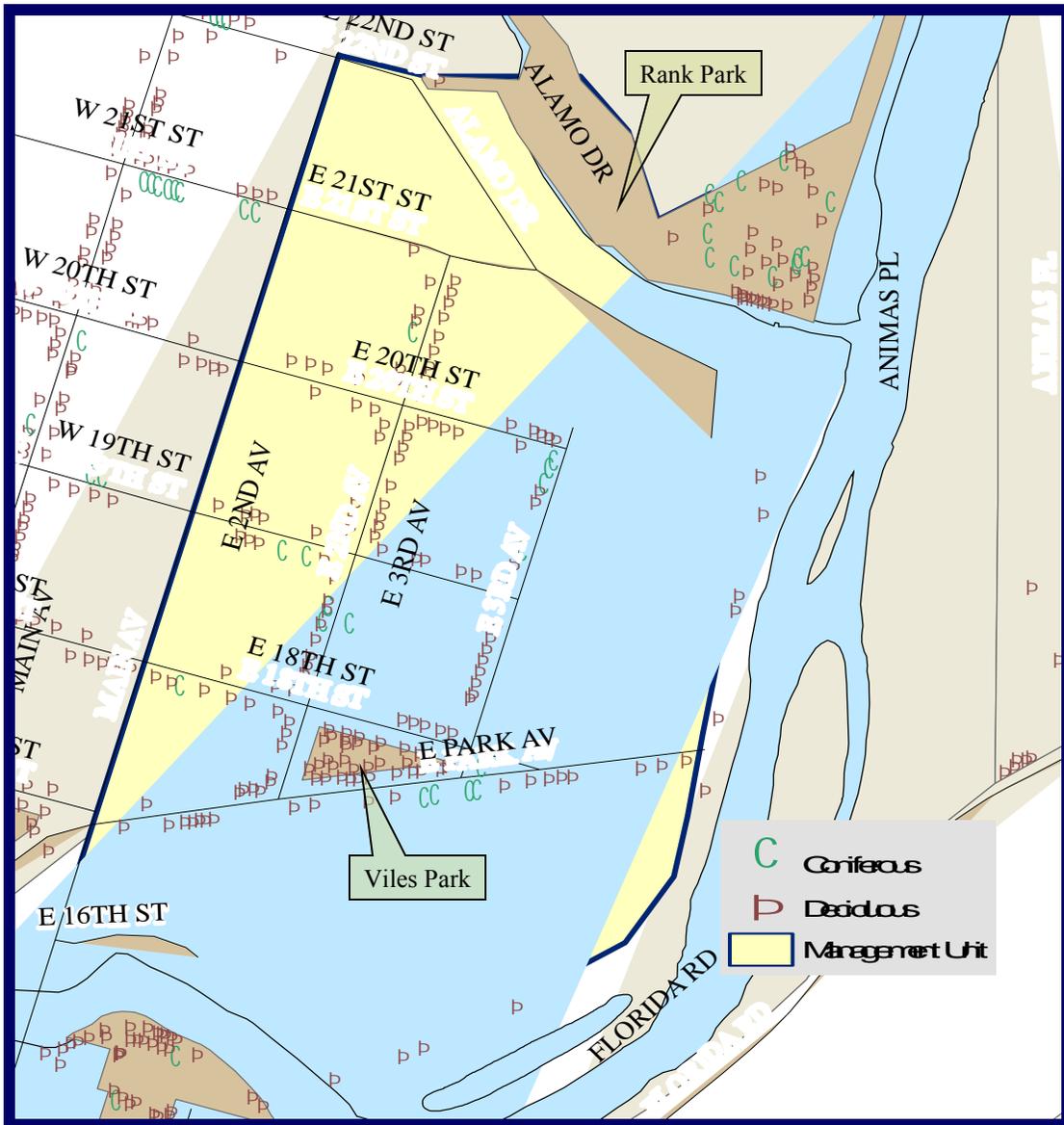
Urban Forest Diversity (Unit 2)





Picea pungens
Colorado Blue Spruce

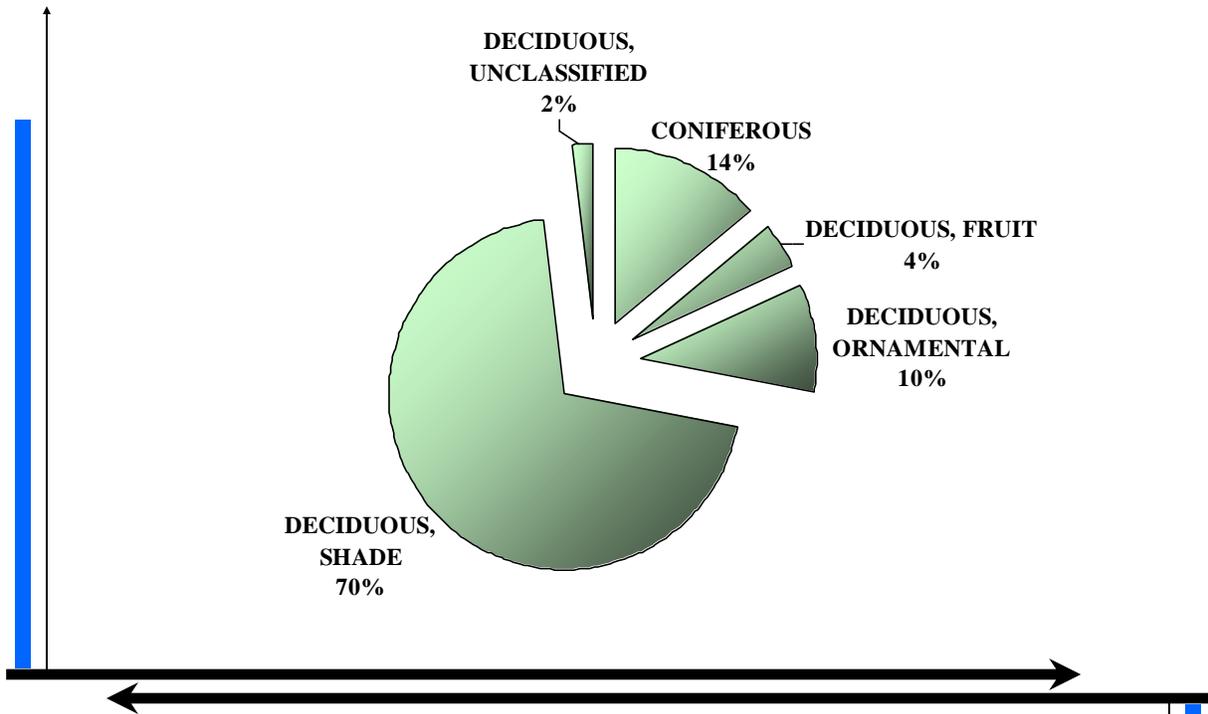
Management Unit 3



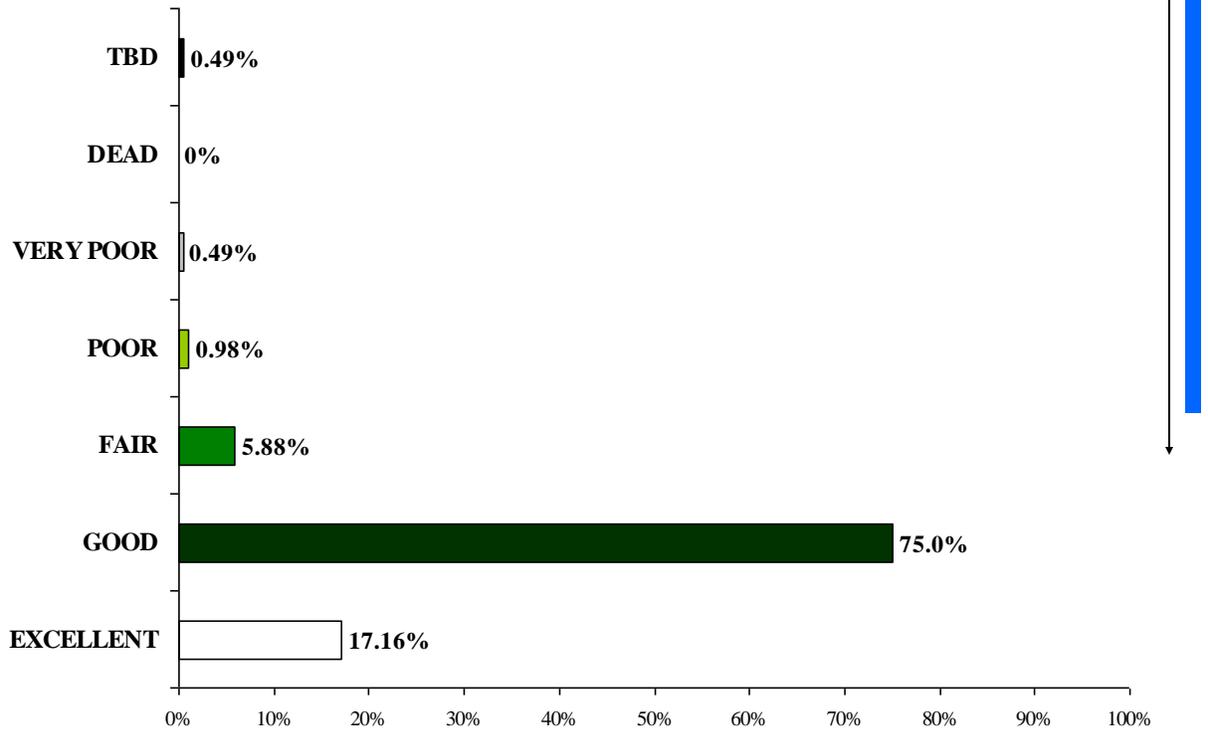
Unit 3– Viles Park

The Animas River and Junction Creek create the south, east, and north boundaries of this management unit. The unit includes all streets from the west side of the river to Main Avenue. It also includes Rank Park and Viles Park and sections of the Animas River Trail. Unit 3 contains 204 trees valued at \$945,707 and 14 recommended plant sites.

Urban Forest Tree Types (Unit 3)

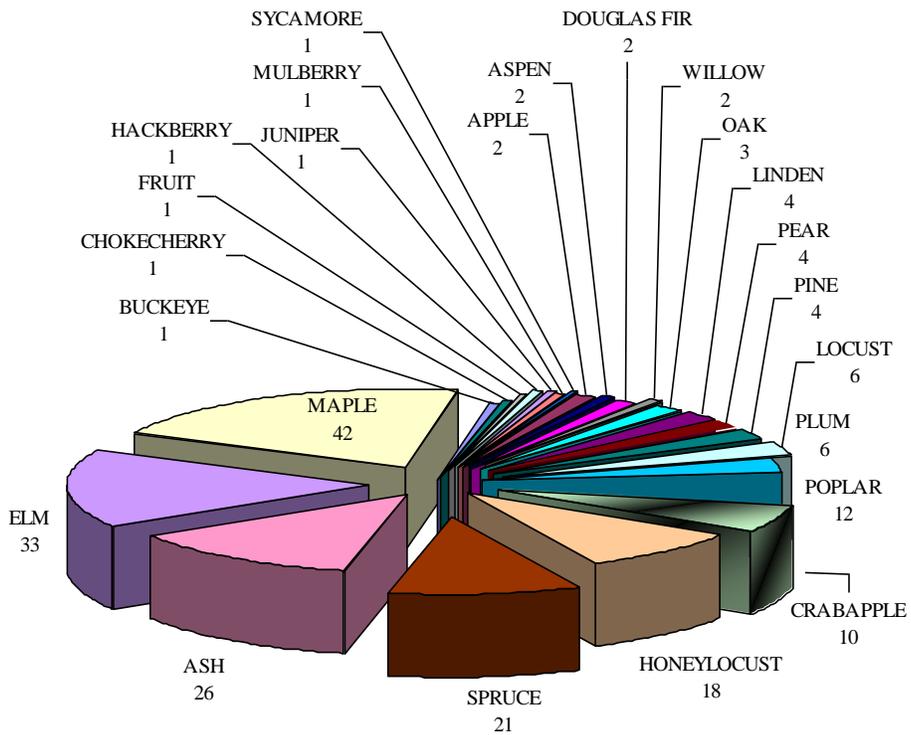


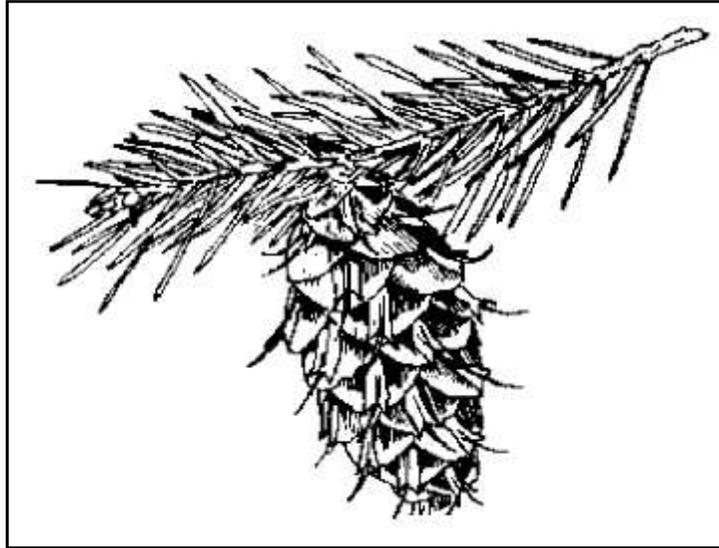
Urban Forest Health (Unit 3)



MANAGEMENT NEED DESCRIPTIONS UNIT 3	
DEAD TREE, REMOVE	1
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	24
FORM PRUNE, 3RD PRIORITY	137
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	6
TREAT DISEASE	—
PLANT NEW TREE	14
OK, NO MANAGEMENT NEEDS	37

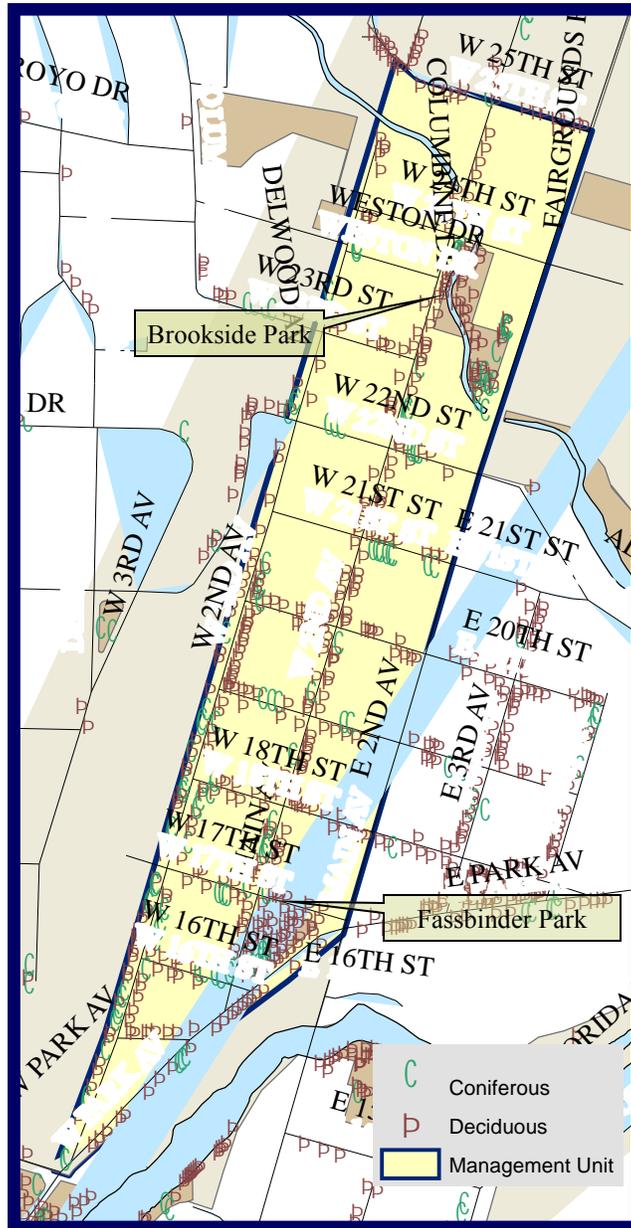
Urban Forest Diversity (Unit 3)





Pseudotsuga menziesii
Douglas Fir

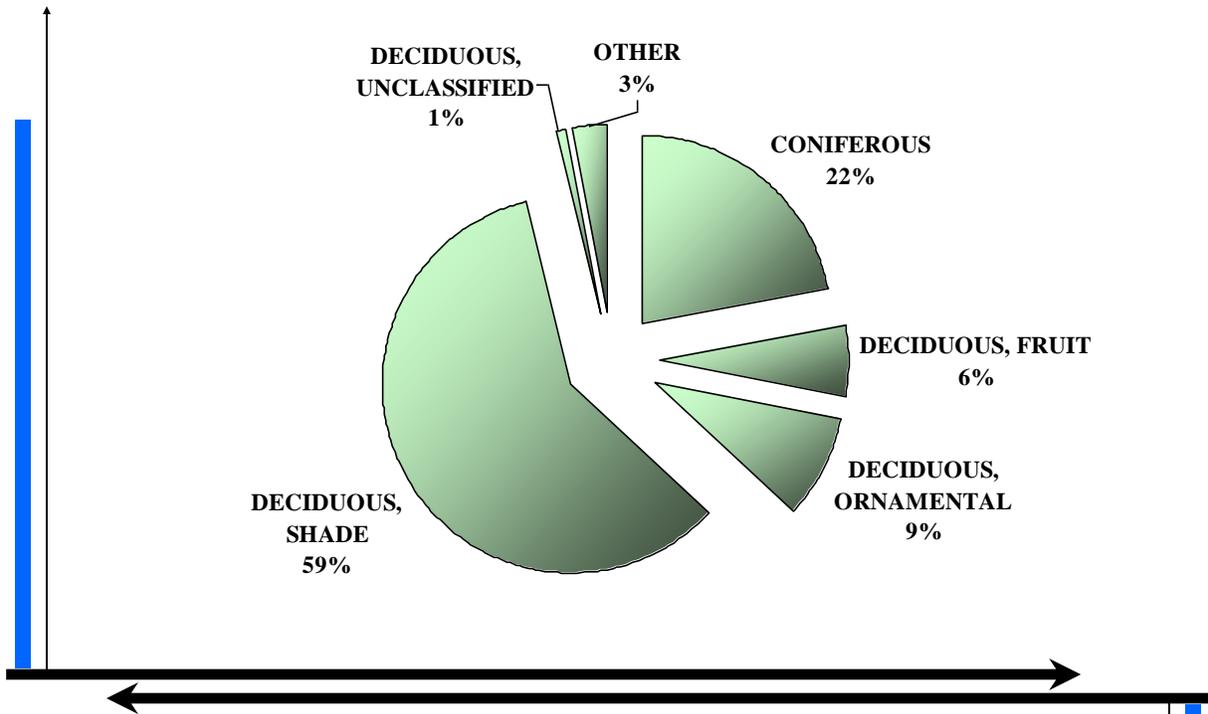
Management Unit 4



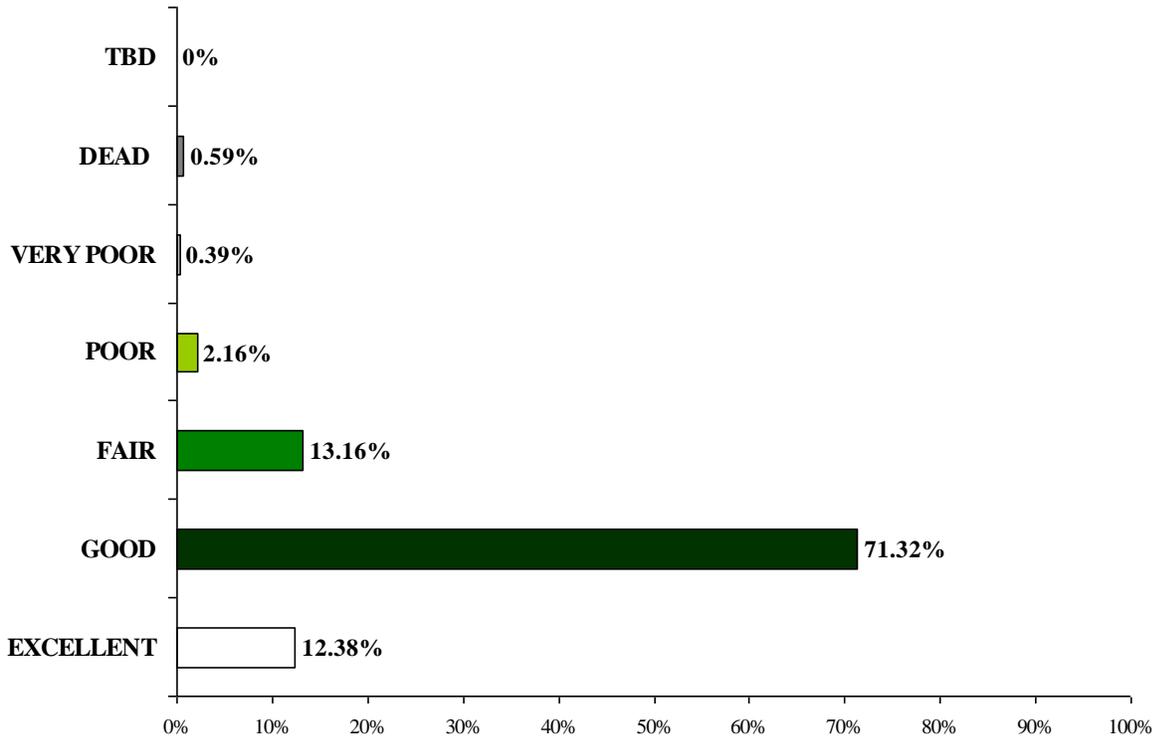
Unit 4- Brookside

This unit extends from West Park Avenue to 25th Street and Main Avenue to W. 3rd Avenue. A section of Junction Creek runs through this unit. Brookside Park and Fassbinder Park provide excellent habitat for maturing trees. Unit four has 509 city-owned trees valued at \$2,734,256 and 28 recommended plant sites.

Urban Forest Tree Types (Unit 4)

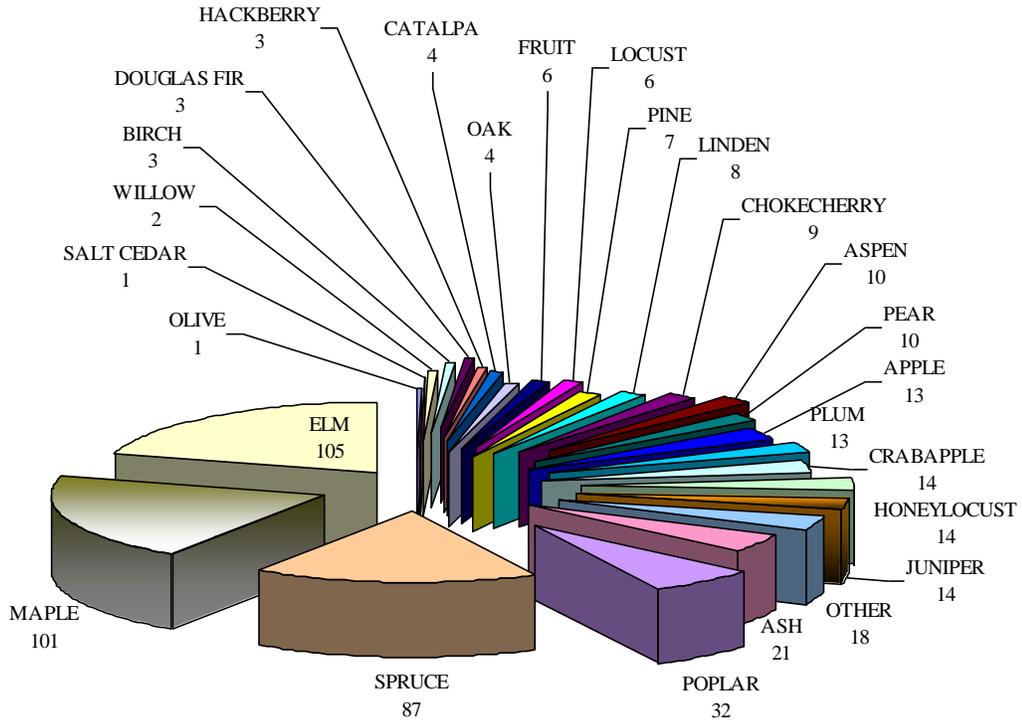


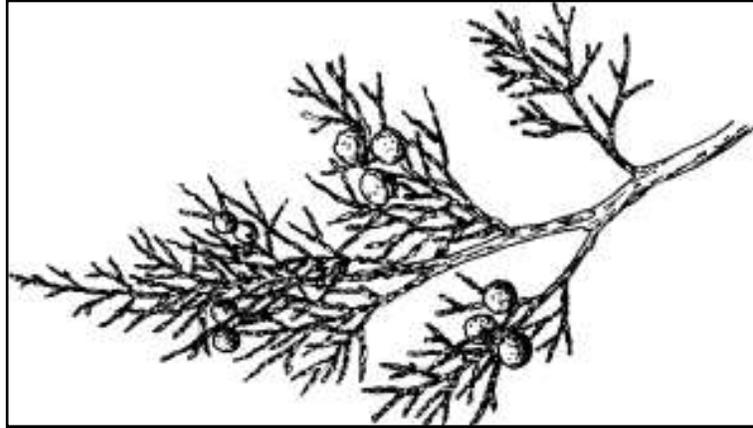
Urban Forest Health (Unit 4)



MANAGEMENT NEED DESCRIPTIONS UNIT 4	
DEAD TREE, REMOVE	9
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	1
CLEARANCE PRUNE, 2ND PRIORITY	66
FORM PRUNE, 3RD PRIORITY	388
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	10
TREAT DISEASE	3
PLANT NEW TREE	28
OK, NO MANAGEMENT NEEDS	42

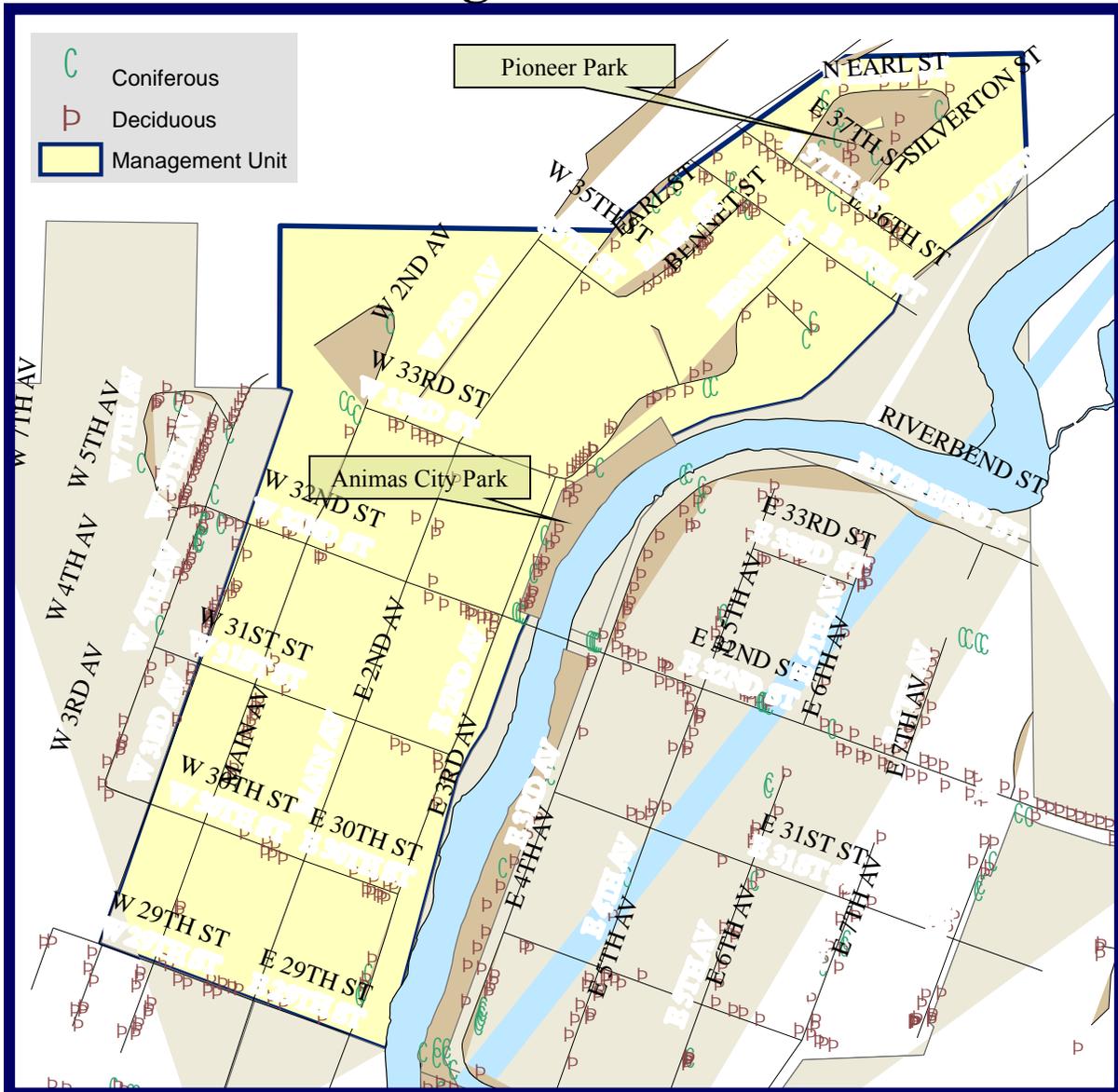
Urban Forest Diversity (Unit 4)





Juniperus scopulorum
Rocky Mountain Juniper

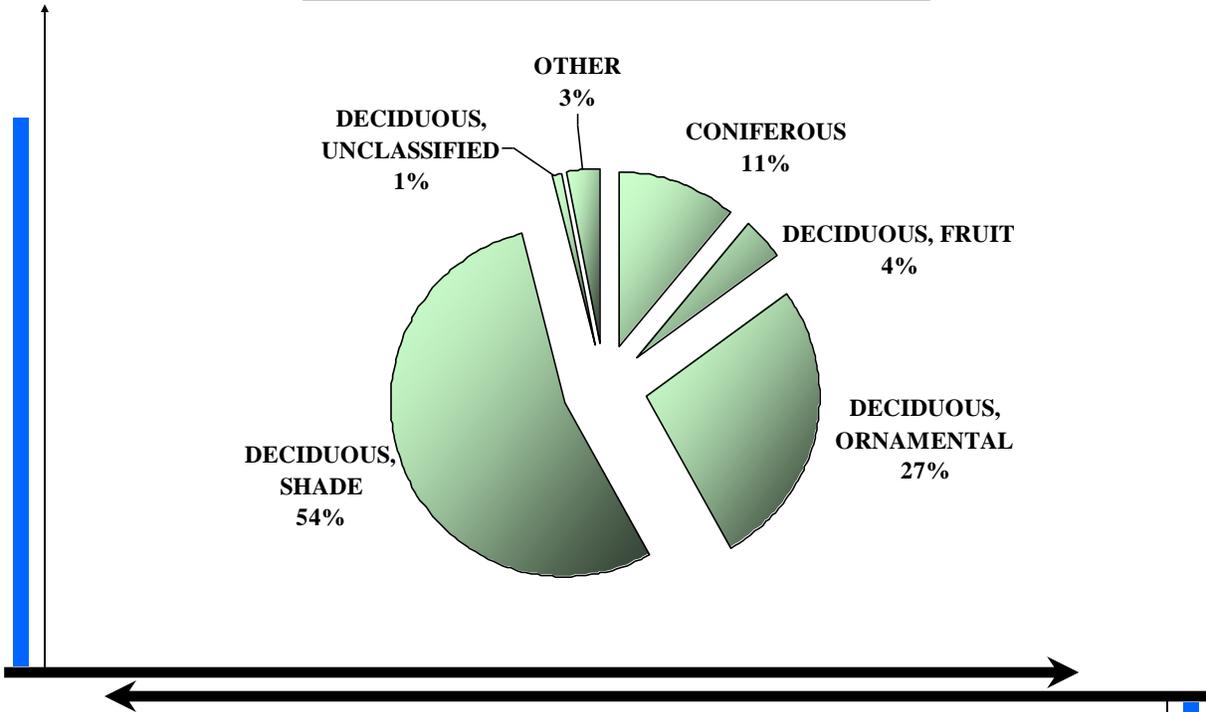
Management Unit 5



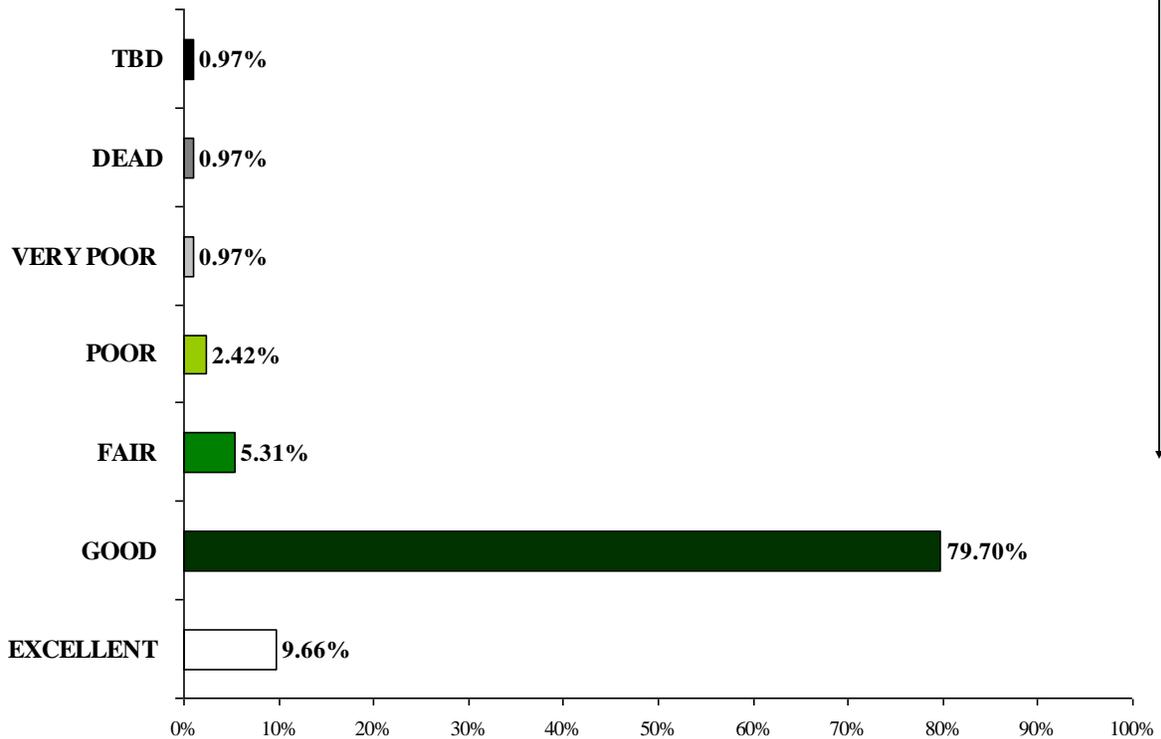
Unit 5- Animas City Annex

Unit 5 extends from 29th Street north to Pioneer Park and from E. 2nd Avenue to W. 3rd Avenue below 33rd Street. Above 33rd Street, the unit runs from the railroad tracks west to Main Avenue. This unit follows the Animas River along its east border. It has 207 trees valued at \$168,844 and 3 recommended plant sites.

Urban Forest Tree Types (Unit 5)

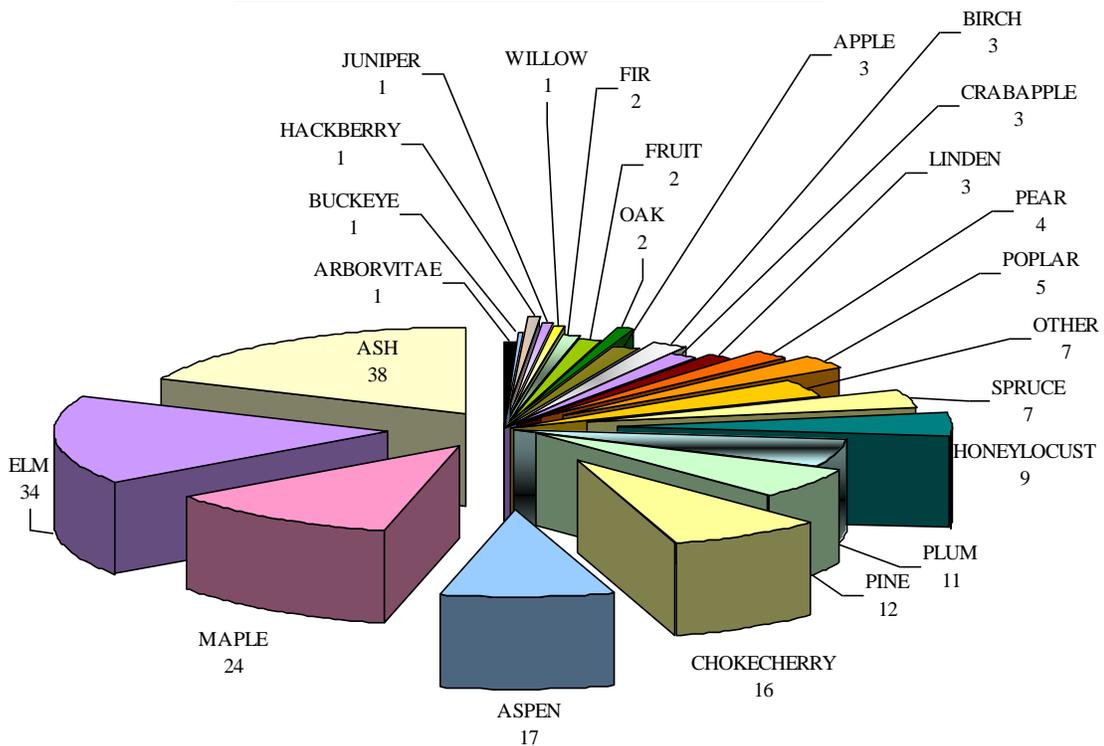


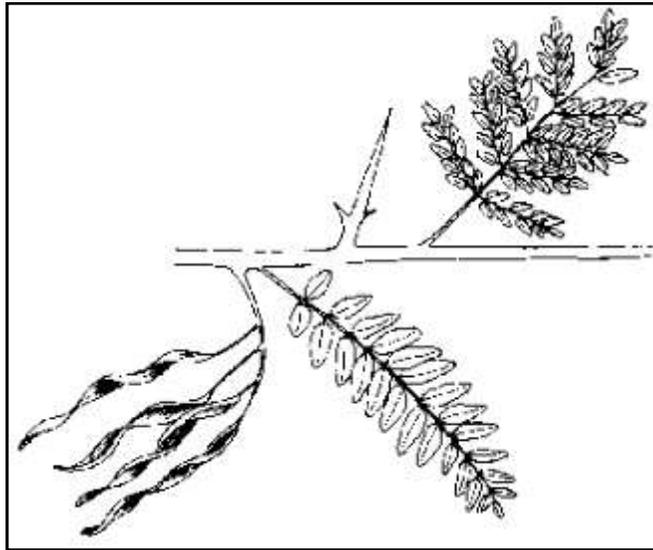
Urban Forest Health (Unit 5)



MANAGEMENT NEED DESCRIPTIONS UNIT 5	
DEAD TREE, REMOVE	7
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	23
FORM PRUNE, 3RD PRIORITY	154
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	3
TREAT DISEASE	1
PLANT NEW TREE	3
OK, NO MANAGEMENT NEEDS	22

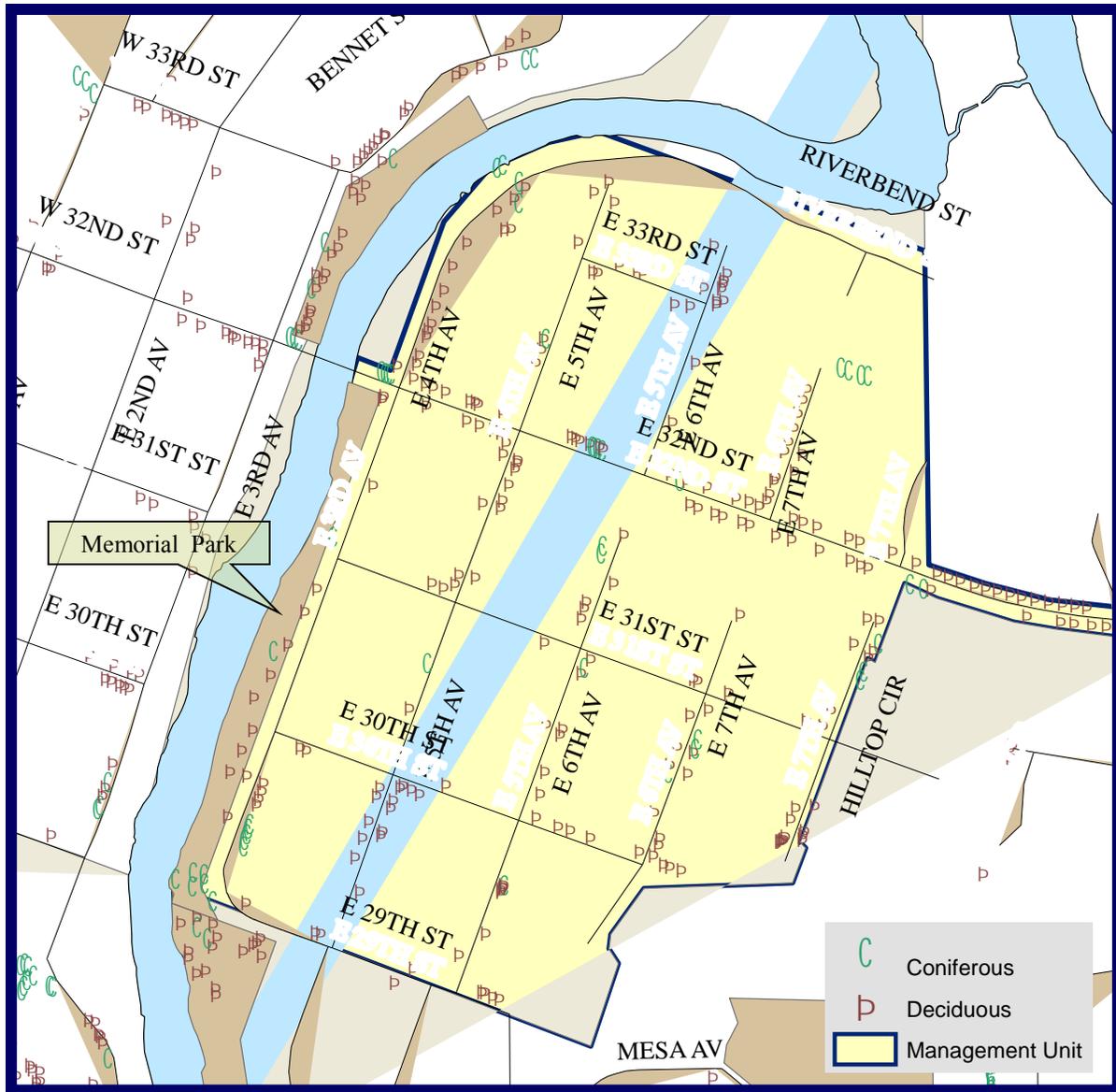
Urban Forest Diversity (Unit 5)





Gleditsia tricanthos
Honeylocust

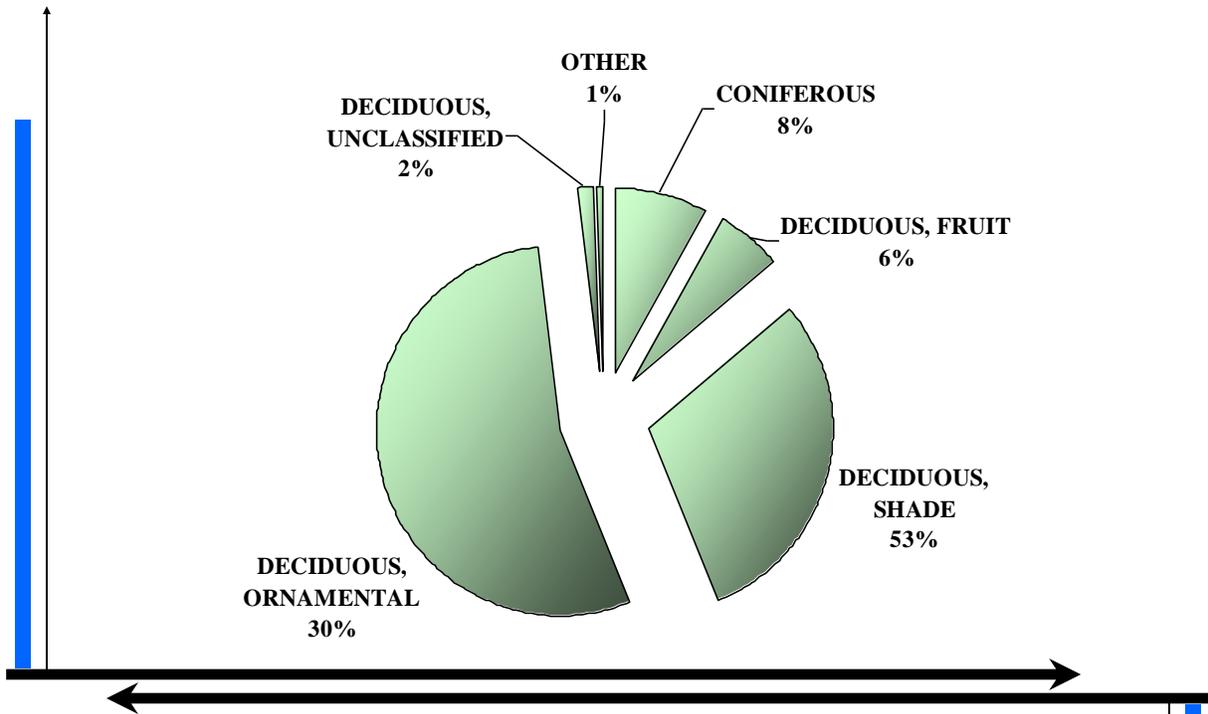
Management Unit 6



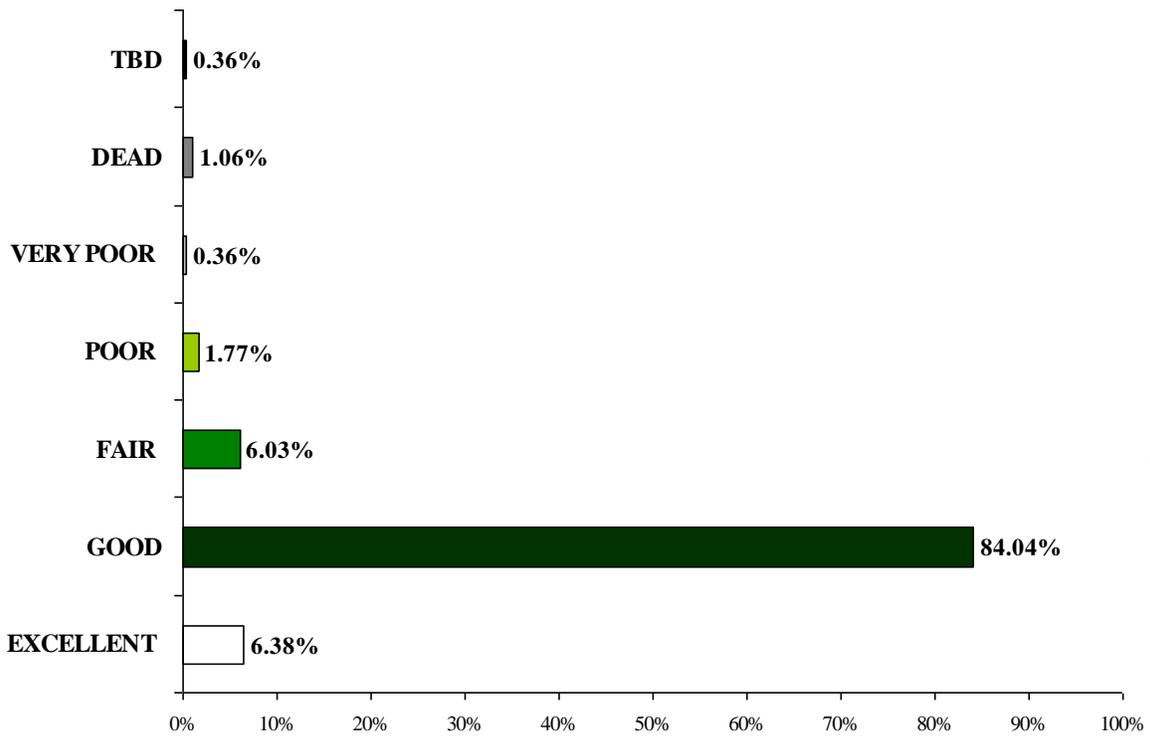
Unit 6- Riverview

The Animas River borders this unit on its north and west sides. The unit begins north of E. 29th Street and west of E. 7th Avenue and continues northward to Riverbend Street encompassing much of Memorial Park and a corridor along E. 32nd Street. This unit has 282 trees valued at \$303,498.

Urban Forest Tree Types (Unit 6)

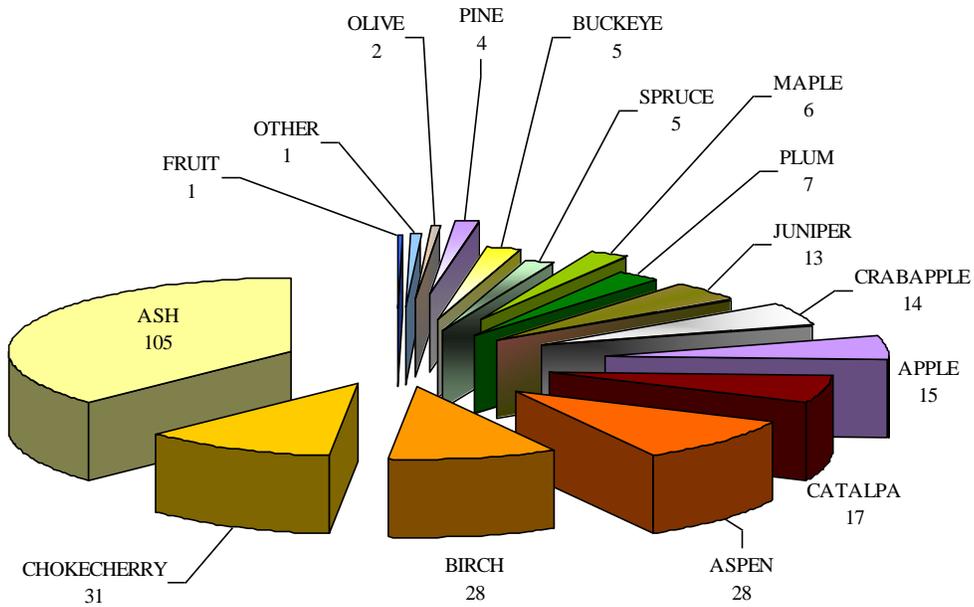


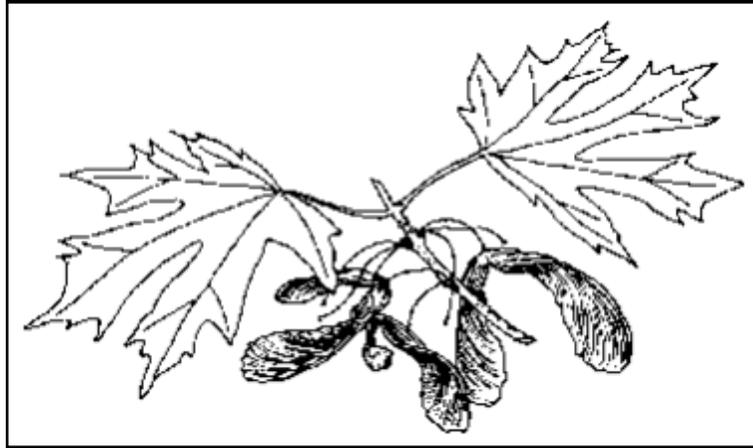
Urban Forest Health (Unit 6)



MANAGEMENT NEED DESCRIPTIONS UNIT 6	
DEAD TREE, REMOVE	19
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	24
FORM PRUNE, 3RD PRIORITY	203
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	4
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	35

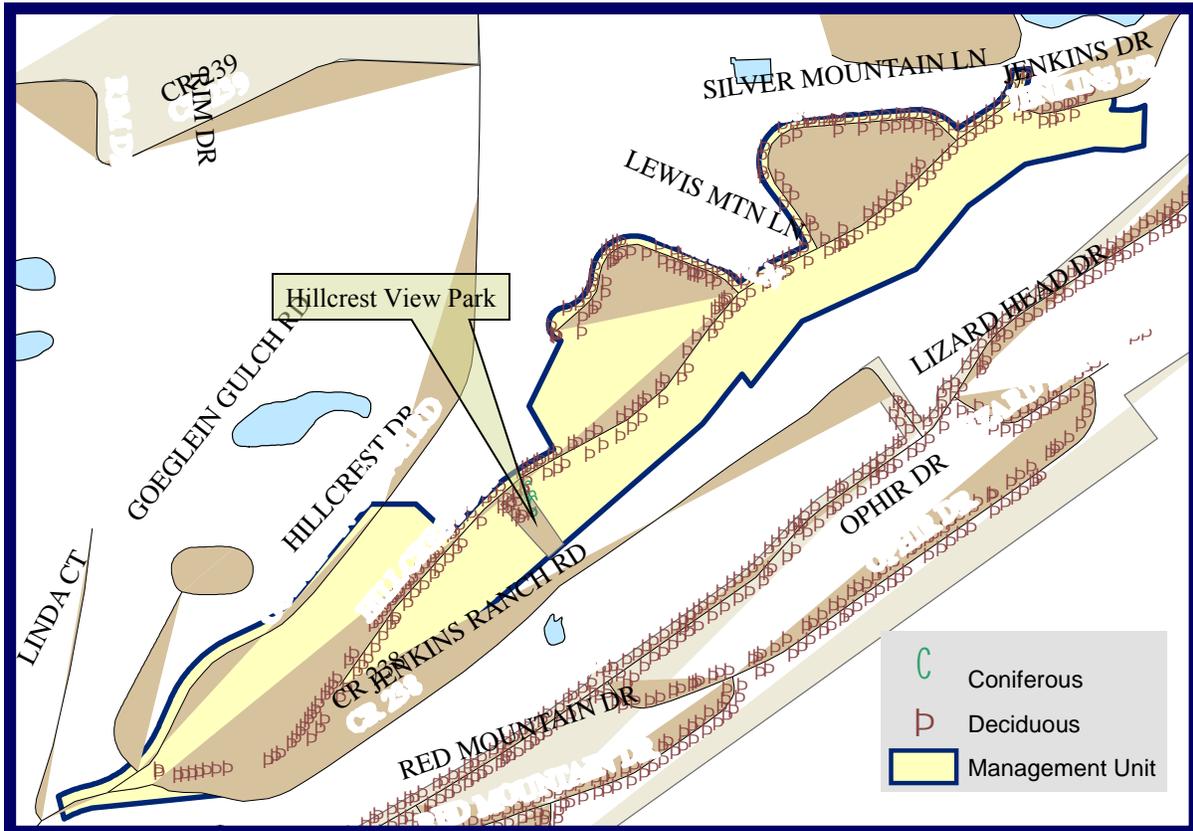
Urban Forest Diversity (Unit 6)





Acer saccharinum
Silver Maple

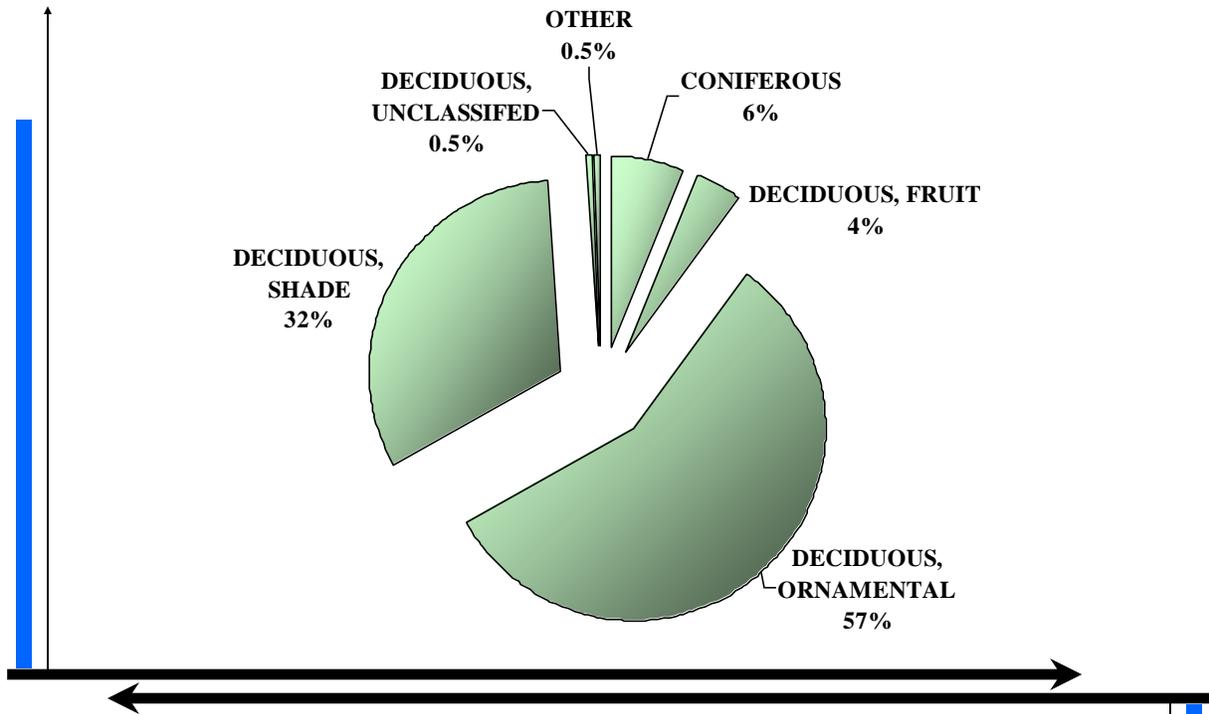
Management Unit 7



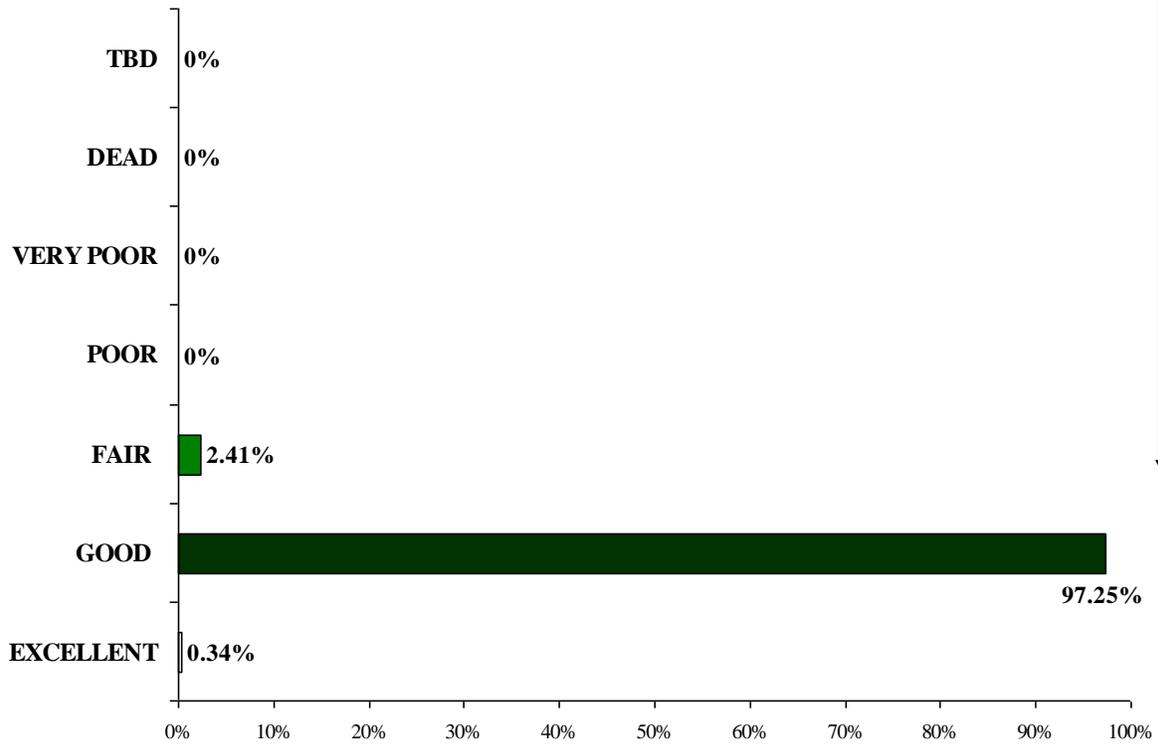
Unit 7- Hillcrest

This unit includes a subdivision that was developed in the early 1980s and subsequently has less mature street trees than those found in older areas of the city. Because conifers were disallowed in city right-of-ways prior to the development of the subdivision, there is a comparably less conifer diversity within the unit as well. Unit 7 has 291 trees valued at \$136,458 and 1 recommended plant site.

Urban Forest Tree Types (Unit 7)

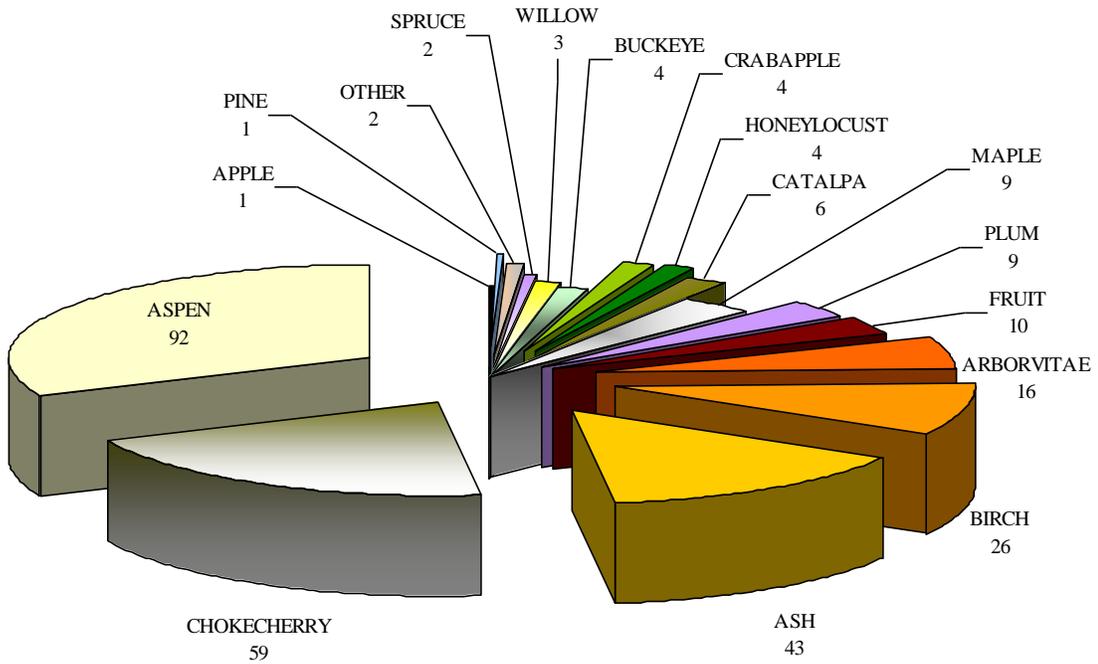


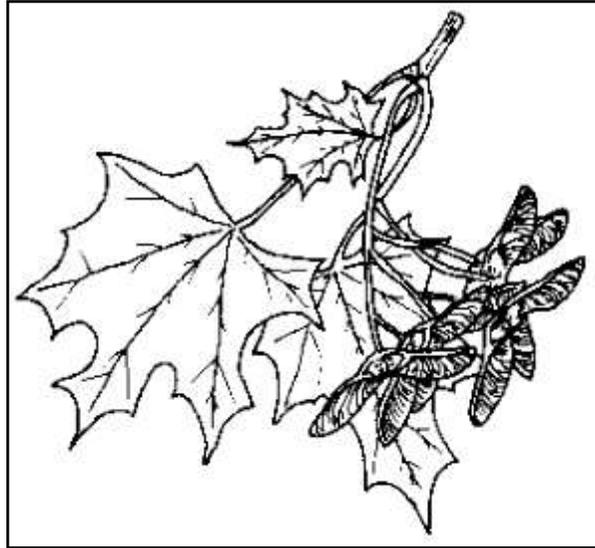
Urban Forest Health (Unit 7)



MANAGEMENT NEED DESCRIPTIONS UNIT 7	
DEAD TREE, REMOVE	1
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	2
FORM PRUNE, 3RD PRIORITY	288
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	1
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	3
TREAT DISEASE	—
PLANT NEW TREE	1
OK, NO MANAGEMENT NEEDS	—

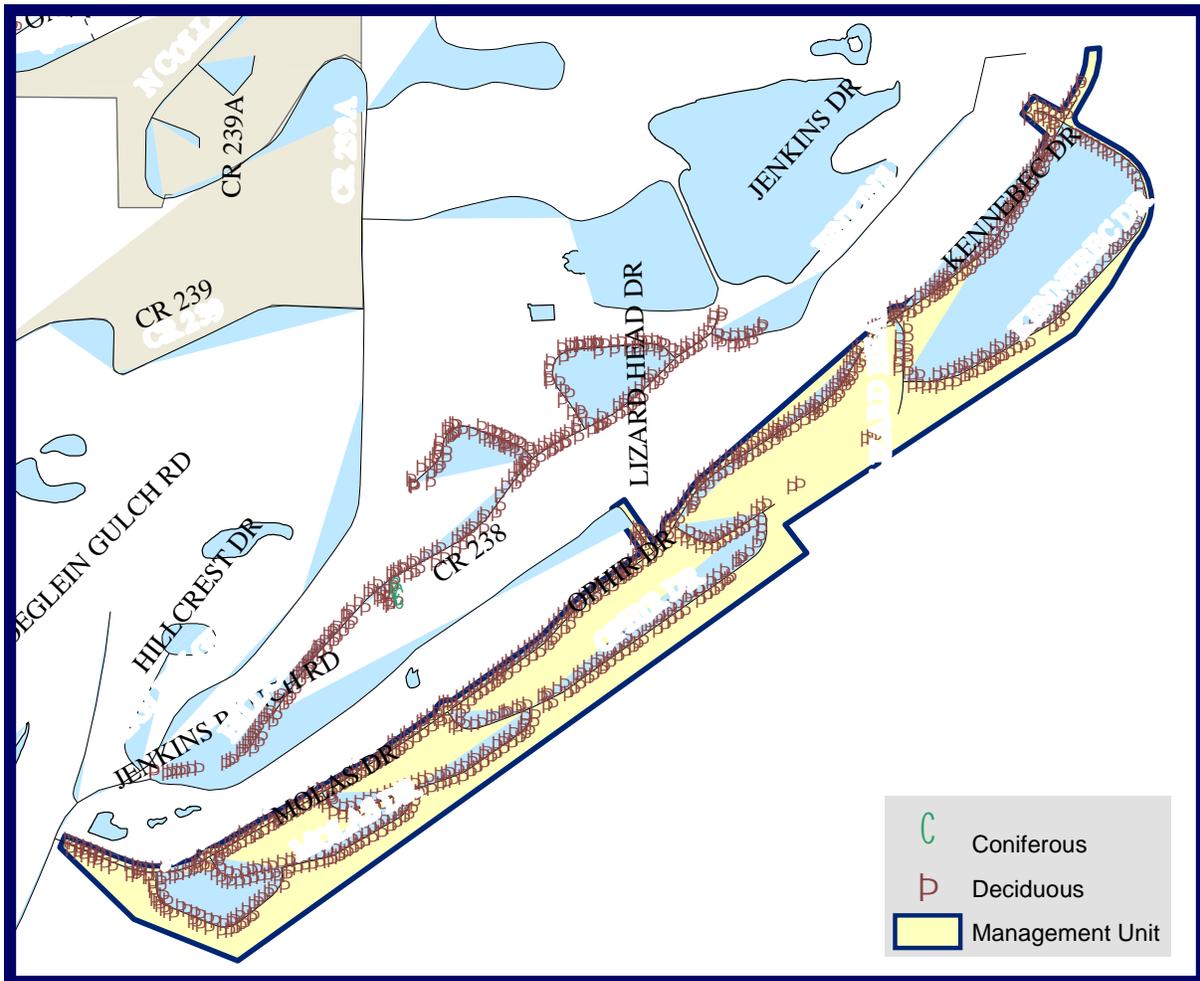
Urban Forest Diversity (Unit 7)





Acer plantanoides
Norway Maple

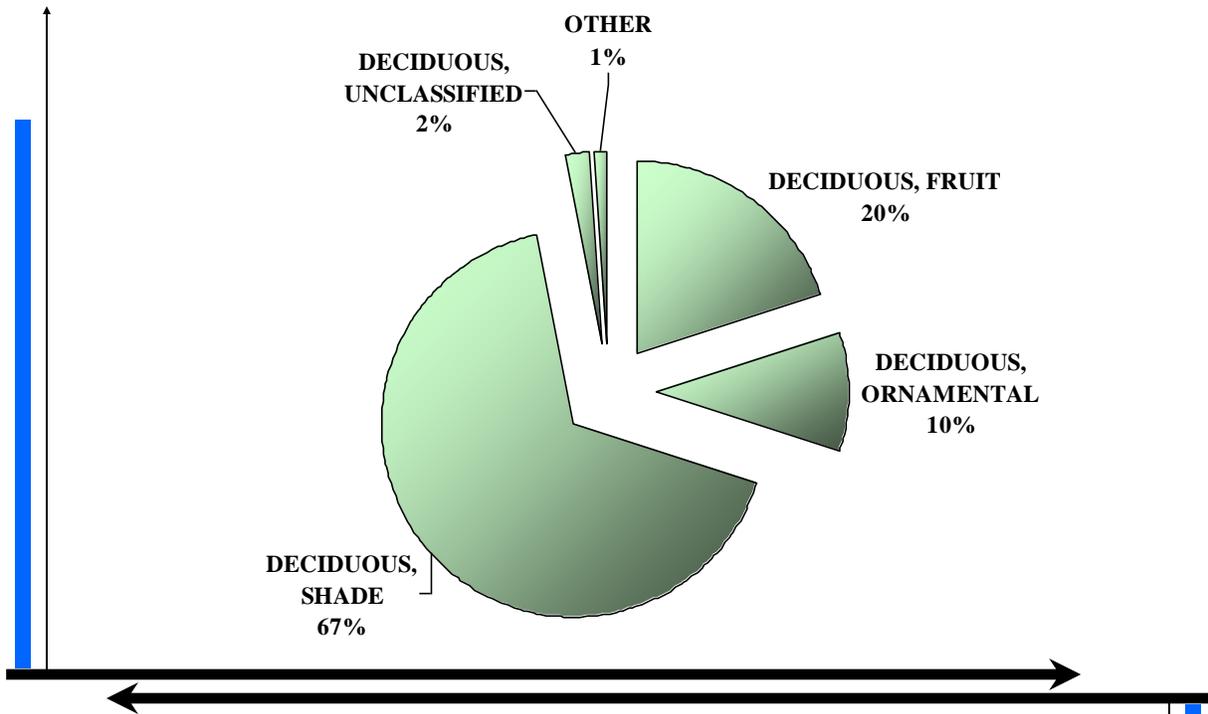
Management Unit 8



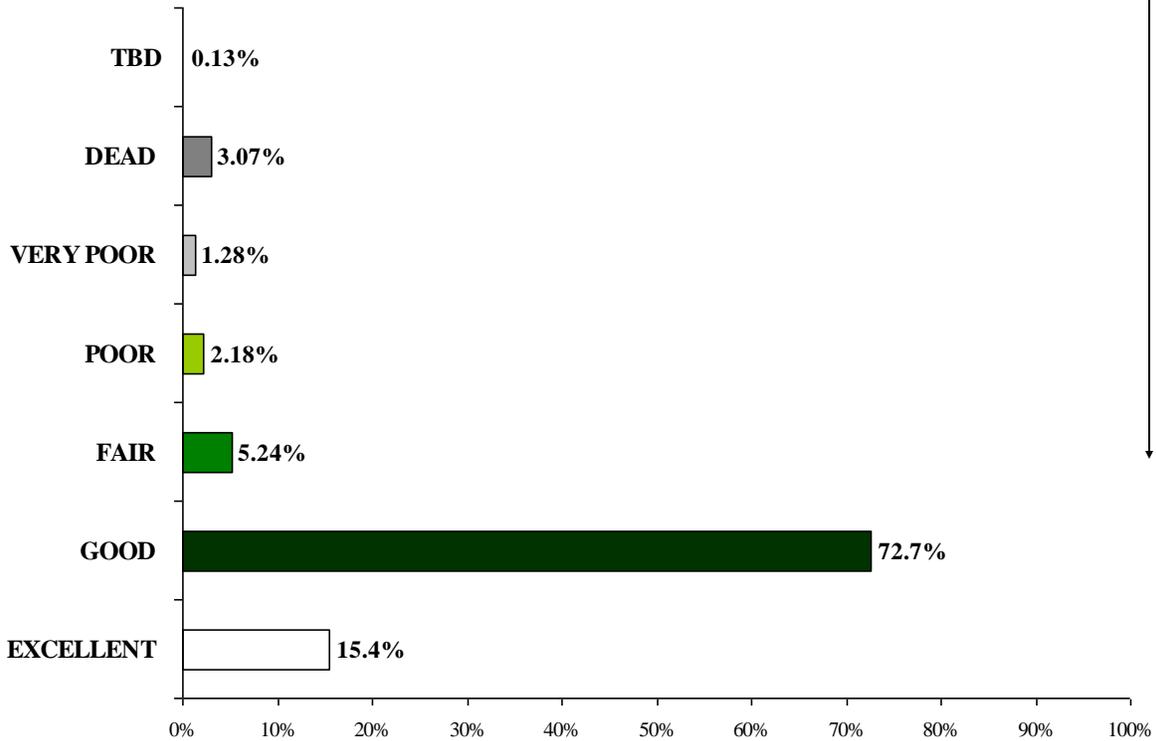
Unit 8- Skyridge

At the time of this inventory, parts of this unit were still under construction. The trees in this unit are some of the youngest trees in the city. The health, mortality, and sizes of these trees are indicative of their young age. In addition, the diversity of species is limited. This unit has 783 trees valued at \$24,546 and 1 recommended plant site.

Urban Forest Tree Types (Unit 8)

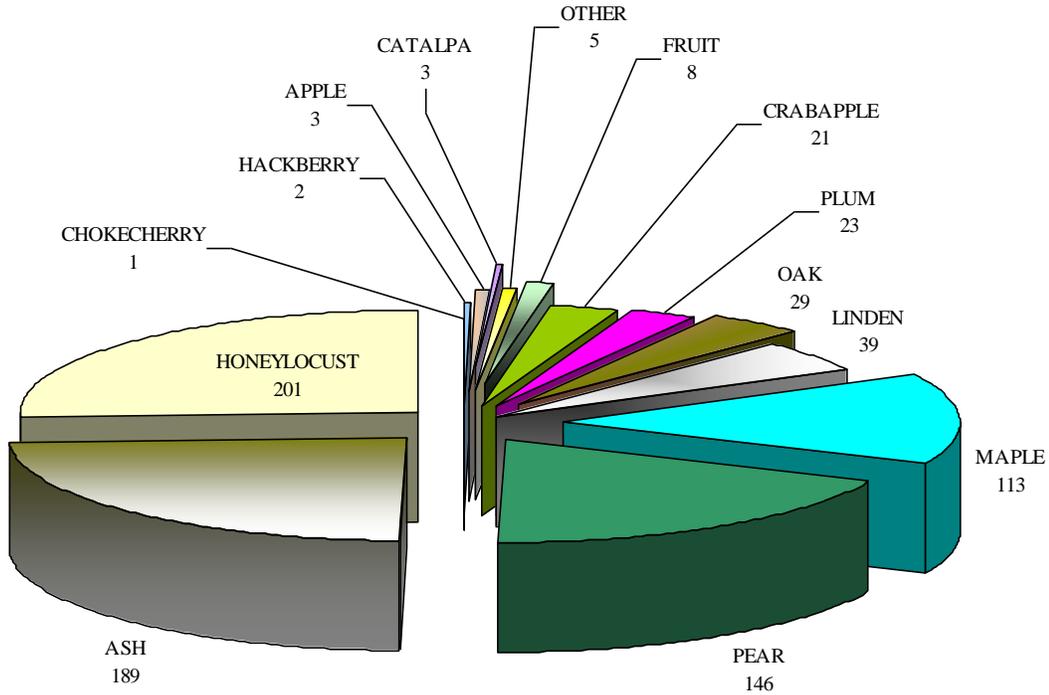


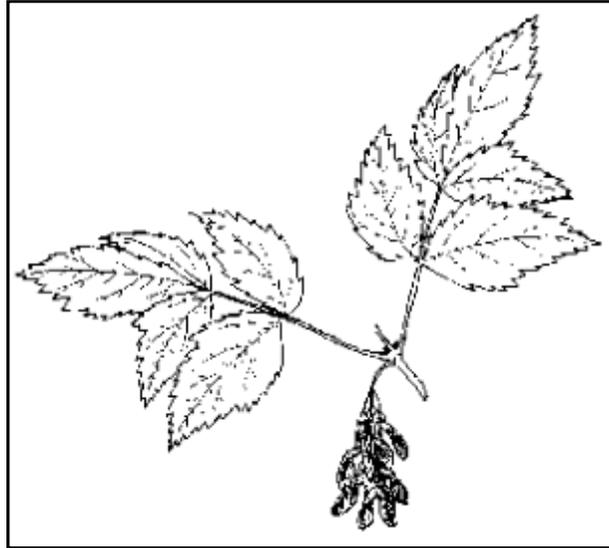
Urban Forest Health (Unit 8)



MANAGEMENT NEED DESCRIPTIONS UNIT 8	
DEAD TREE, REMOVE	28
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	2
CLEARANCE PRUNE, 2ND PRIORITY	73
FORM PRUNE, 3RD PRIORITY	677
STAKE OR FENCE	1
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	7
SAMPLE, STRESSED TREE	—
TREAT INSECTS	3
TREAT DISEASE	1
PLANT NEW TREE	1
OK, NO MANAGEMENT NEEDS	3

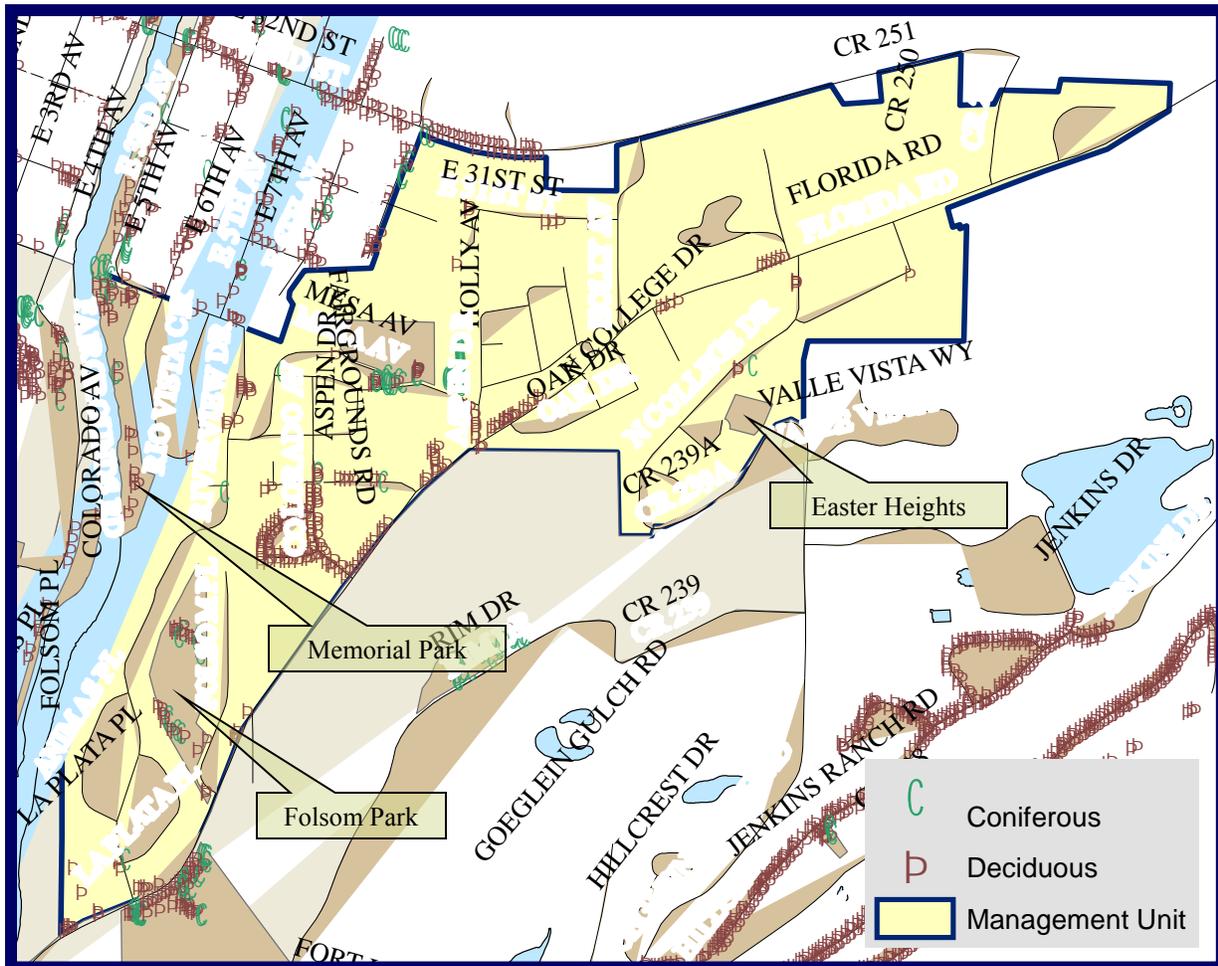
Urban Forest Diversity (Unit 8)





Acer negundo
Boxelder

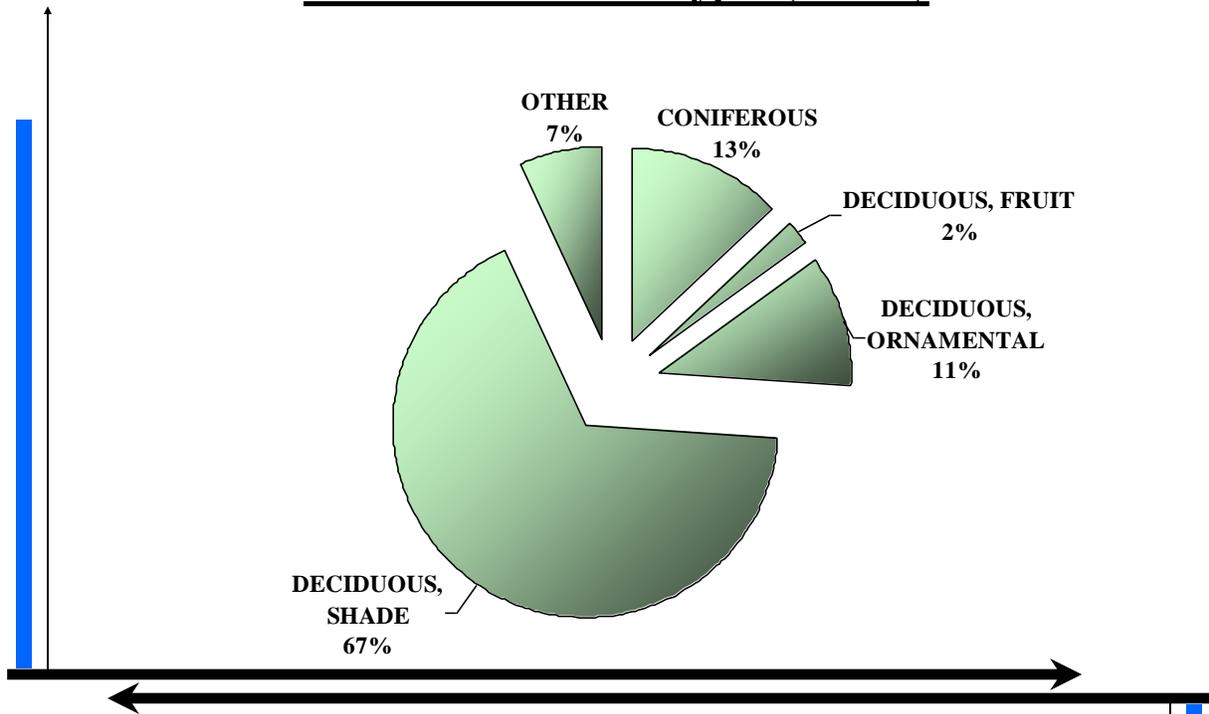
Management Unit 9



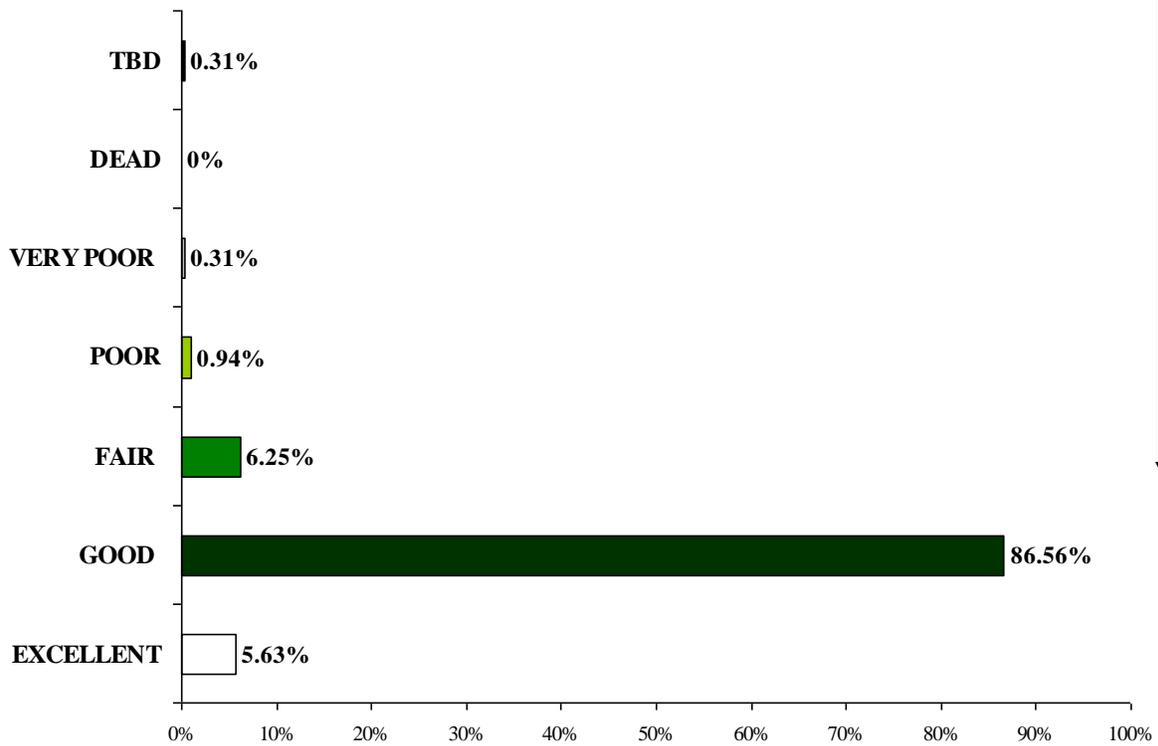
Unit 9- The Heights

This is a large management unit that stretches along Florida Road from the city's northeastern most boundary southwest to the Animas River in its southern section and along E. 32nd St (CR 251) from E. Animas Road (CR 250) west to E. 7th Avenue in its northern section. Unit 9 encompasses several city parks and contains 320 trees valued at \$305,917.

Urban Forest Tree Types (Unit 9)

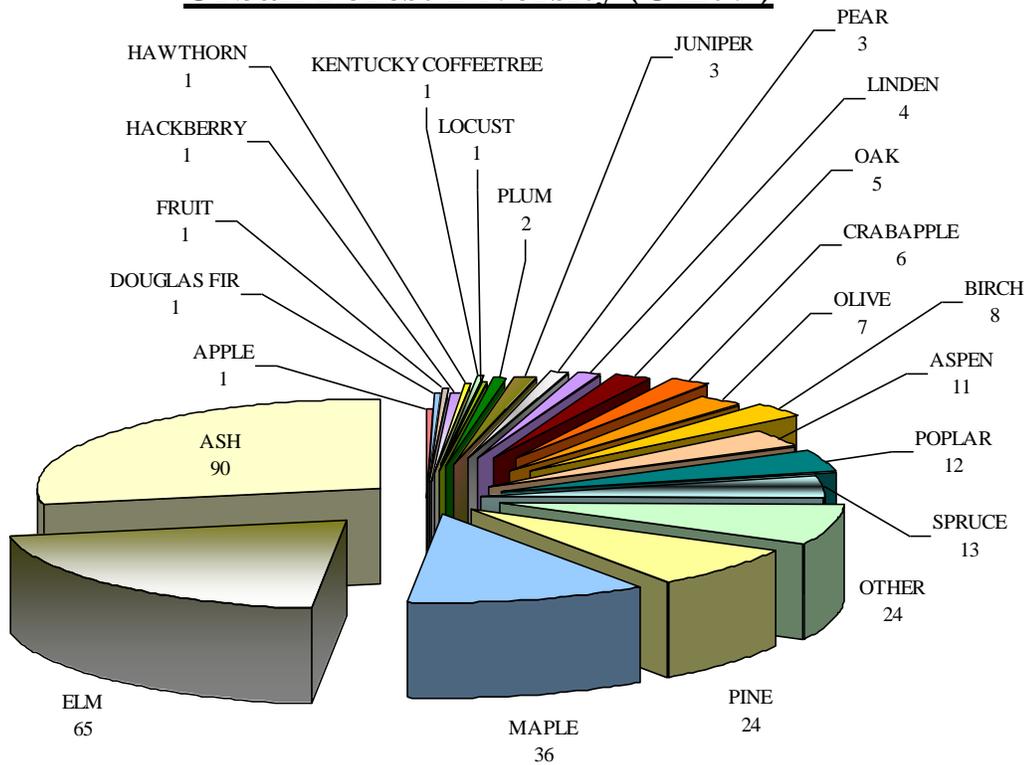


Urban Forest Health (Unit 9)



MANAGEMENT NEED DESCRIPTIONS UNIT 9	
DEAD TREE, REMOVE	12
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	17
FORM PRUNE, 3RD PRIORITY	253
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	5
SAMPLE, STRESSED TREE	—
TREAT INSECTS	1
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	39

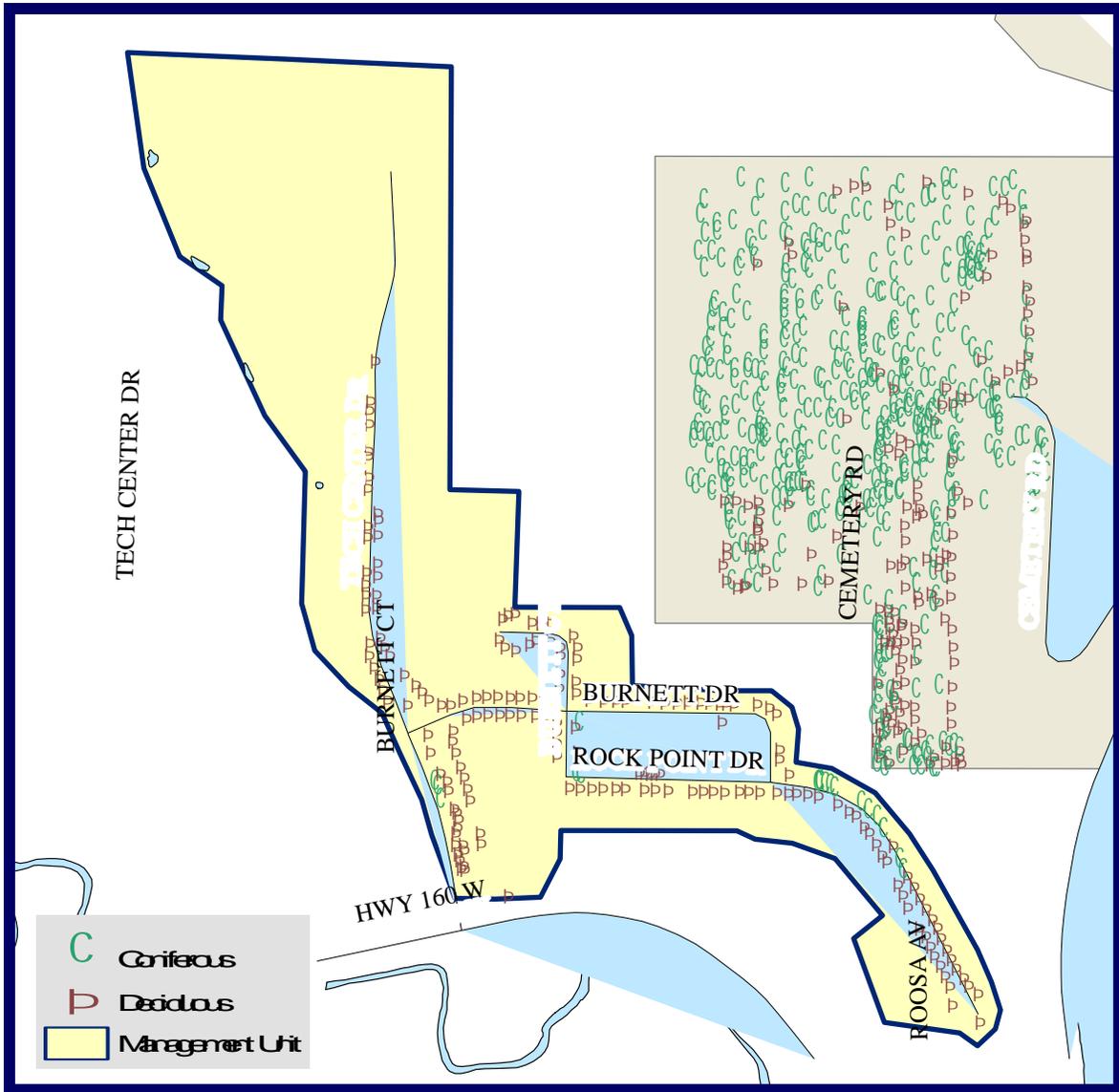
Urban Forest Diversity (Unit 9)





Prunus virginiana
Chokecherry

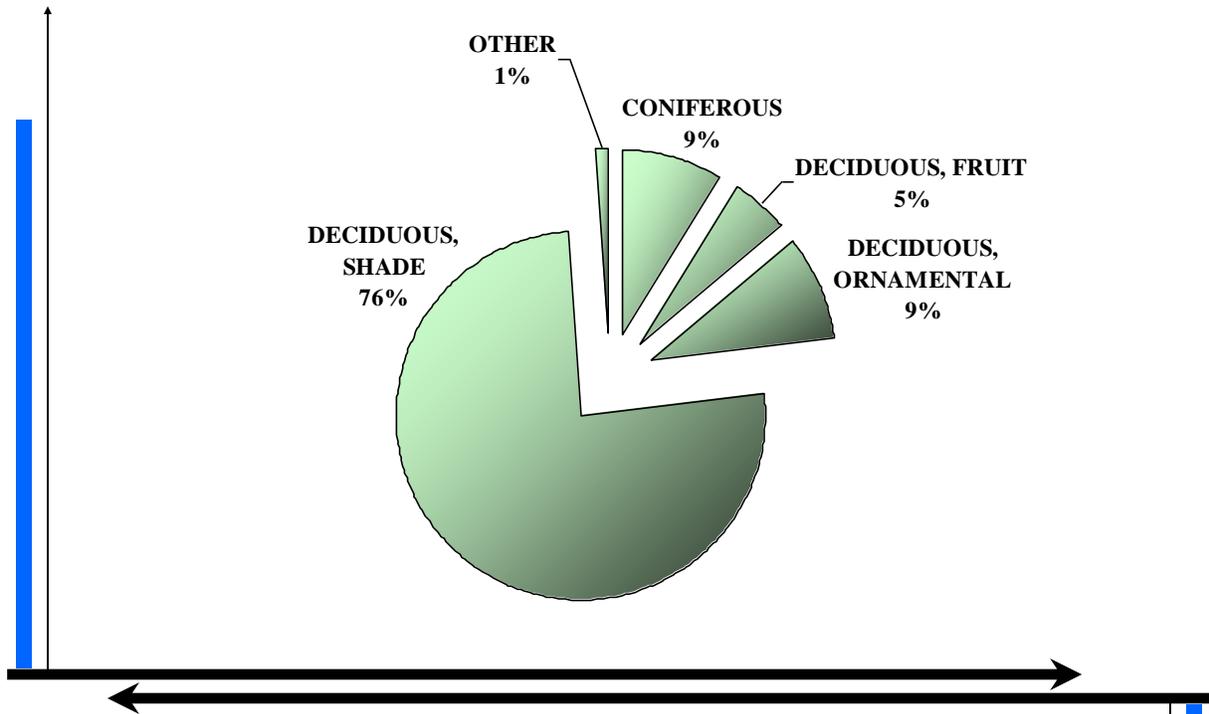
Management Unit 10



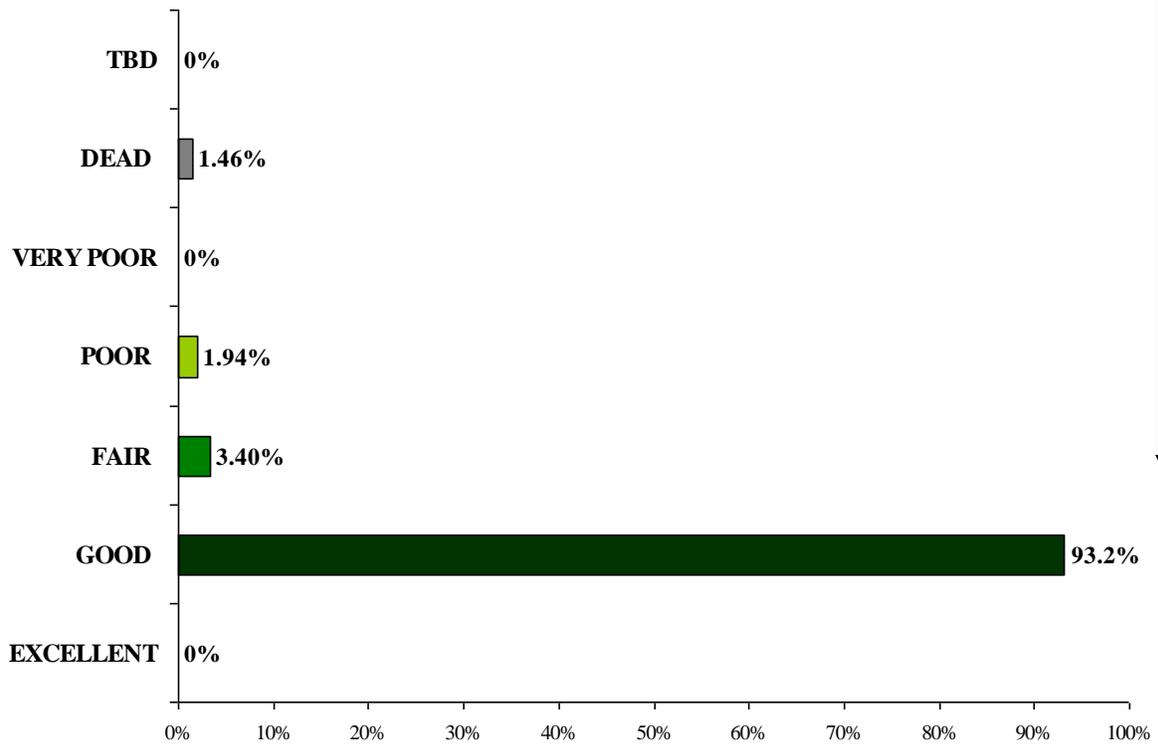
Unit 10- Durango Tech Center

This unit is zoned primarily commercial/industrial. It is also newly built (between 2000-present). It lies west of the Animas River and north of the U.S. Highway 160 W corridor in western Durango. Unit 10 has 206 young trees valued at \$28,895.

Urban Forest Tree Types (Unit 10)

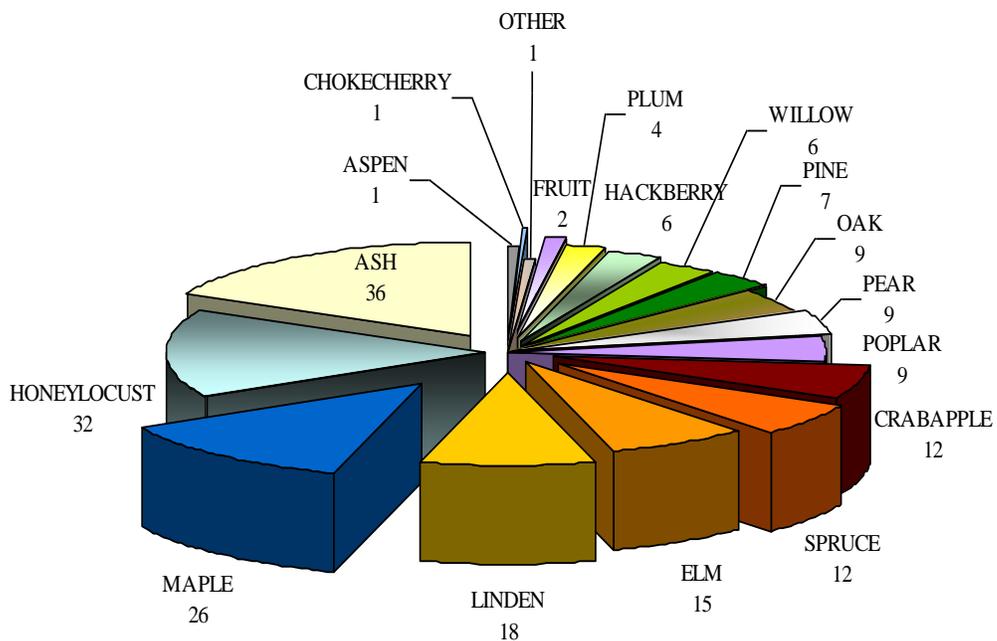


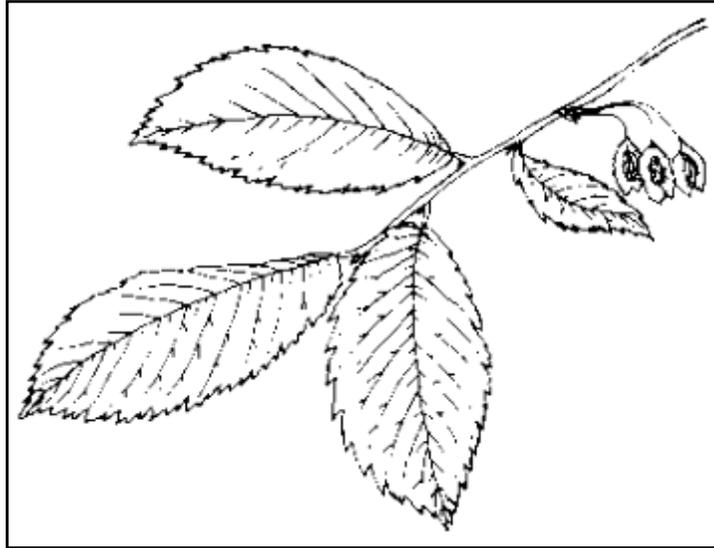
Urban Forest Health (Unit 10)



MANAGEMENT NEED DESCRIPTIONS UNIT 10	
DEAD TREE, REMOVE	3
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	—
FORM PRUNE, 3RD PRIORITY	203
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	—
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	—

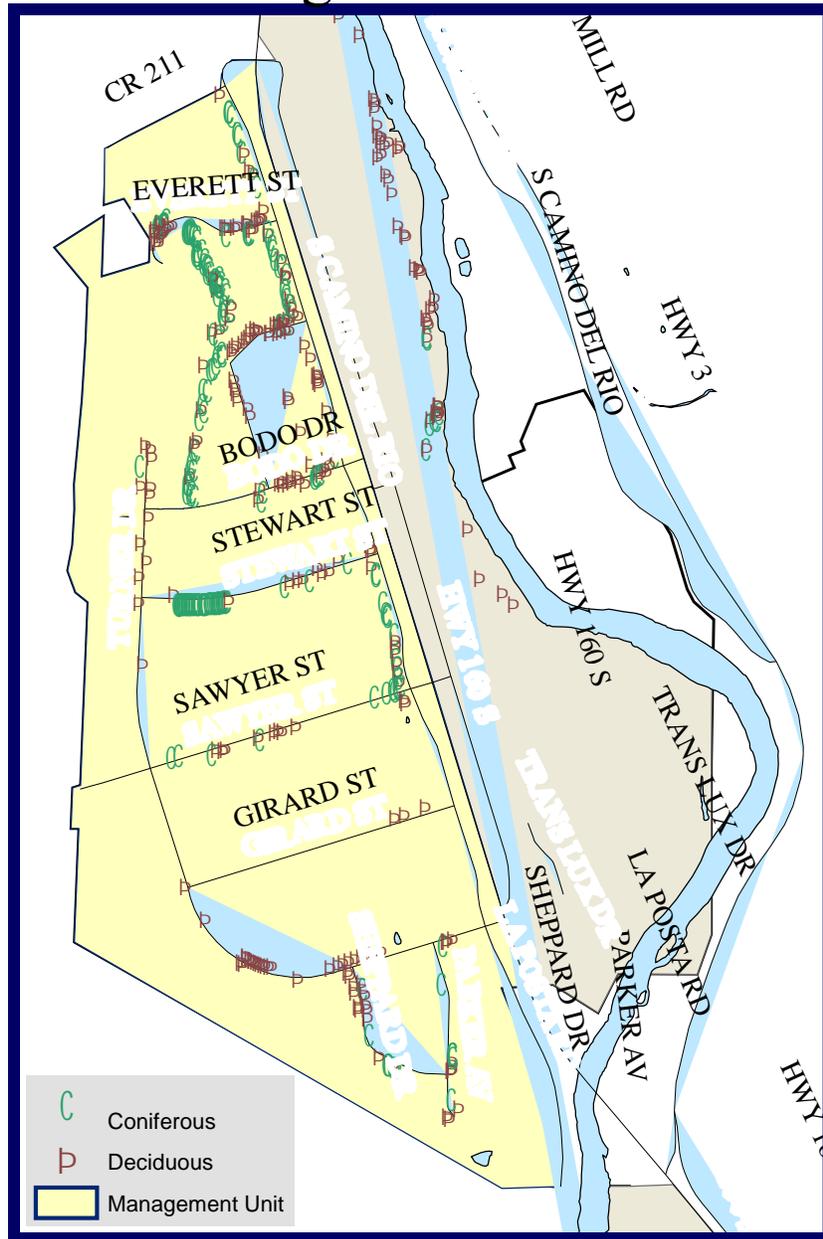
Urban Forest Diversity (Unit 10)





Ulmus americana
American Elm

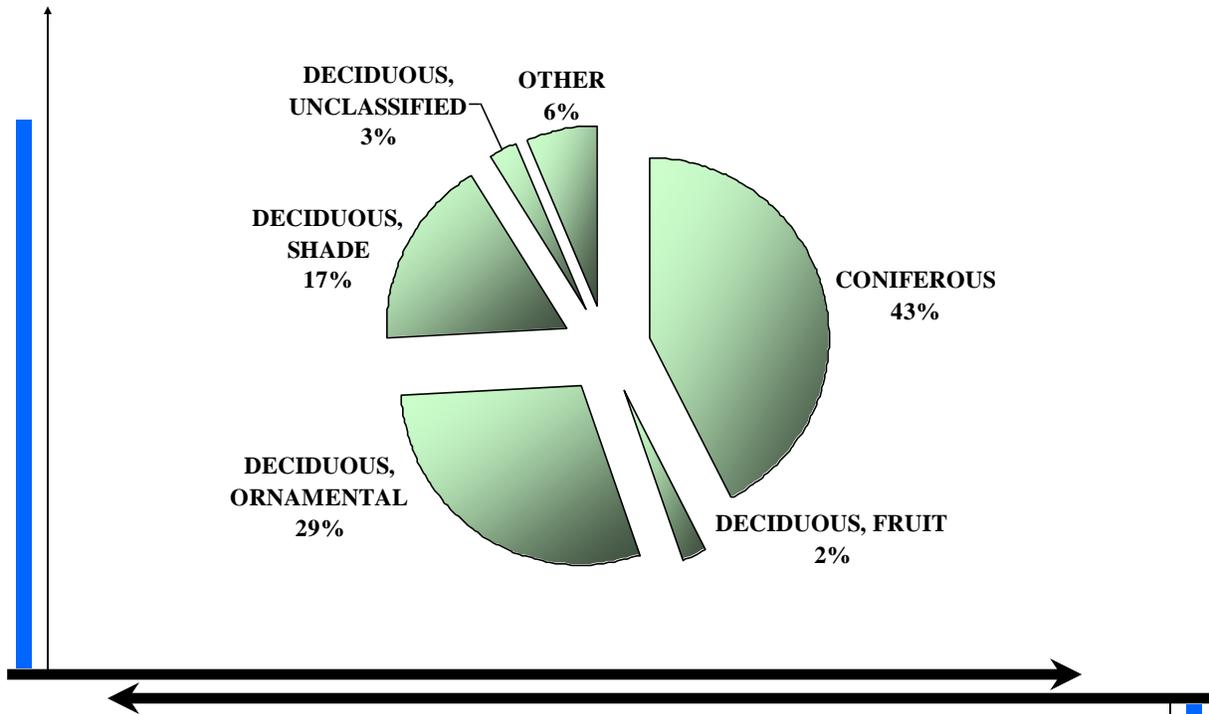
Management Unit 11



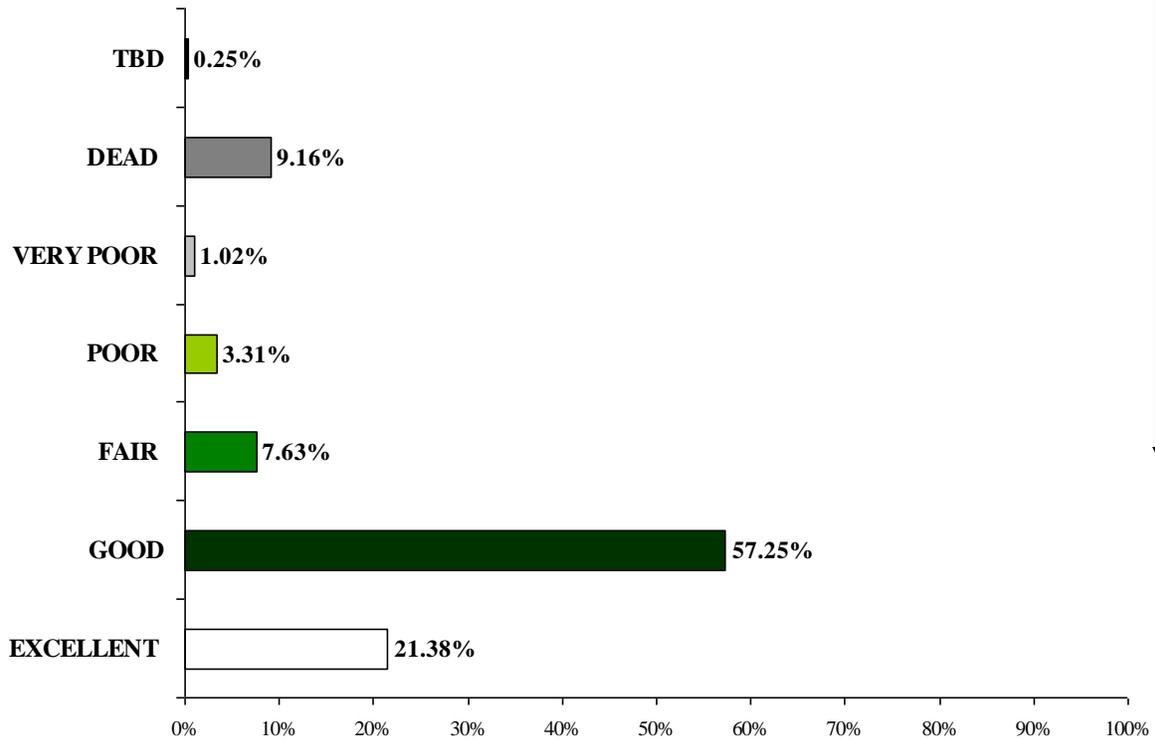
Unit 11-Bodo Park

This unit includes Bodo Industrial Park in south Durango. It exists on the west side of U.S. Highway 160 from Centennial Shopping Center to where the highway crosses the Animas River at the High Bridge. Unit 11 has 393 city-owned trees valued at \$101,061 but contains many undesirable species on both private and city land.

Urban Forest Tree Types (Unit 11)

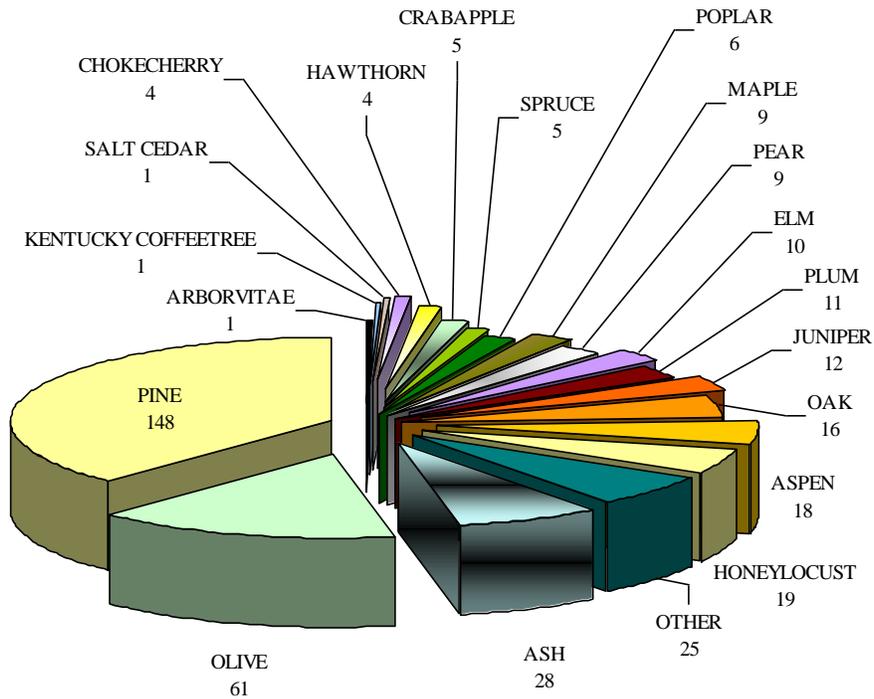


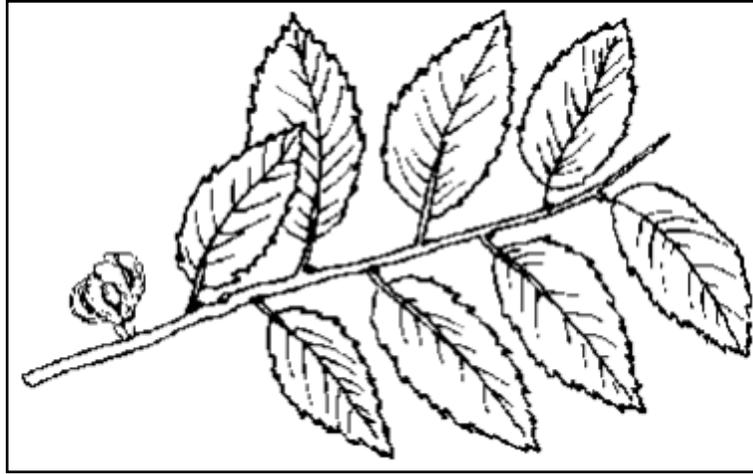
Urban Forest Health (Unit 11)



MANAGEMENT NEED DESCRIPTIONS UNIT 11	
DEAD TREE, REMOVE	102
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	13
FORM PRUNE, 3RD PRIORITY	177
STAKE OR FENCE	2
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	12
TREAT DISEASE	3
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	91

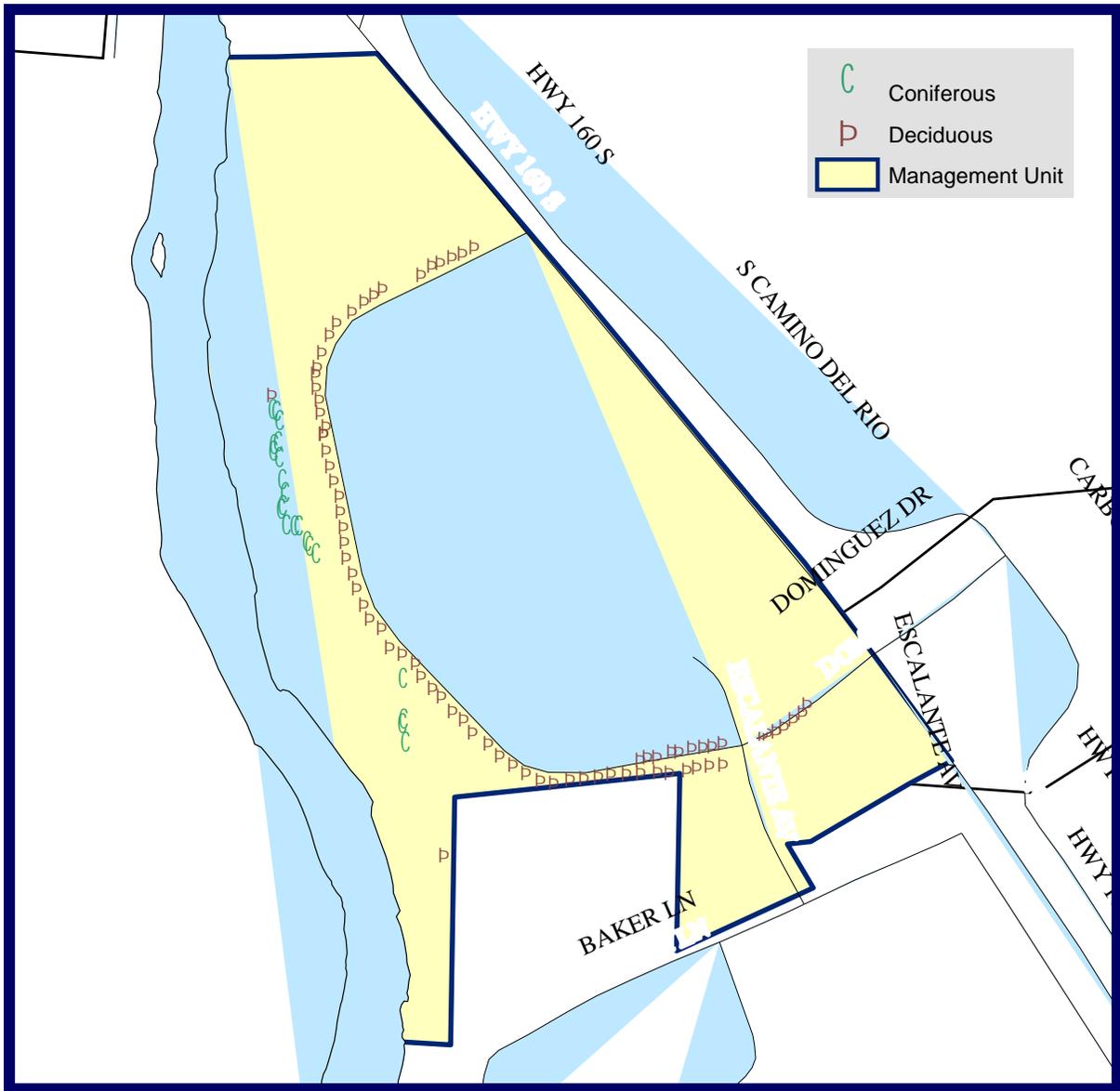
Urban Forest Diversity (Unit 11)





Ulmus pumila
Siberian Elm

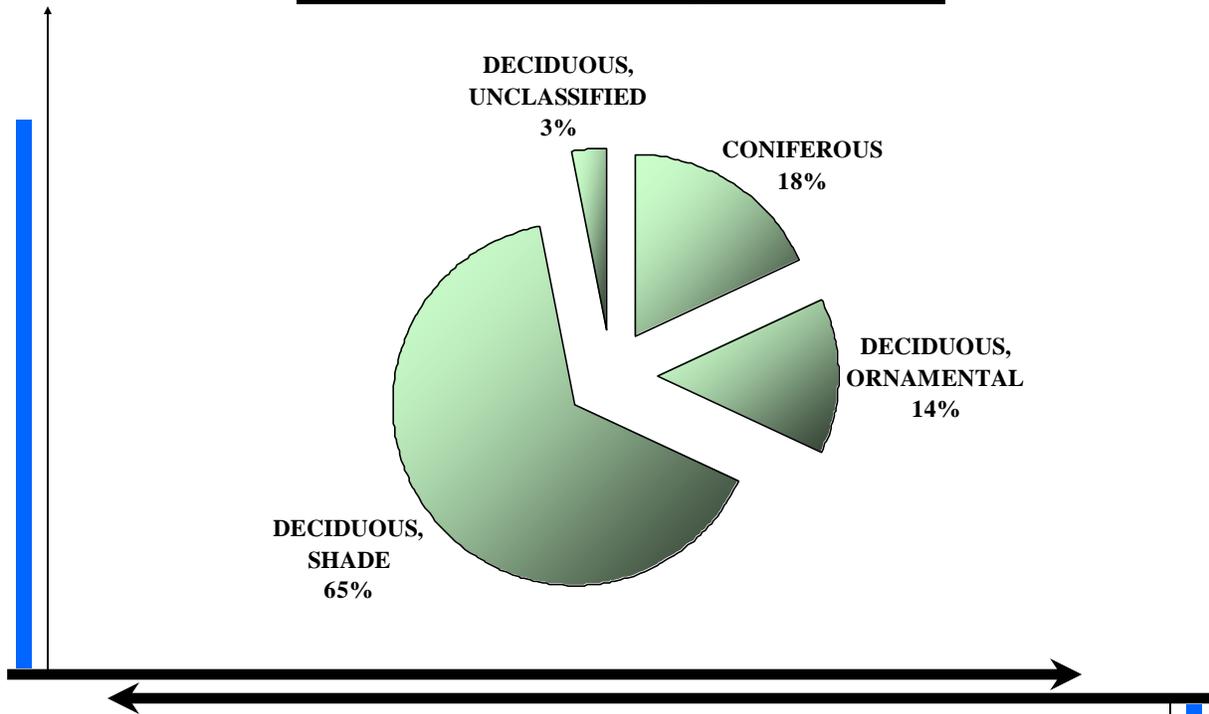
Management Unit 12



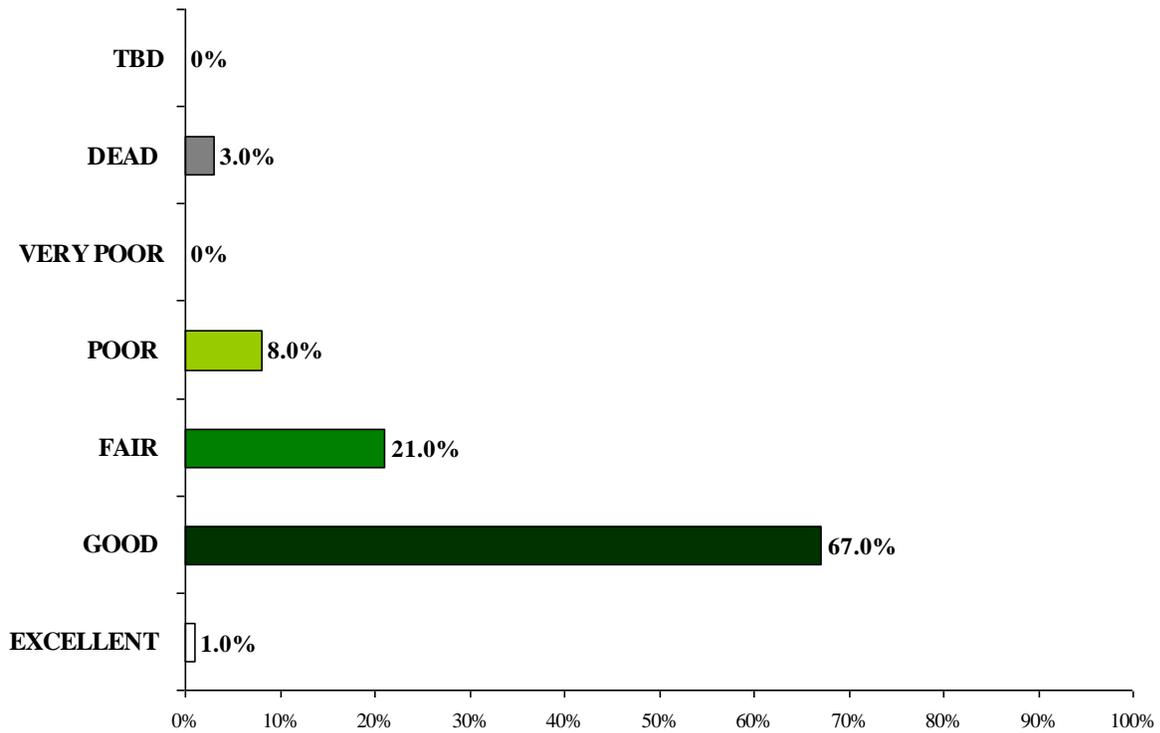
Unit 12– South Durango Center

This management unit is primarily commercial and contains 100 city maintained trees including some along a section of the Animas River Trail behind the shopping center. More development is anticipated within this area. The value of this unit's 100 young trees is \$6,952.

Urban Forest Tree Types (Unit 12)

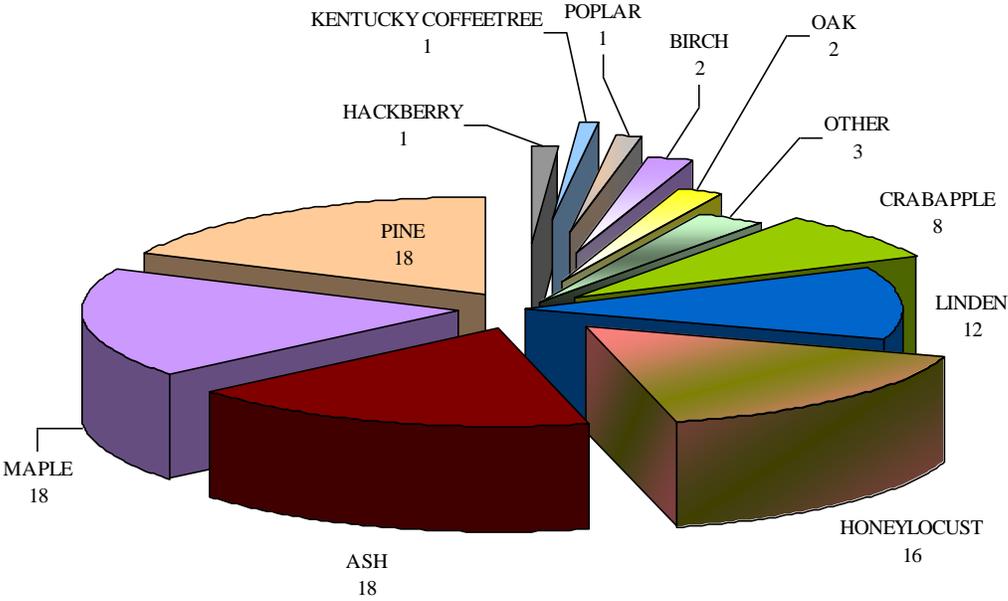


Urban Forest Health (Unit 12)



MANAGEMENT NEED DESCRIPTIONS UNIT 12	
DEAD TREE, REMOVE	3
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	1
CLEARANCE PRUNE, 2ND PRIORITY	8
FORM PRUNE, 3RD PRIORITY	87
STAKE OR FENCE	1
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	2
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	1

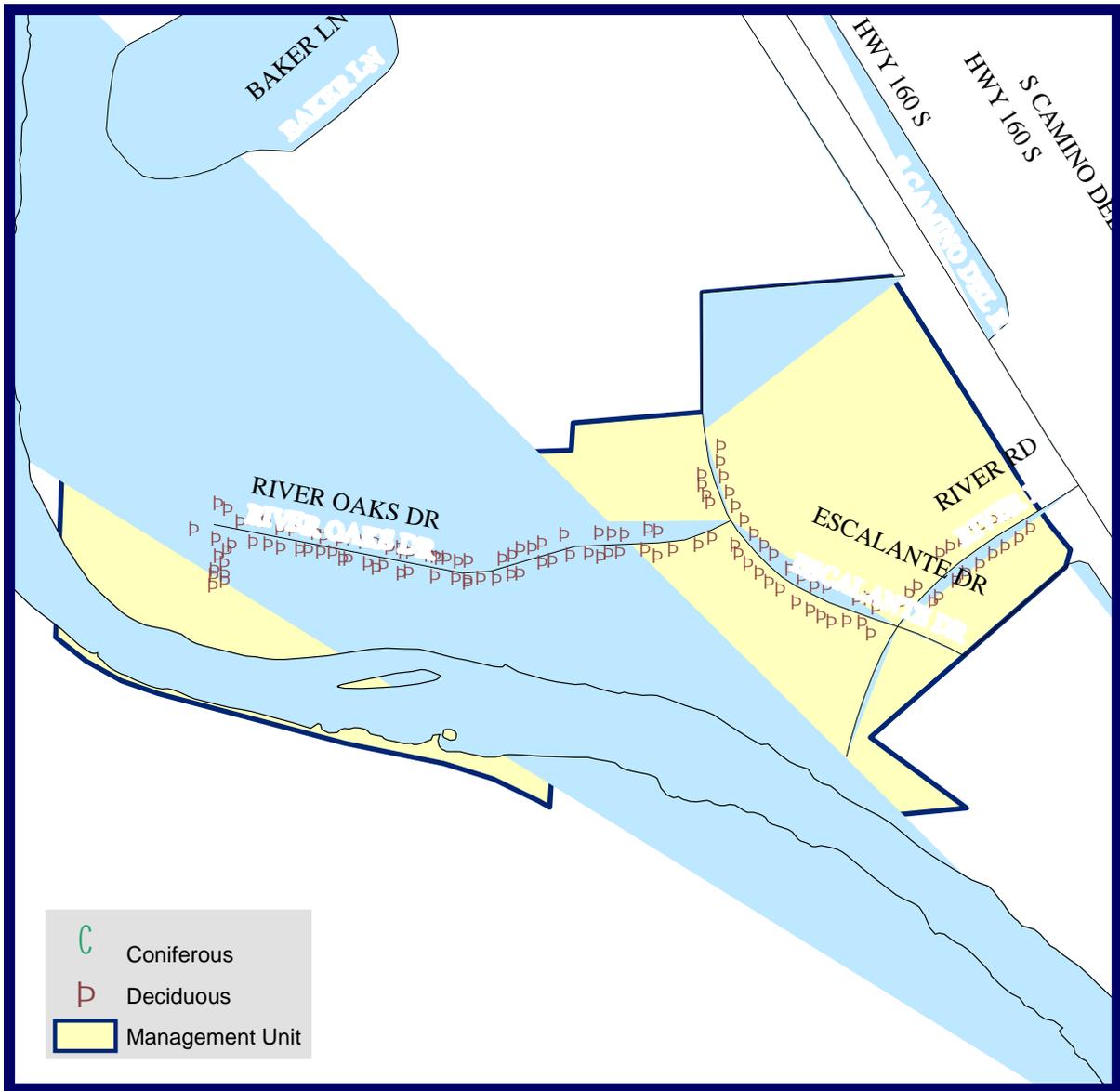
Urban Forest Diversity (Unit 12)





Fraxinus pennsylvanica
Green Ash

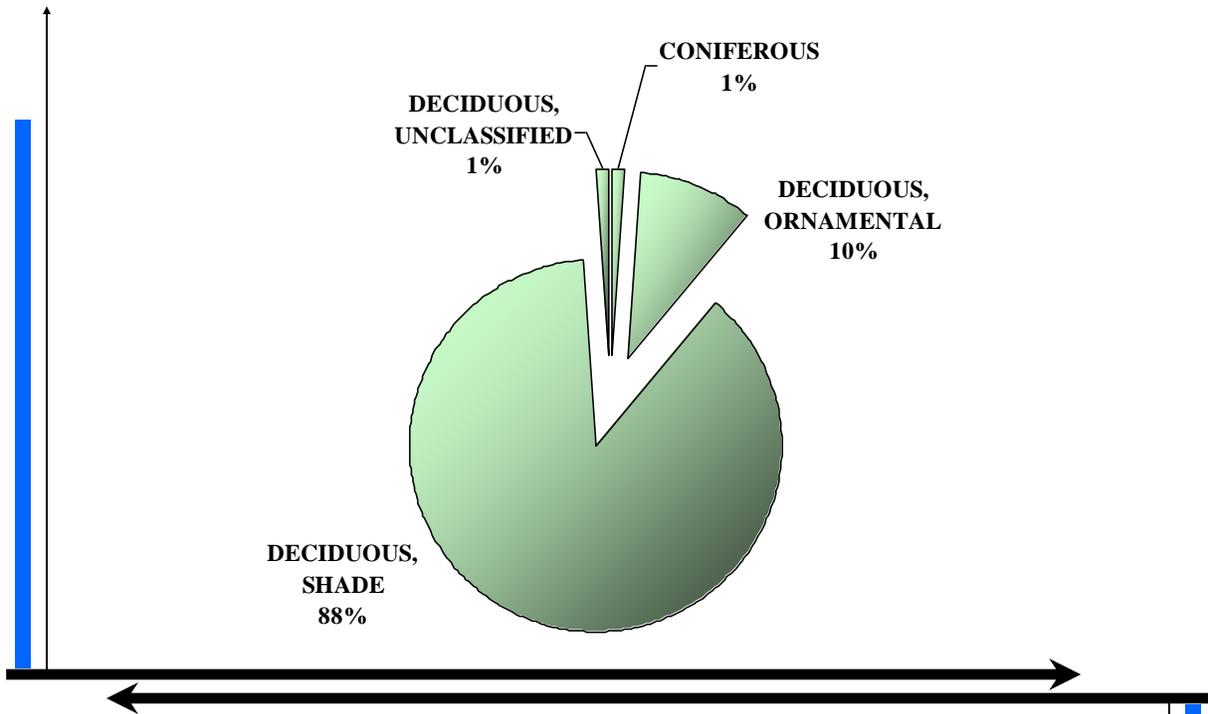
Management Unit 13



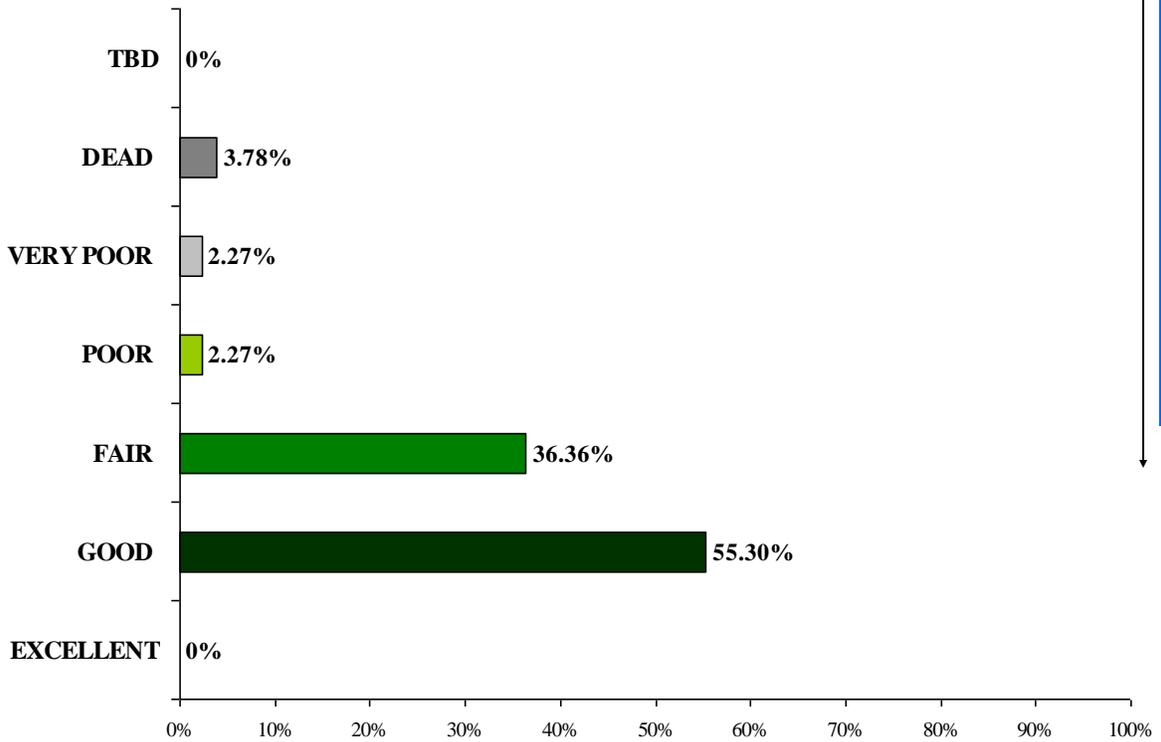
Unit 13- Escalante Crossing

Unit 13 contains 132 immature trees valued at \$3,004. This area is experiencing new residential and commercial development. It also includes a developing section of the Animas River Trail.

Urban Forest Tree Types (Unit 13)

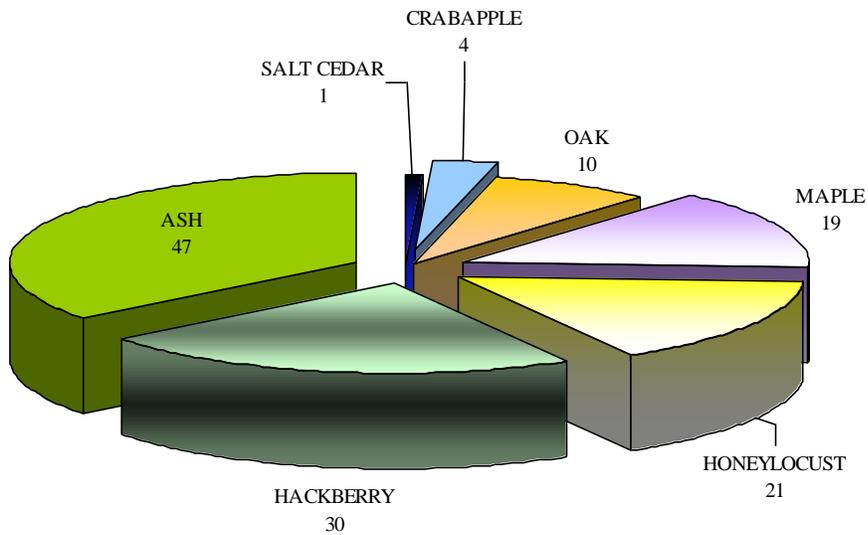


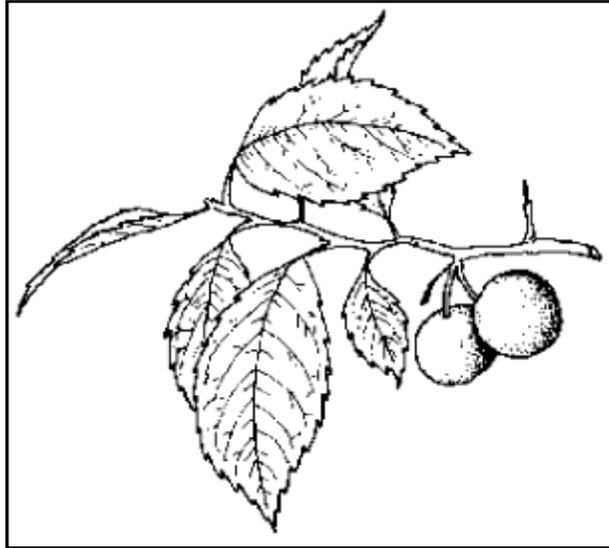
Urban Forest Health (Unit 13)



MANAGEMENT NEED DESCRIPTIONS UNIT 13	
DEAD TREE, REMOVE	8
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	—
FORM PRUNE, 3RD PRIORITY	124
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	2
TREAT DISEASE	1
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	—

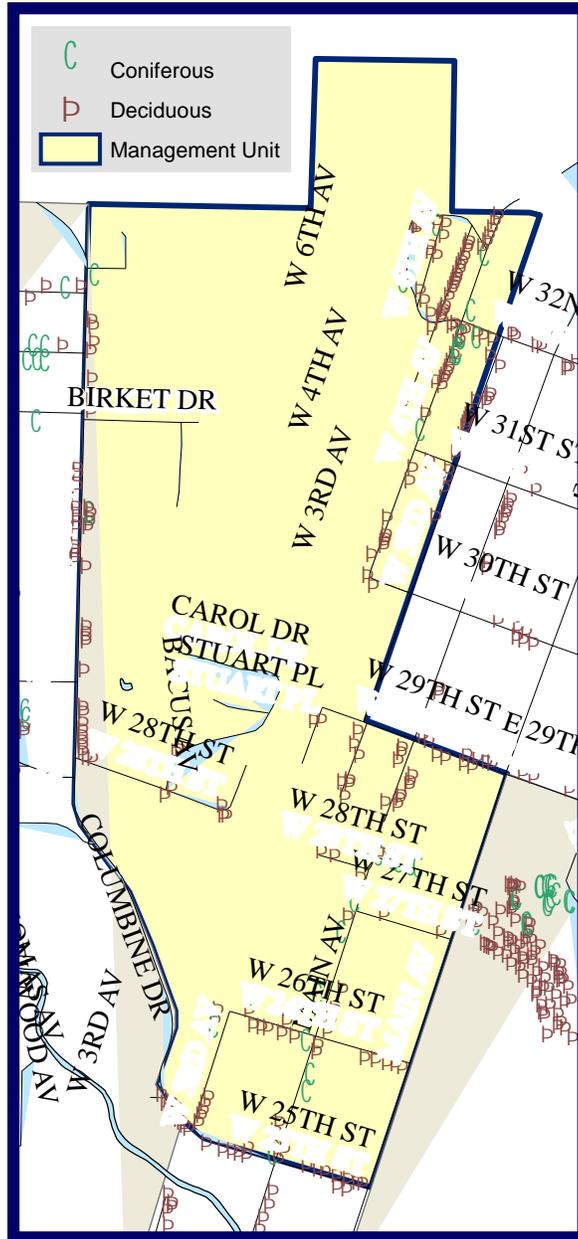
Urban Forest Diversity (Unit 13)





Prunus cerasifera
Plum

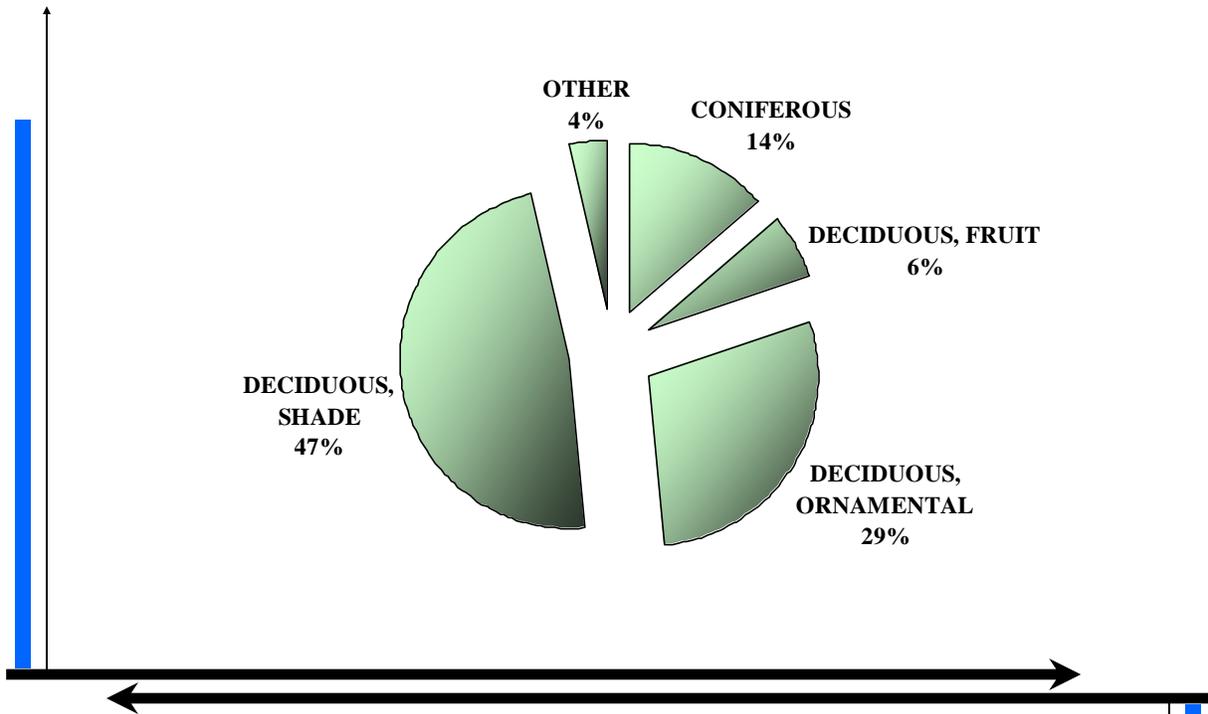
Management Unit 14



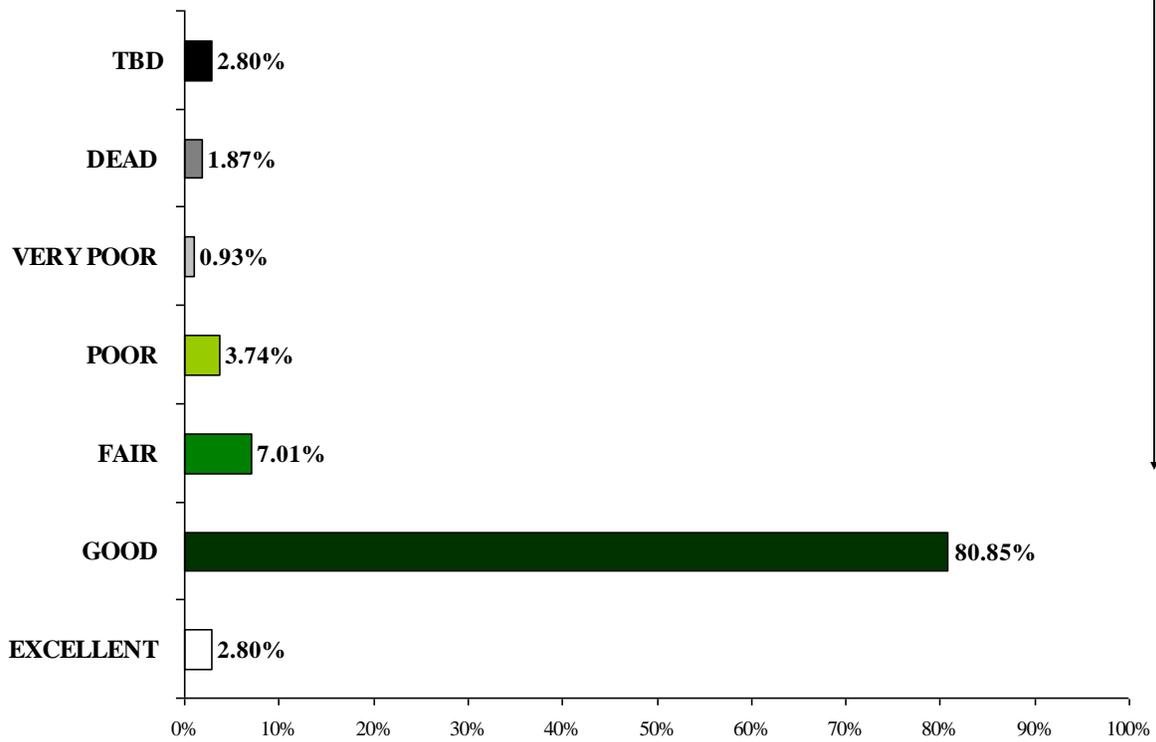
Unit 14- Miller

Unit 14 extends north from W. 25th Street to W. 33rd Street. Below W. 29th Street it runs west from Main Avenue to Junction Street. Above W. 29th Street, the unit extends west from W. 3rd Avenue to Junction Street. This unit has 214 trees valued at \$505,042.

Urban Forest Tree Types (Unit 14)

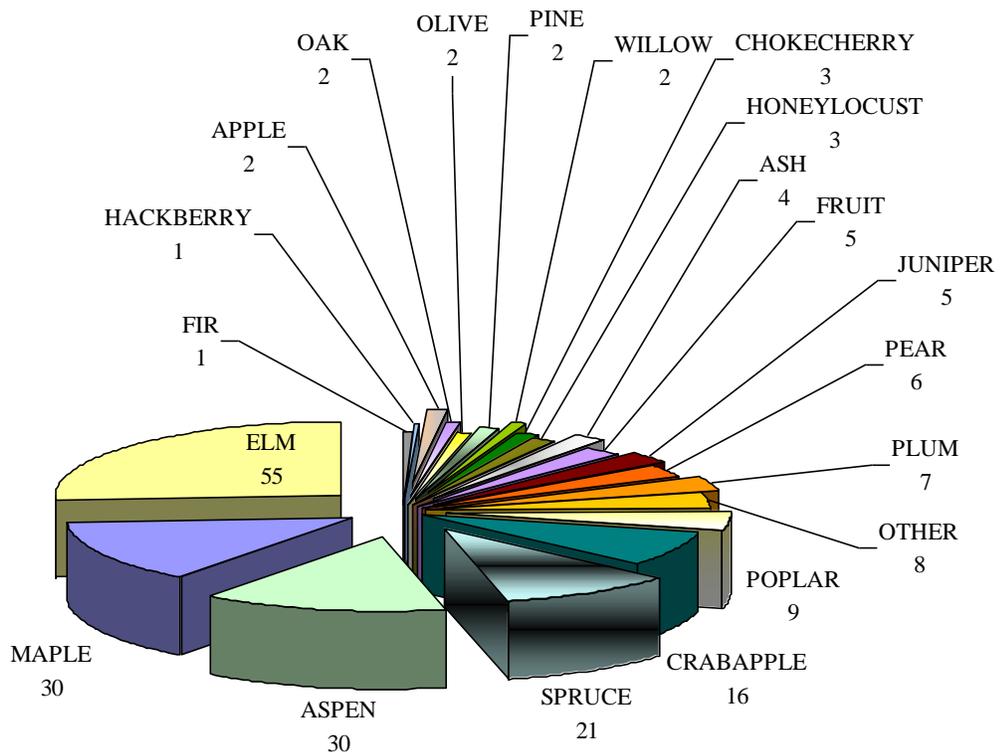


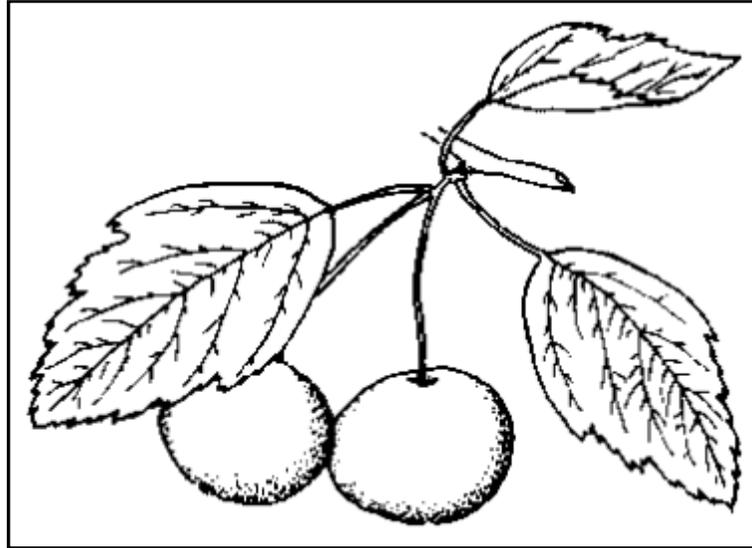
Urban Forest Health (Unit 14)



MANAGEMENT NEED DESCRIPTIONS UNIT 14	
DEAD TREE, REMOVE	15
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	1
CLEARANCE PRUNE, 2ND PRIORITY	38
FORM PRUNE, 3RD PRIORITY	158
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	—
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	4

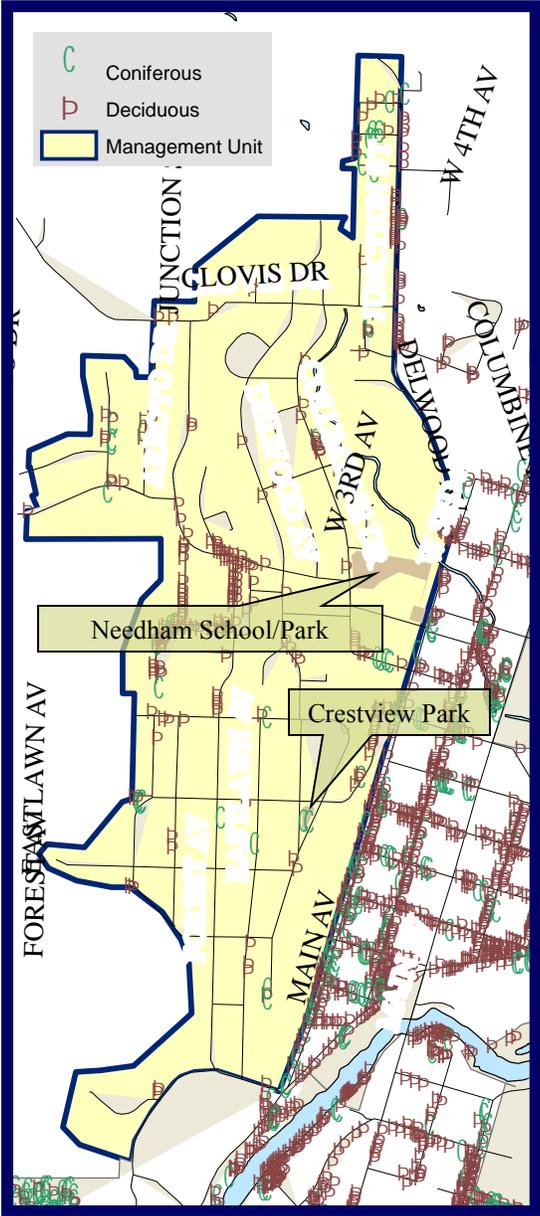
Urban Forest Diversity (Unit 14)





Malus spp.
Crabapple

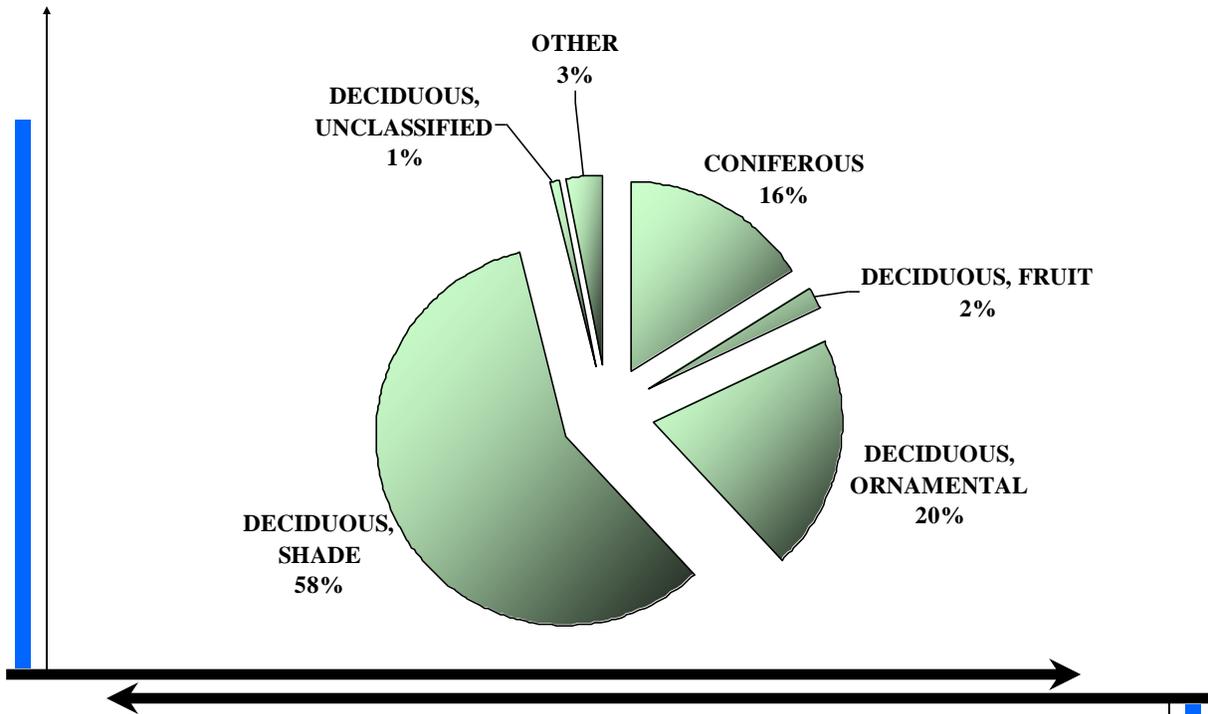
Management Unit 15



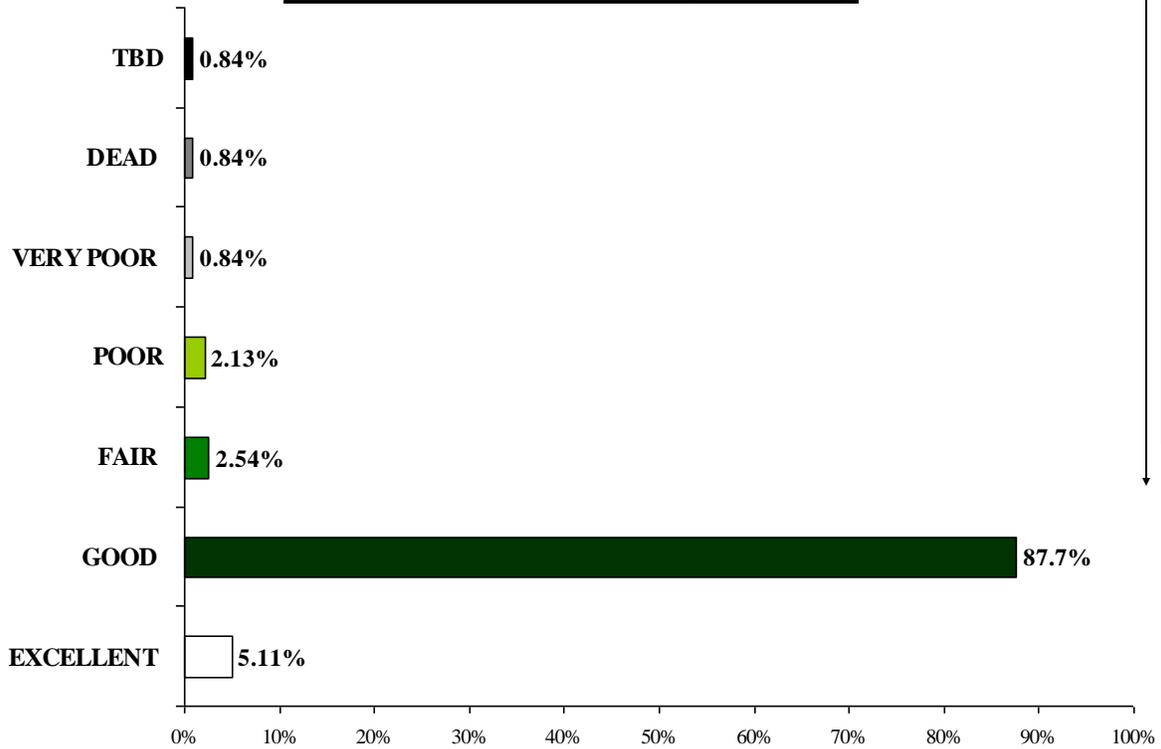
Unit 15- Crestview

Unit 15 includes primarily suburban, residential areas. During the development of this neighborhood, planting strips for city maintained trees and other landscaping were eliminated. Therefore this unit contains few city-owned trees relative to the number of homes and the size of the area it covers. Unit 15 has 235 trees valued at \$326,292.

Urban Forest Tree Types (Unit 15)

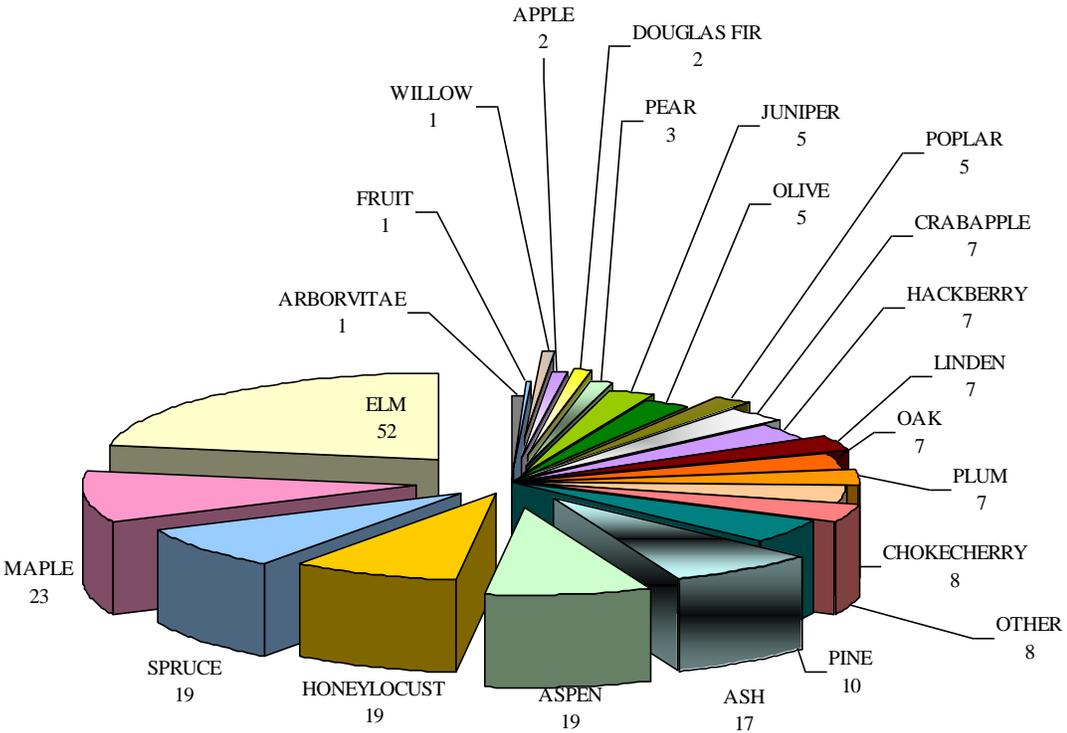


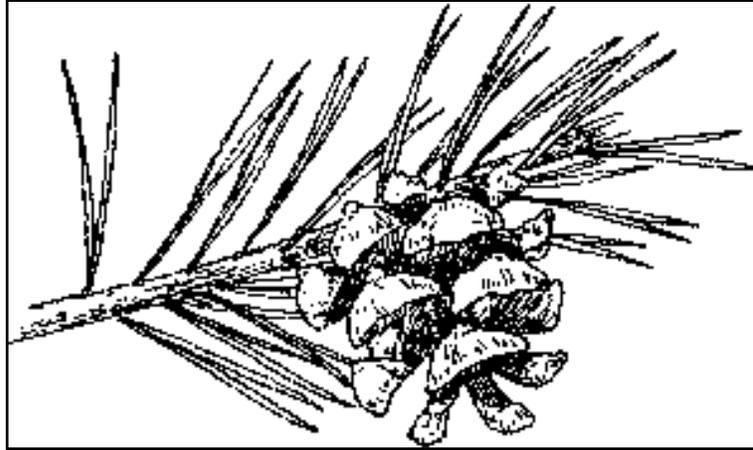
Urban Forest Health (Unit 15)



MANAGEMENT NEED DESCRIPTIONS UNIT 15	
DEAD TREE, REMOVE	17
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	21
FORM PRUNE, 3RD PRIORITY	181
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	—
TREAT DISEASE	1
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	17

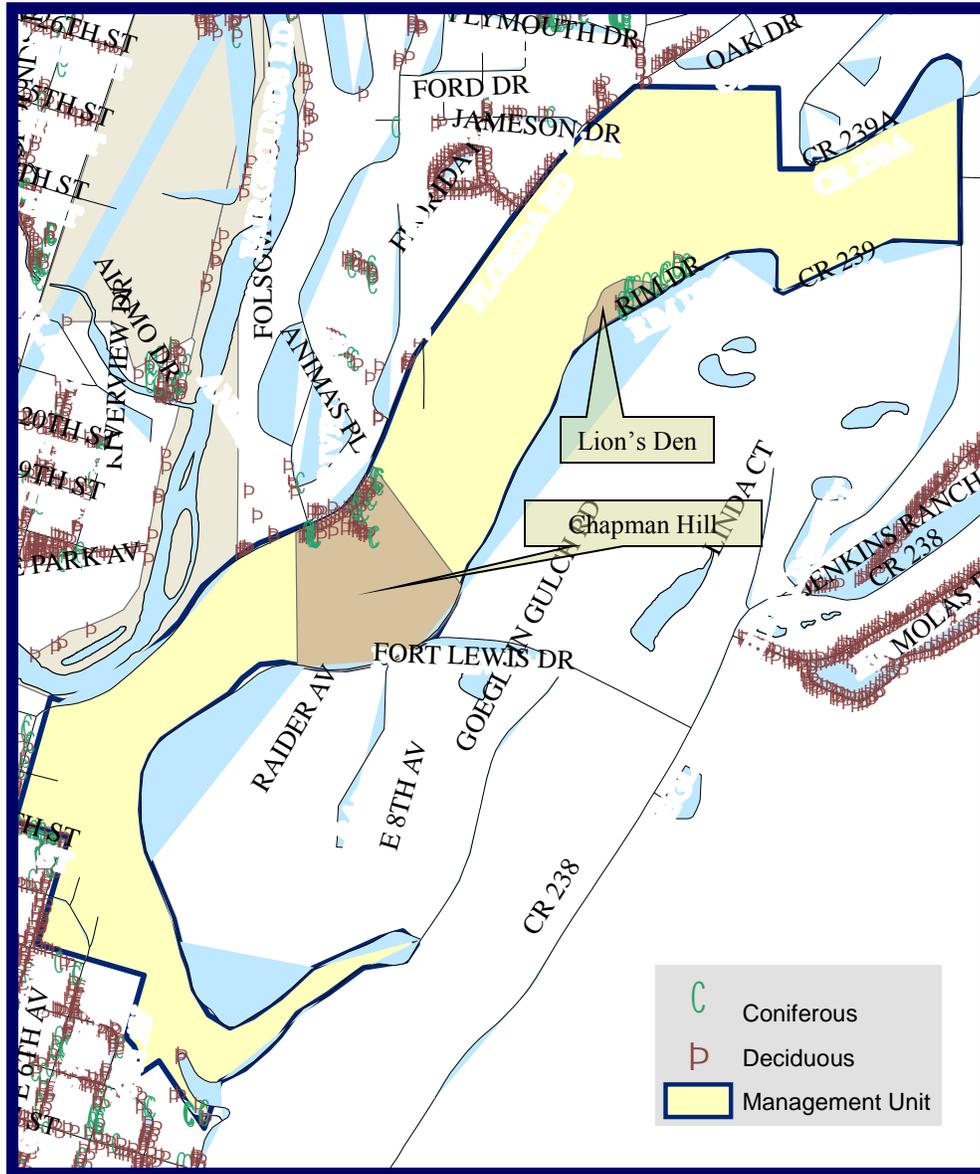
Urban Forest Diversity (Unit 15)





Pinus edulis
Pinion Pine

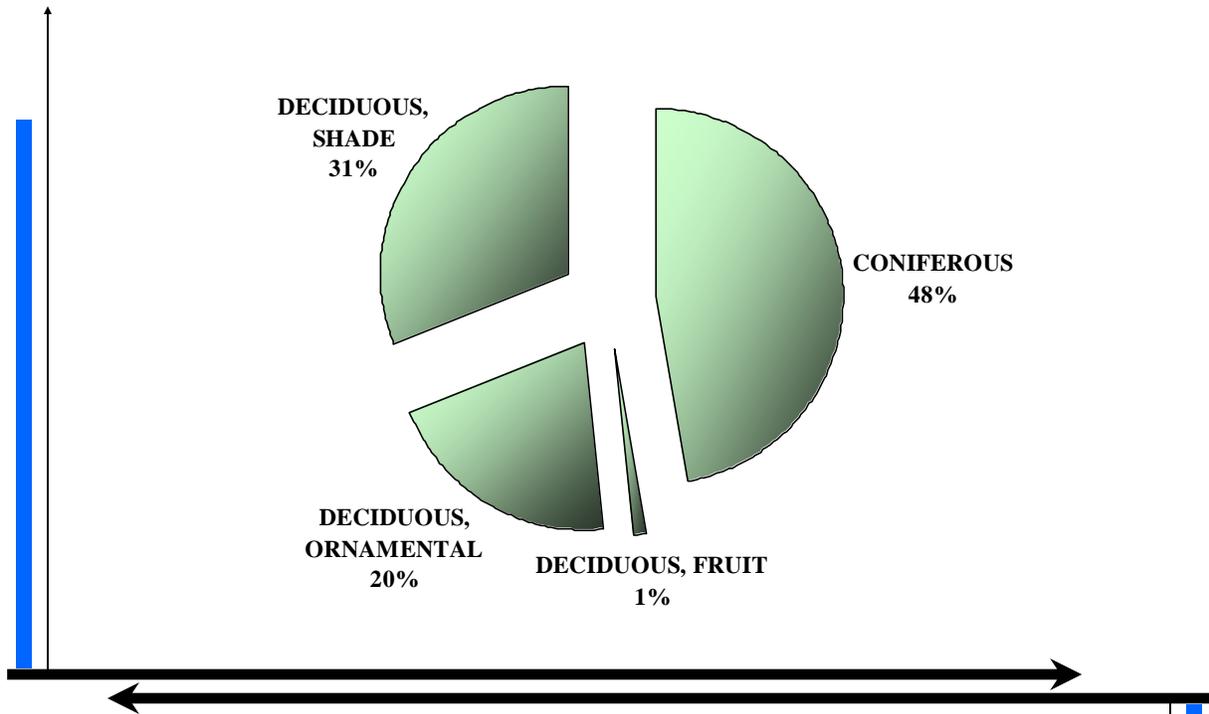
Management Unit 16



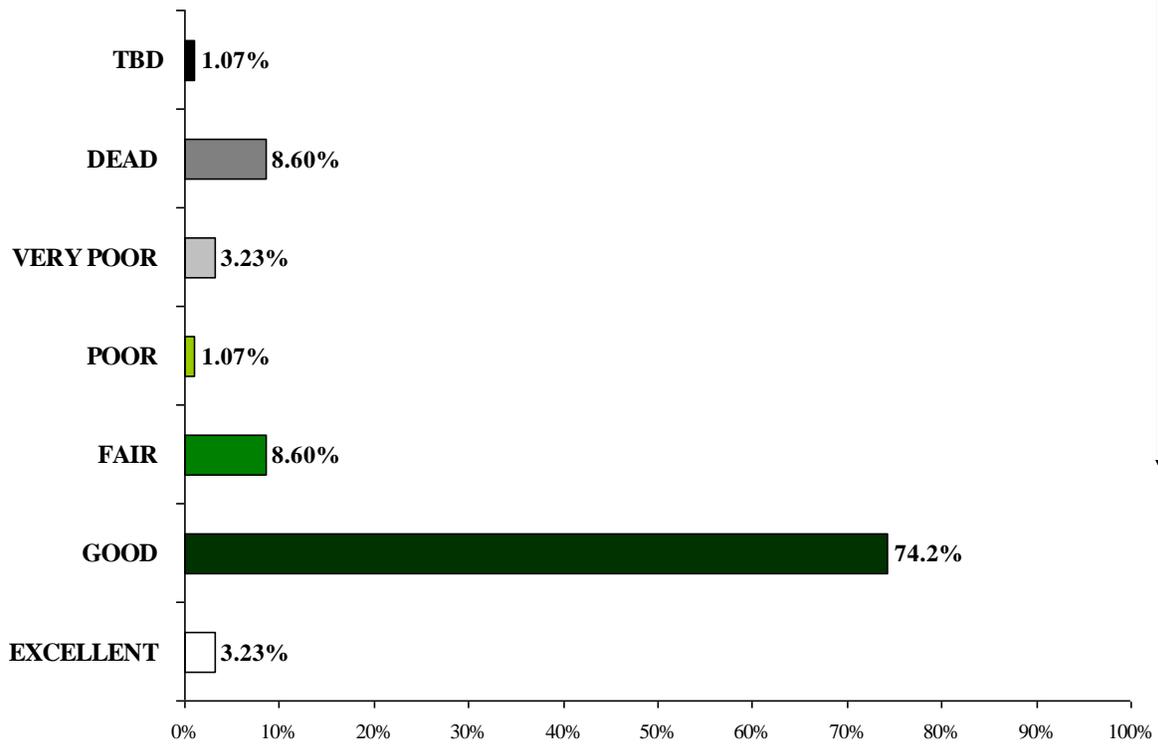
Unit 16- Chapman and College Hill

Unit 16 is dominated by Pinion Pines. At the time of this inventory, the pinions were undergoing intense pressure from drought and insect infestation. This is reflected in the large percentage of dead and dying trees recorded. This unit has 93 trees valued at \$21,656.

Urban Forest Tree Types (Unit 16)

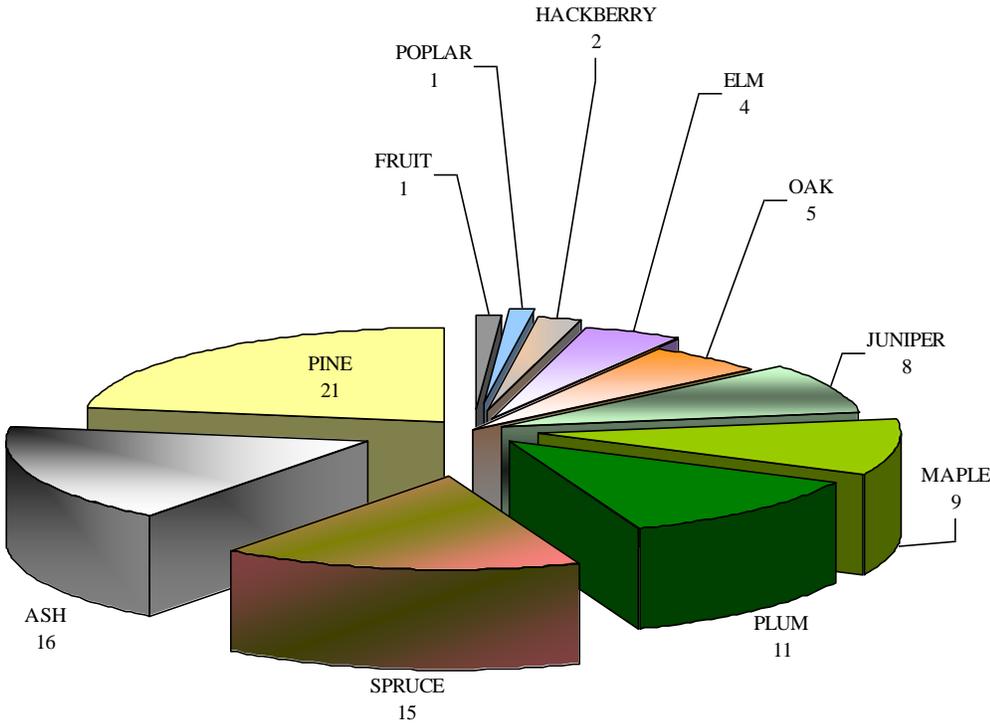


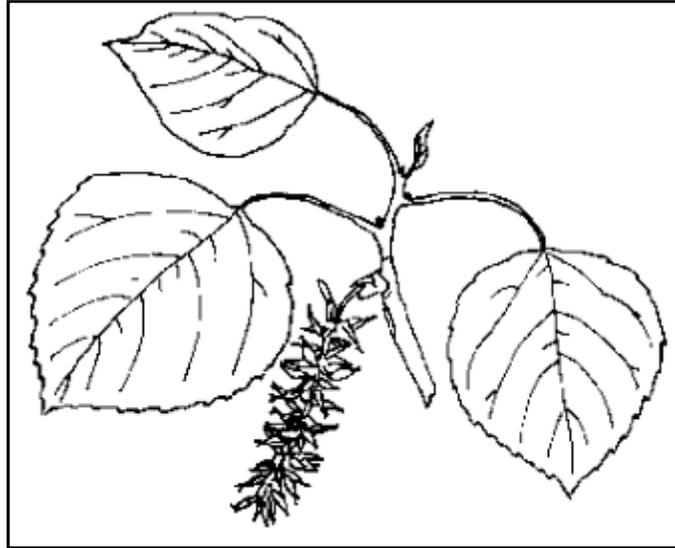
Urban Forest Health (Unit 16)



MANAGEMENT NEED DESCRIPTIONS UNIT 16	
DEAD TREE, REMOVE	10
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	4
FORM PRUNE, 3RD PRIORITY	75
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	—
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	4

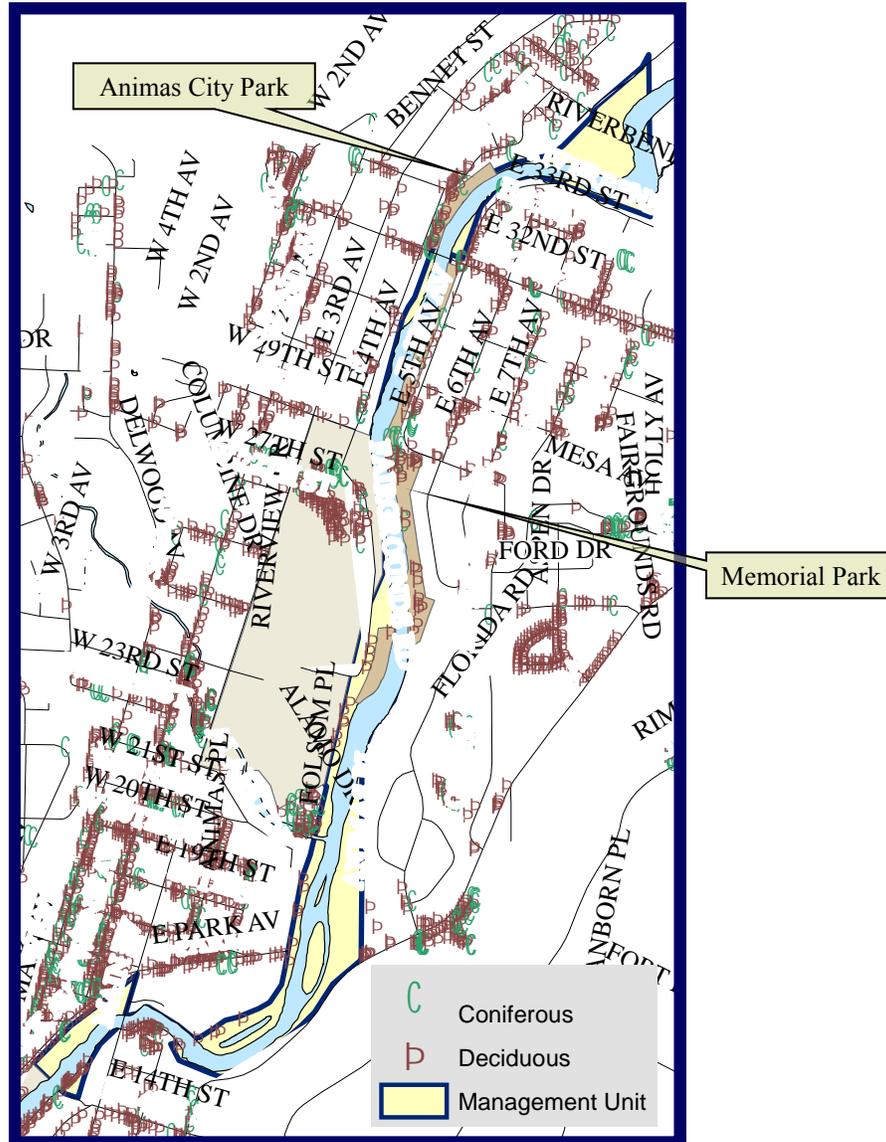
Urban Forest Diversity (Unit 16)





Populus tremuloides
Quaking Aspen

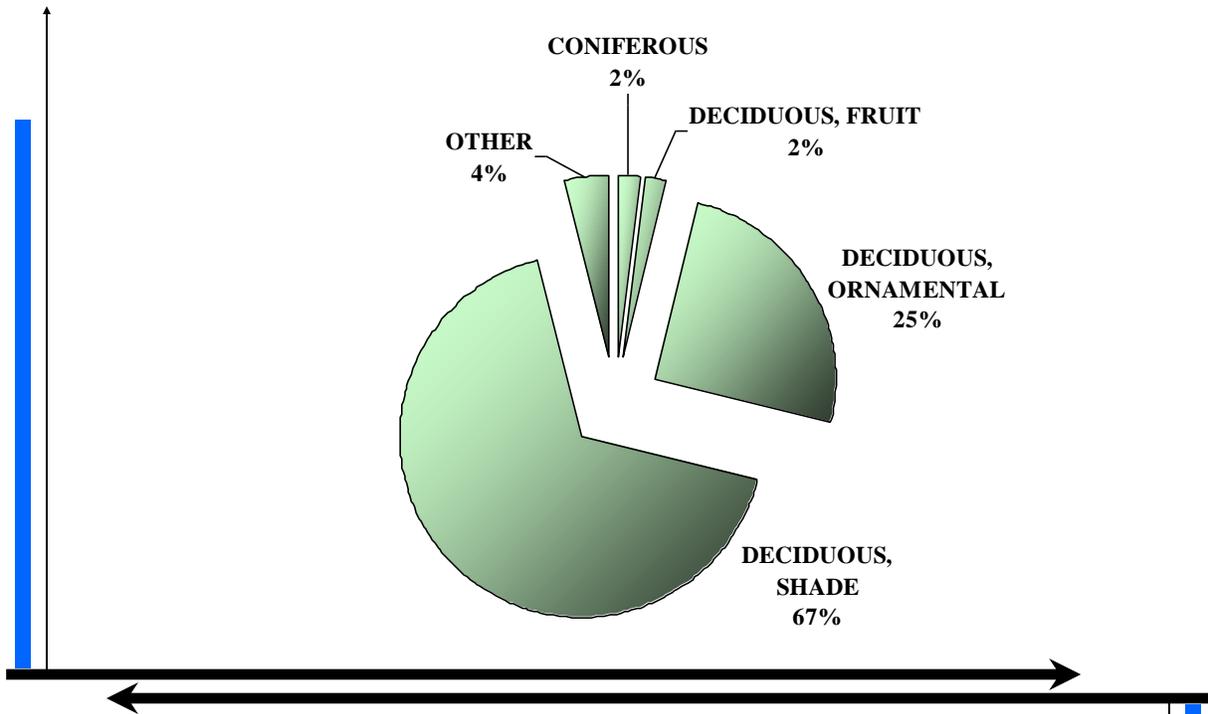
Management Unit 17



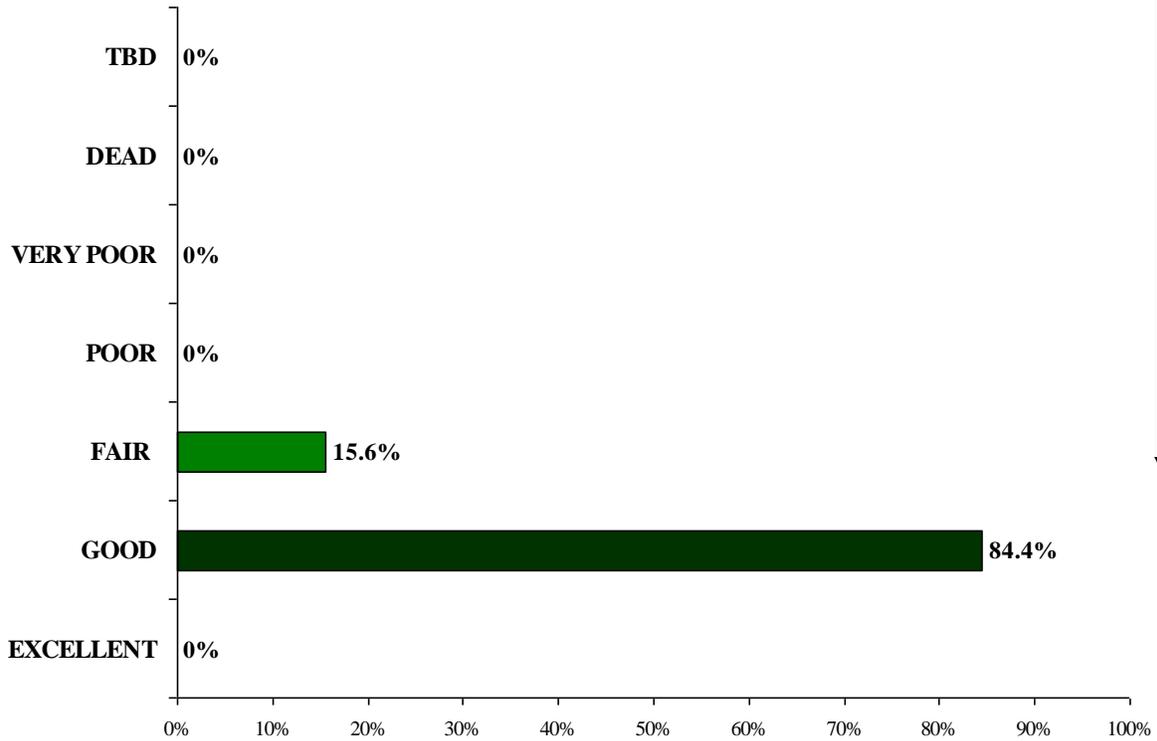
Unit 17- The Animas River Corridor (north)

This unit includes all of the riparian area directly adjacent to the Animas River north of the Main Avenue Bridge. The trees counted in the inventory do not accurately reflect the vast number of trees along the riparian area, but only those trees that the city actively manages. This includes trees along the Animas River Trail and within riverfront parks. This unit has 45 inventoried trees valued at \$33,298.

Urban Forest Tree Types (Unit 17)

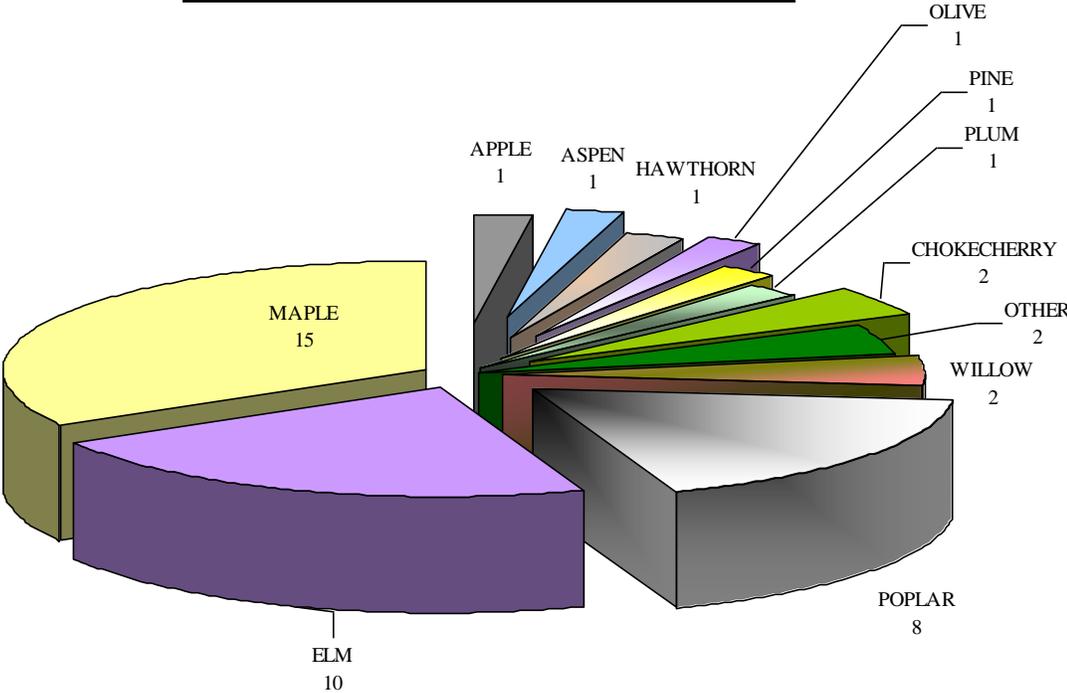


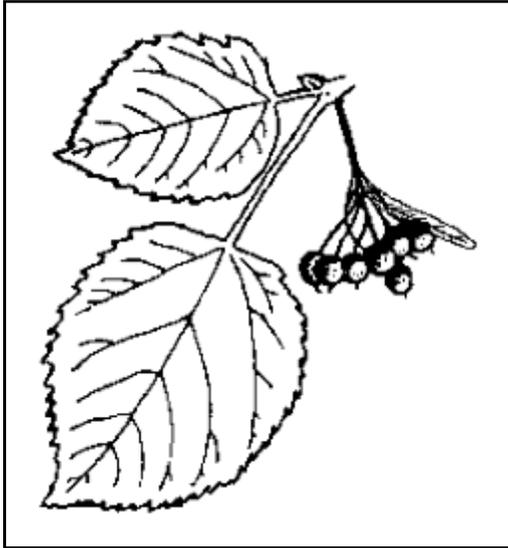
Urban Forest Health (Unit 17)



MANAGEMENT NEED DESCRIPTIONS UNIT 17	
DEAD TREE, REMOVE	1
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	2
CLEARANCE PRUNE, 2ND PRIORITY	17
FORM PRUNE, 3RD PRIORITY	25
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	—
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	—

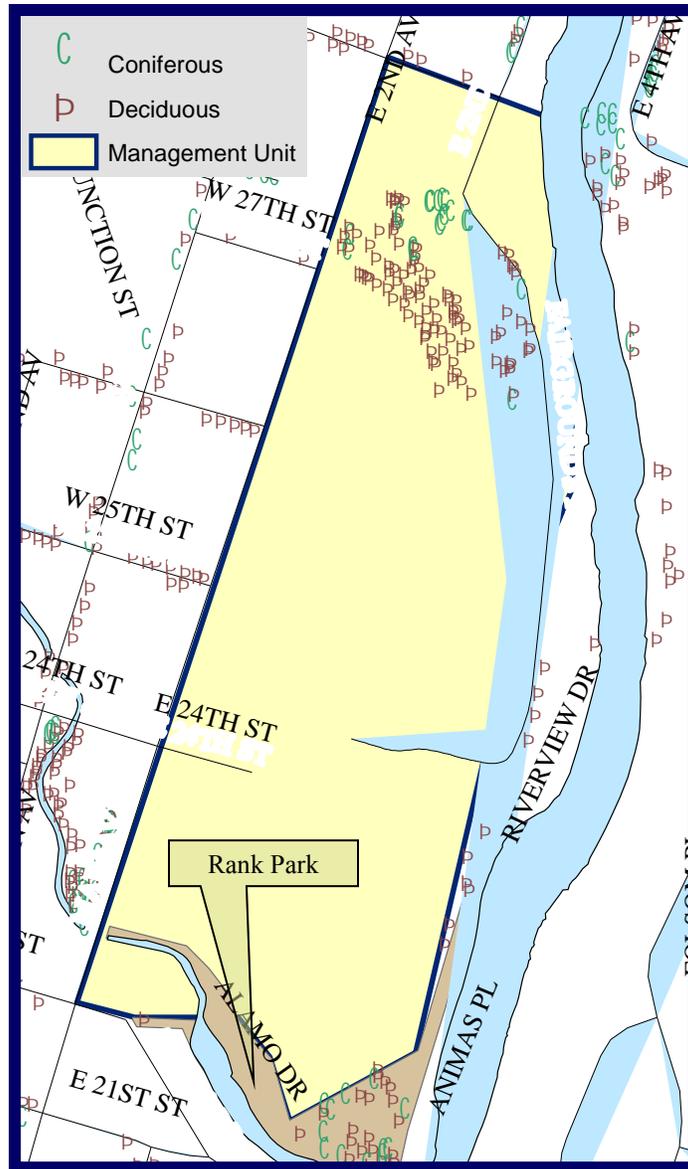
Urban Forest Diversity (Unit 17)





Tilia cordata
Little Leaf Linden

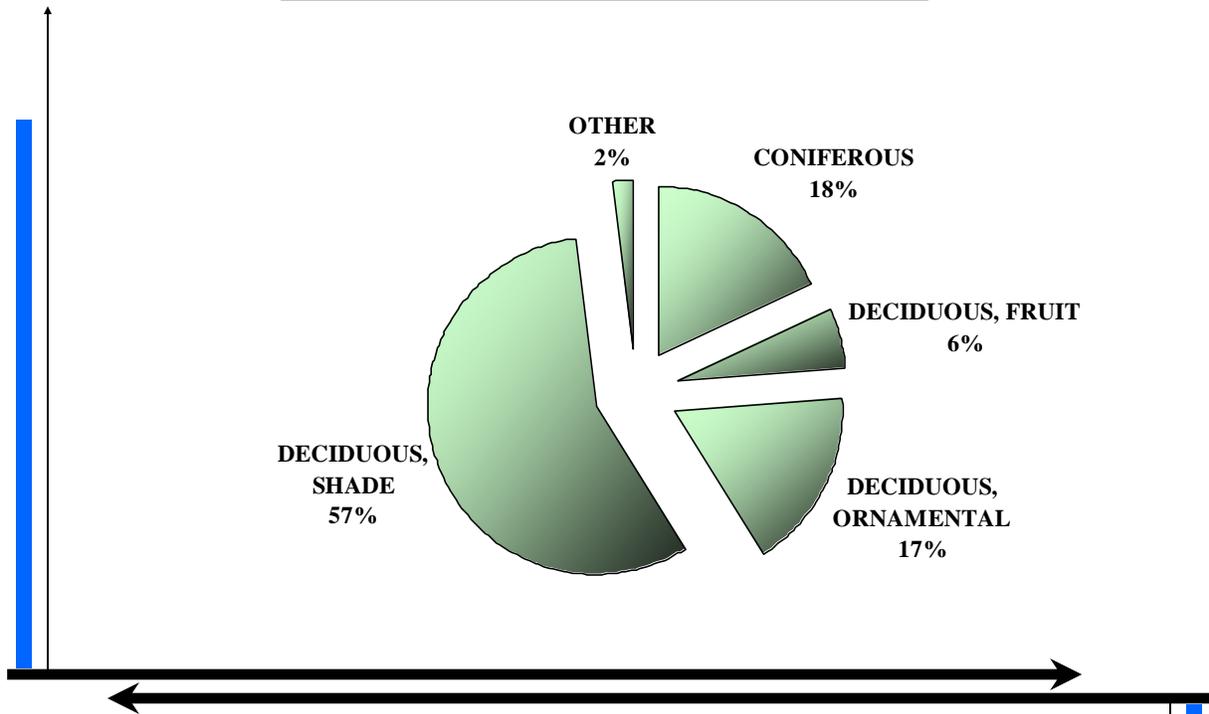
Management Unit 18



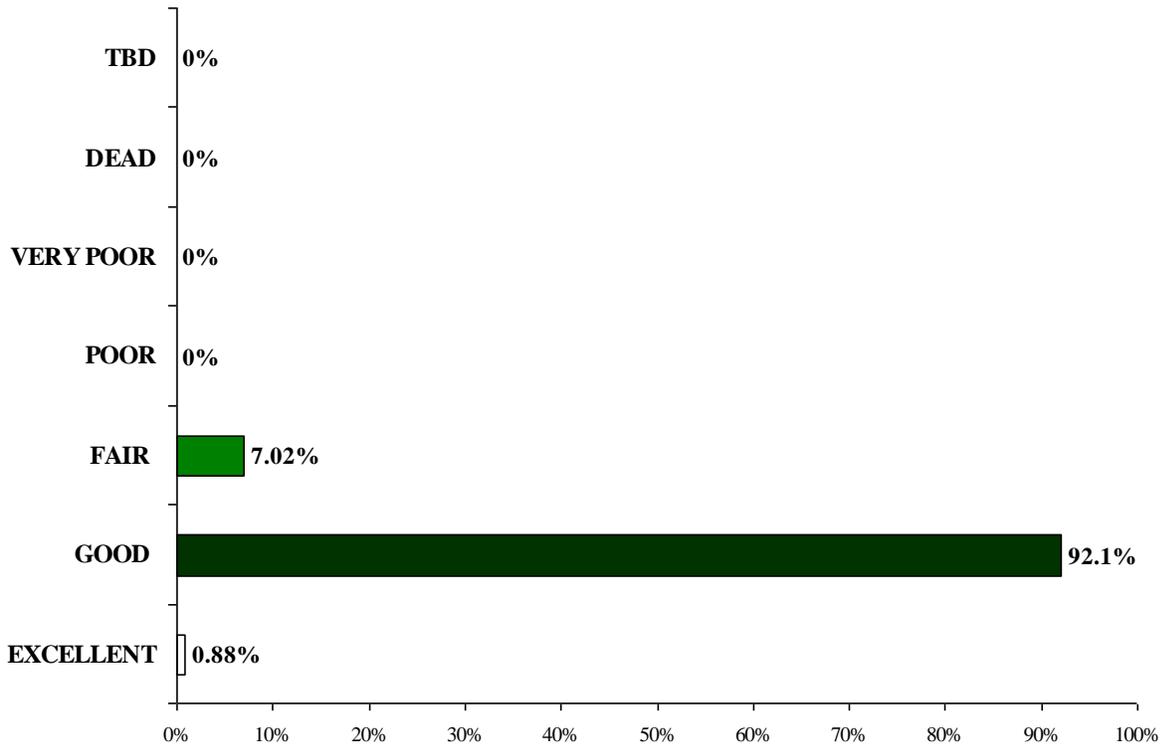
Unit 18– Durango Recreation Center

Unit 18 covers a small section of the Animas River Trail behind the La Plata County Fairgrounds between Rank Park and E. 29th Street. It also includes the grounds of the Durango Community Recreation Center. This unit has 114 trees valued at \$22,018.

Urban Forest Tree Types (Unit 18)

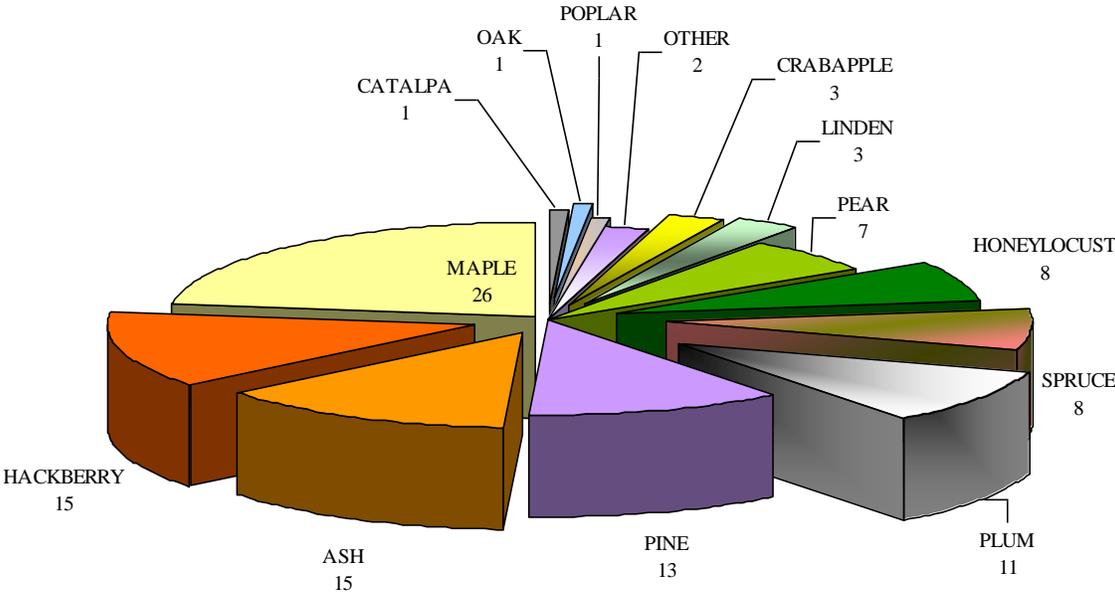


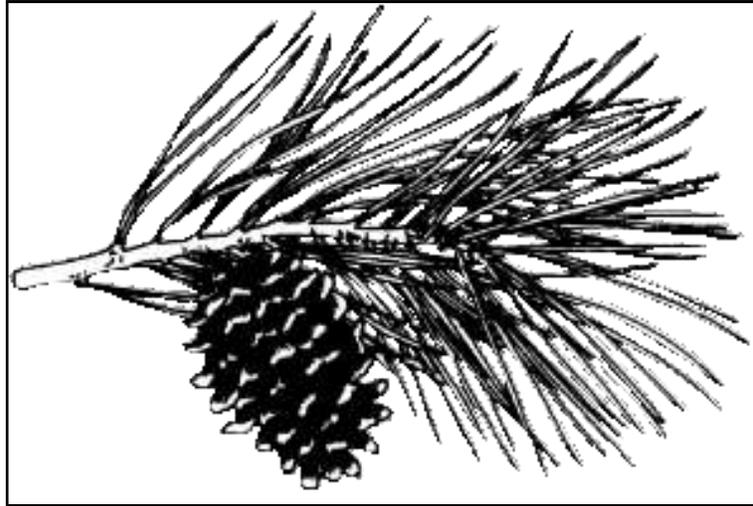
Urban Forest Health (Unit 18)



MANAGEMENT NEED DESCRIPTIONS UNIT 18	
DEAD TREE, REMOVE	—
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	—
CLEARANCE PRUNE, 2ND PRIORITY	1
FORM PRUNE, 3RD PRIORITY	112
STAKE OR FENCE	1
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	—
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	—

Urban Forest Diversity (Unit 18)





Pinus ponderosa
Ponderosa pine

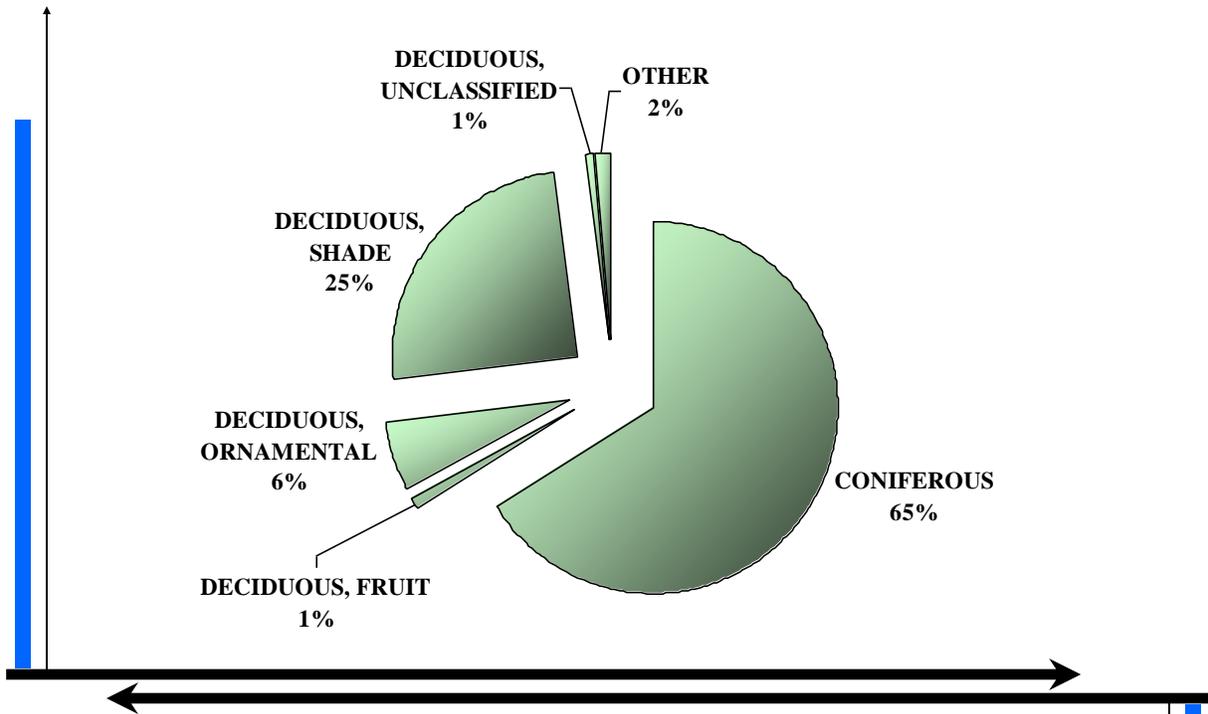
Management Unit 19



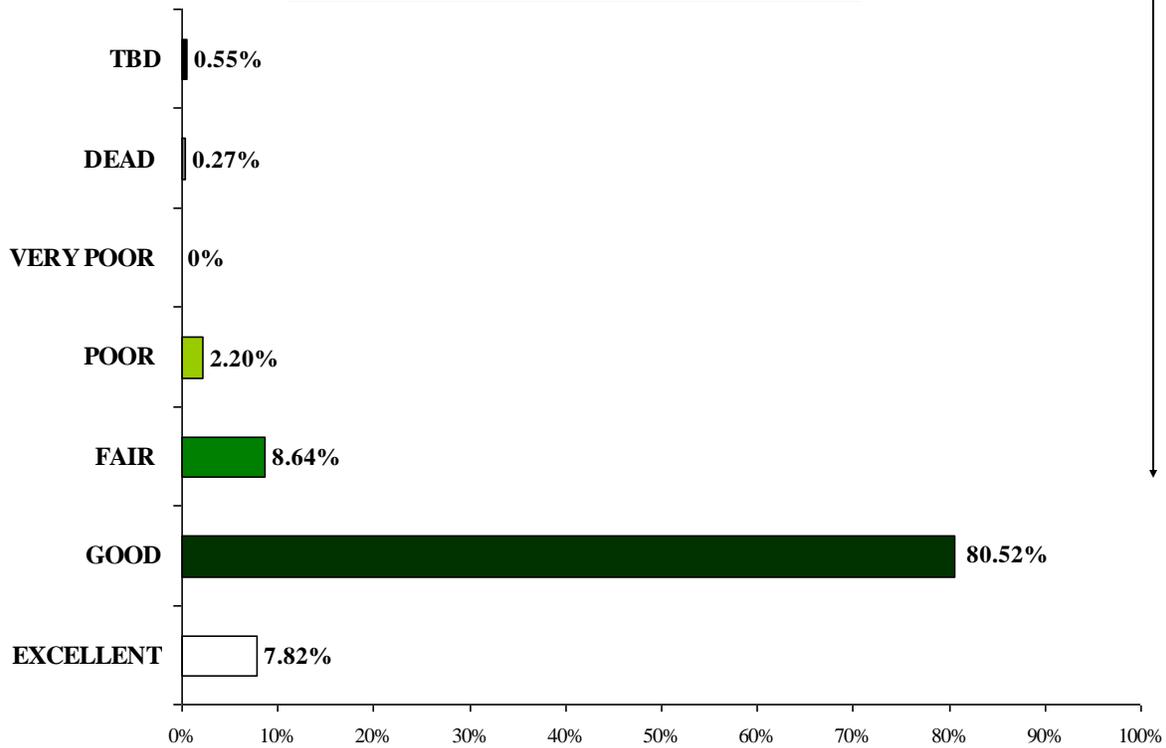
Unit 19- Greenmount Cemetery

Unit 19 includes the city cemetery, Roosa Park, and Schneider Park. Greenmount Cemetery exists in a mountain park setting. Its abundant trees are largely coniferous and mature. Some very fine willow and cottonwood specimens can be found here as well. This unit has 729 trees and is valued at \$2,970,715.

Urban Forest Tree Types (Unit 19)

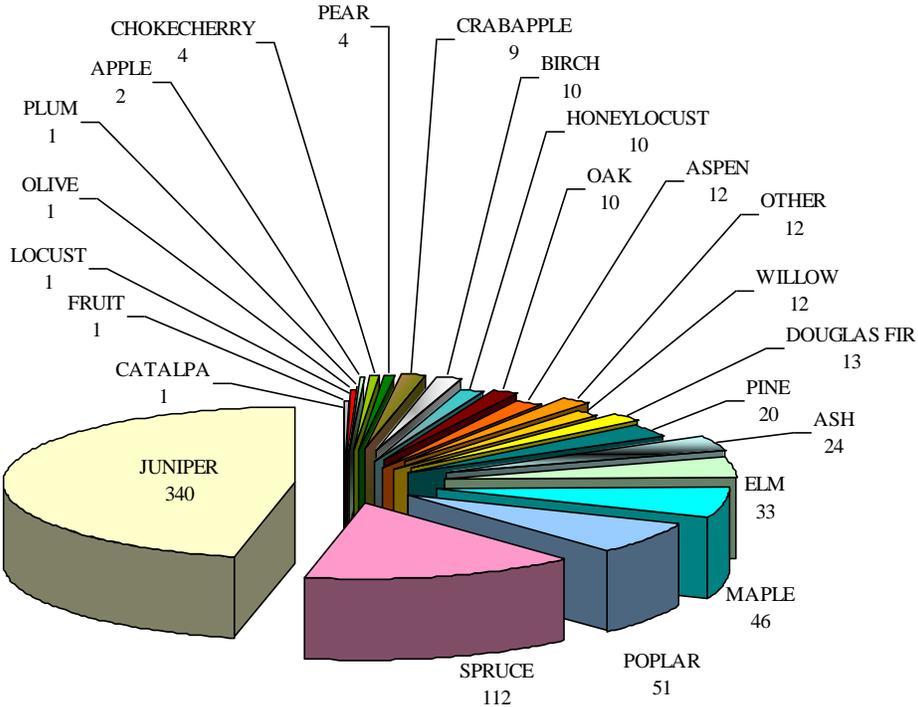


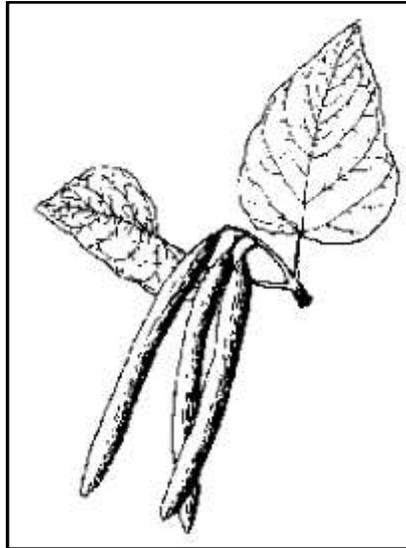
Urban Forest Health (Unit 19)



MANAGEMENT NEED DESCRIPTIONS UNIT 19	
DEAD TREE, REMOVE	11
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	1
CLEARANCE PRUNE, 2ND PRIORITY	35
FORM PRUNE, 3RD PRIORITY	601
STAKE OR FENCE	—
REMOVE THE STAKING OR FENCE	—
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	—
TREAT INSECTS	26
TREAT DISEASE	1
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	79

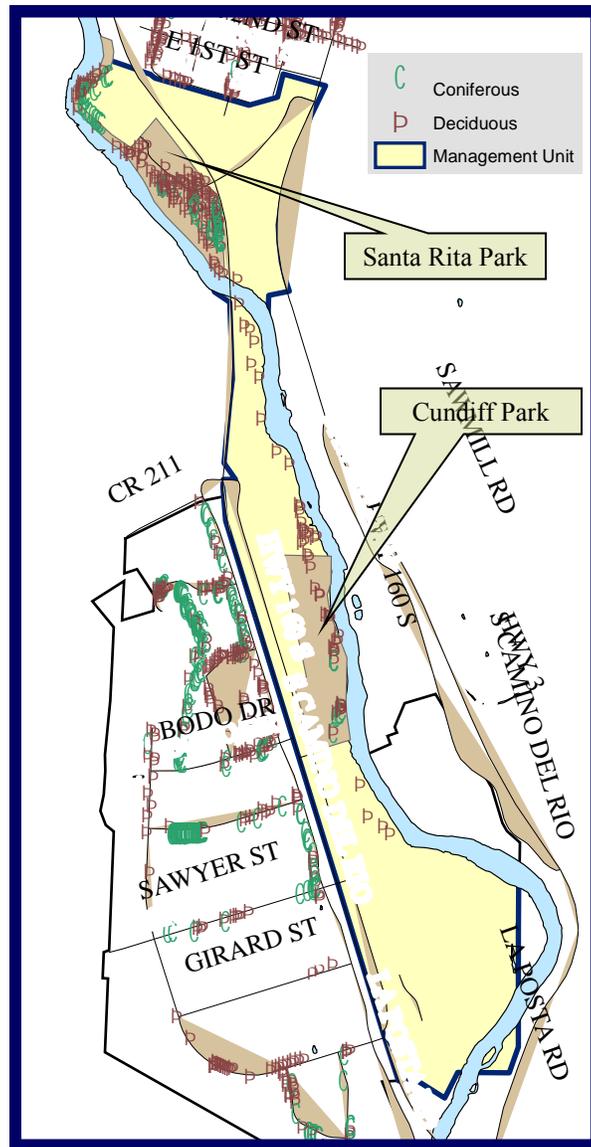
Urban Forest Diversity (Unit 19)





Catalpa speciosa
Catalpa

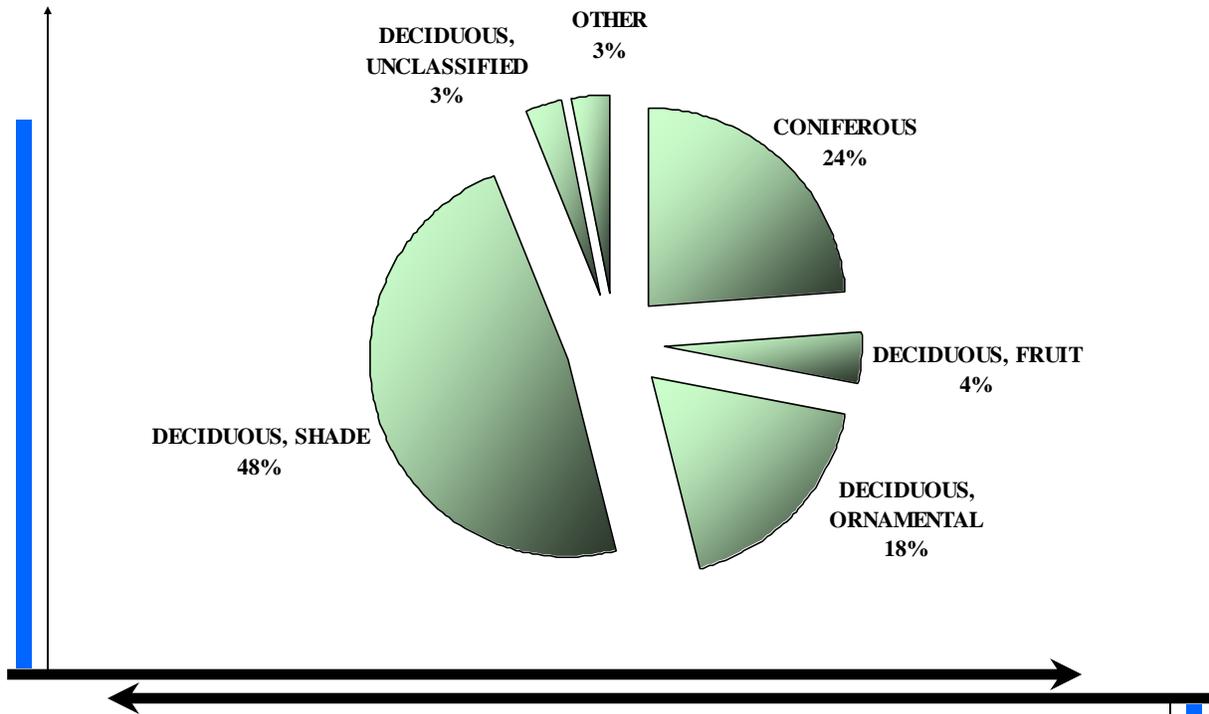
Management Unit 20



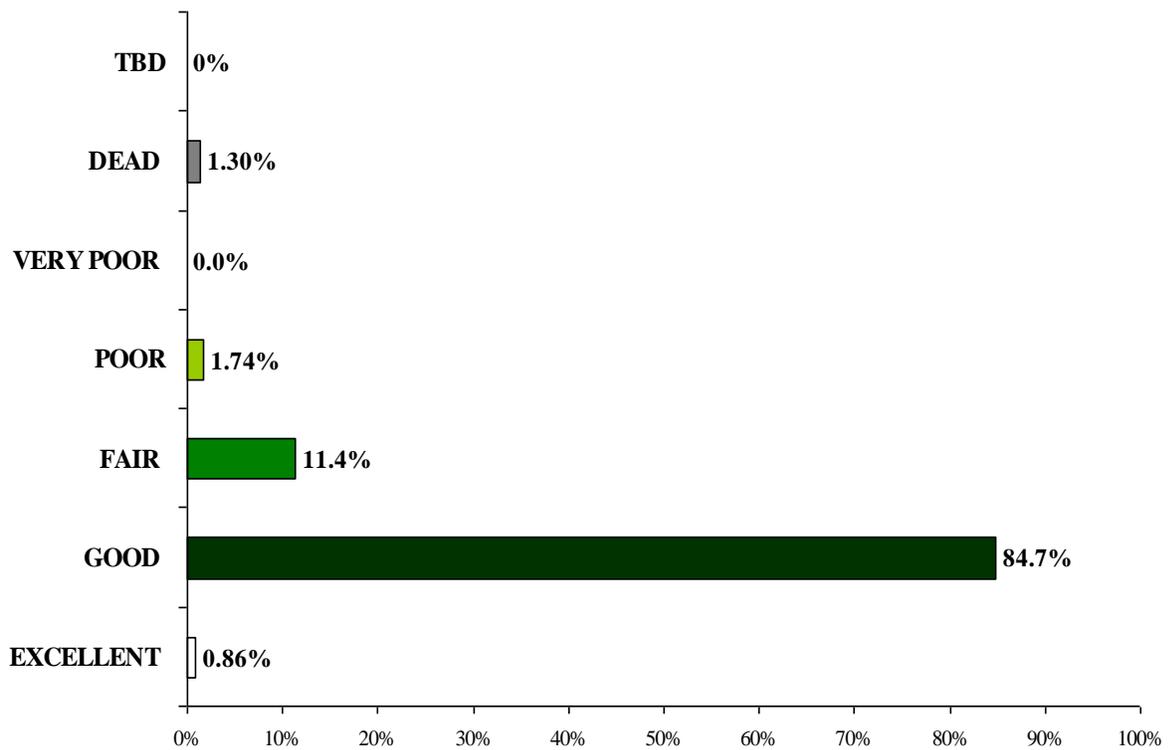
Unit 20- Animas River Corridor (south)

Unit 20 encompasses Santa Rita Park and a significant section of the Animas River Trail. The trees inventoried within this unit are only the trees actively managed by the city for trail clearance and hazard concerns. Due to recent construction east of the park, a few of the trees in Santa Rita Park have been weakened by a surge of groundwater. Unit 20 has 229 trees valued at \$364,423.

Urban Forest Tree Types (Unit 20)

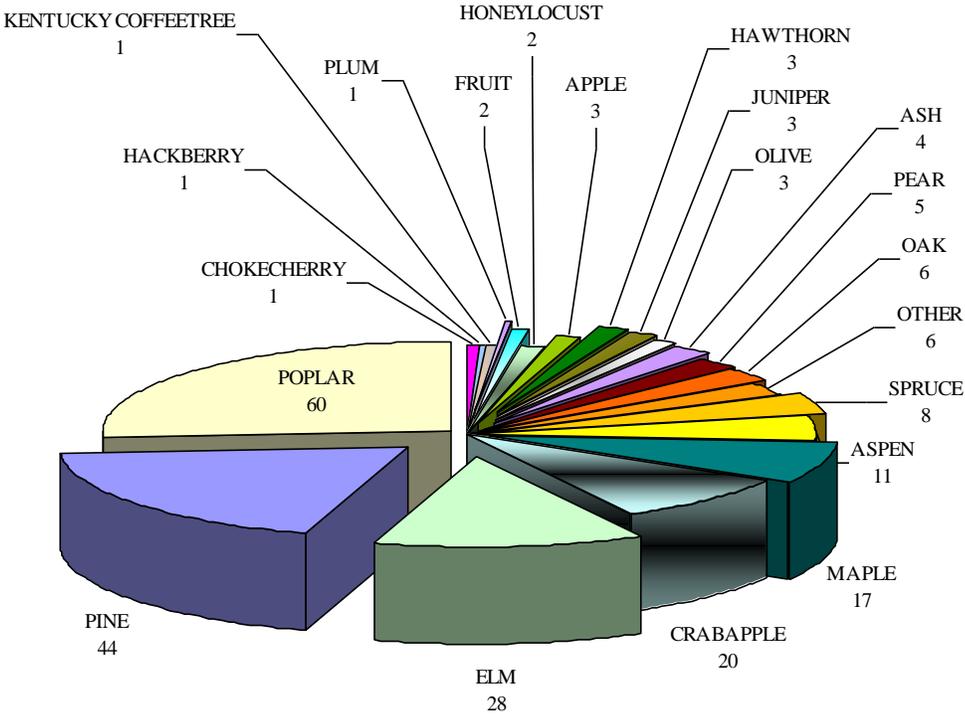


Urban Forest Health (Unit 20)



MANAGEMENT NEED DESCRIPTIONS UNIT 20	
DEAD TREE, REMOVE	6
HAZARD PRUNE OR REMOVE, 1ST PRIORITY	3
CLEARANCE PRUNE, 2ND PRIORITY	52
FORM PRUNE, 3RD PRIORITY	154
STAKE OR FENCE	1
REMOVE THE STAKING OR FENCE	3
AERATE, FERTILIZE OR MULCH	—
SAMPLE, STRESSED TREE	--
TREAT INSECTS	1
TREAT DISEASE	—
PLANT NEW TREE	—
OK, NO MANAGEMENT NEEDS	14

Urban Forest Diversity (Unit 20)



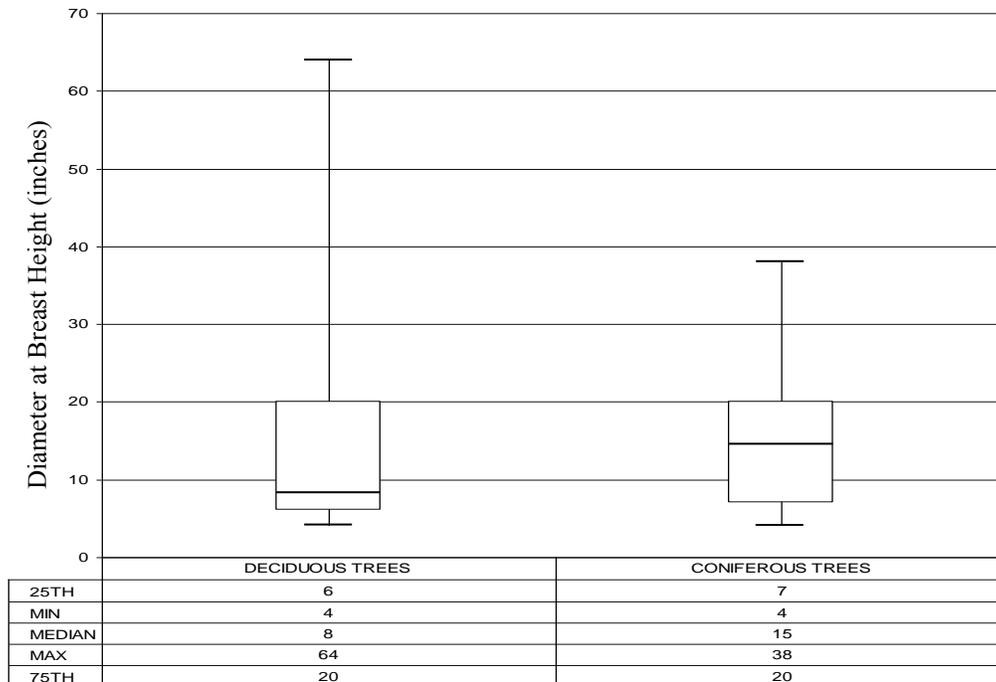
Appendices



Appendix A. A total of 7,128 trees and 154 potential planting sites were counted in the 2004 inventory. Trees are listed in order of abundance by species. The native trees, Colorado Blue Spruce and Rocky Mountain Juniper, and the invasive Siberian Elm, constitute the largest individual species portions throughout the city.

Scientific Name	Common Name	Tree Species Rating Factor	Totals	Percent of All City Managed Trees
<i>Picea pungens</i>	Colorado Blue Spruce	0.875	543	7.62%
<i>Ulmus pumila</i>	Siberian Elm	0.6	526	7.38%
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	0.75	435	6.10%
<i>Acer saccharinum</i>	Silver Maple	0.65	409	5.74%
<i>Gleditsia triacanthos</i>	Shademaster Honeylocust	0.75	392	5.50%
<i>Fraxinus pennsylvanica</i>	Patmore Ash	0.75	386	5.42%
<i>Pyrus spp.</i>	Pear	0.75	314	4.41%
<i>Populus tremuloidies</i>	Quaking Aspen	0.65	277	3.89%
<i>Ulmus americana</i>	American Elm	0.7	272	3.82%
<i>Malus spp.</i>	Crabapple	0.75	245	3.44%
<i>Acer negundo</i>	Box Elder	0.5	207	2.86%
<i>Other</i>	<To-Be-Determined>	NA	199	2.79%
<i>Fraxinus pennsylvanica</i>	Green Ash	0.75	176	2.47%
<i>Acer plantanoides</i>	Norway Maple	0.75	174	2.44%
<i>Prunus cerasifera</i>	Newport Plum	0.65	174	2.44%
<i>Prunus virginiana</i>	Chokecherry	0.75	168	2.36%
<i>Pinus edulis</i>	Pinion Pine	0.8	159	2.23%
<i>Fraxinus americana</i>	Autumn Purple Ash	0.75	135	1.89%
<i>Gleditsia triacanthos</i>	Imperial Honeylocust	0.75	134	1.88%
<i>Tilia cordata</i>	Little Leaf Linden	0.8	119	1.67%
<i>Fraxinus pennsylvanica</i>	Summit Ash	0.75	118	1.66%
<i>Populus fremontii</i>	Fremont Cottonwood	0.7	117	1.64%
<i>Acer freemanii</i>	Autumn Blaze Maple	0.6	110	1.54%
<i>Populus anugustifolia</i>	Narrowleaf Cottonwood	0.6	103	1.45%
<i>Betula pendula</i>	Weeping Birch	0.65	92	1.29%
<i>Celtis spp.</i>	Common Hackberry	0.8	86	1.21%
<i>Pinus nigra</i>	Austrian Pine	0.8	86	1.21%
<i>Elaeagnus angustifolia</i>	Russian Olive	0.7	85	1.19%
<i>Pinus ponderosa</i>	Ponderosa Pine	0.8	83	1.16%
<i>Quercus gambelii</i>	Gamble Oak	0.8	71	1.00%
<i>Malus spp.</i>	Apple	0.75	60	0.84%
<i>Gleditsia spp.</i>	Other Honeylocust	0.75	48	0.67%
<i>Pseudotsuga menziesii</i>	Douglas Fir	0.8	46	0.65%
<i>Catalpa speciosa</i>	Catalpa	0.75	44	0.62%
<i>Tilia americana</i>	American Linden	0.85	40	0.56%

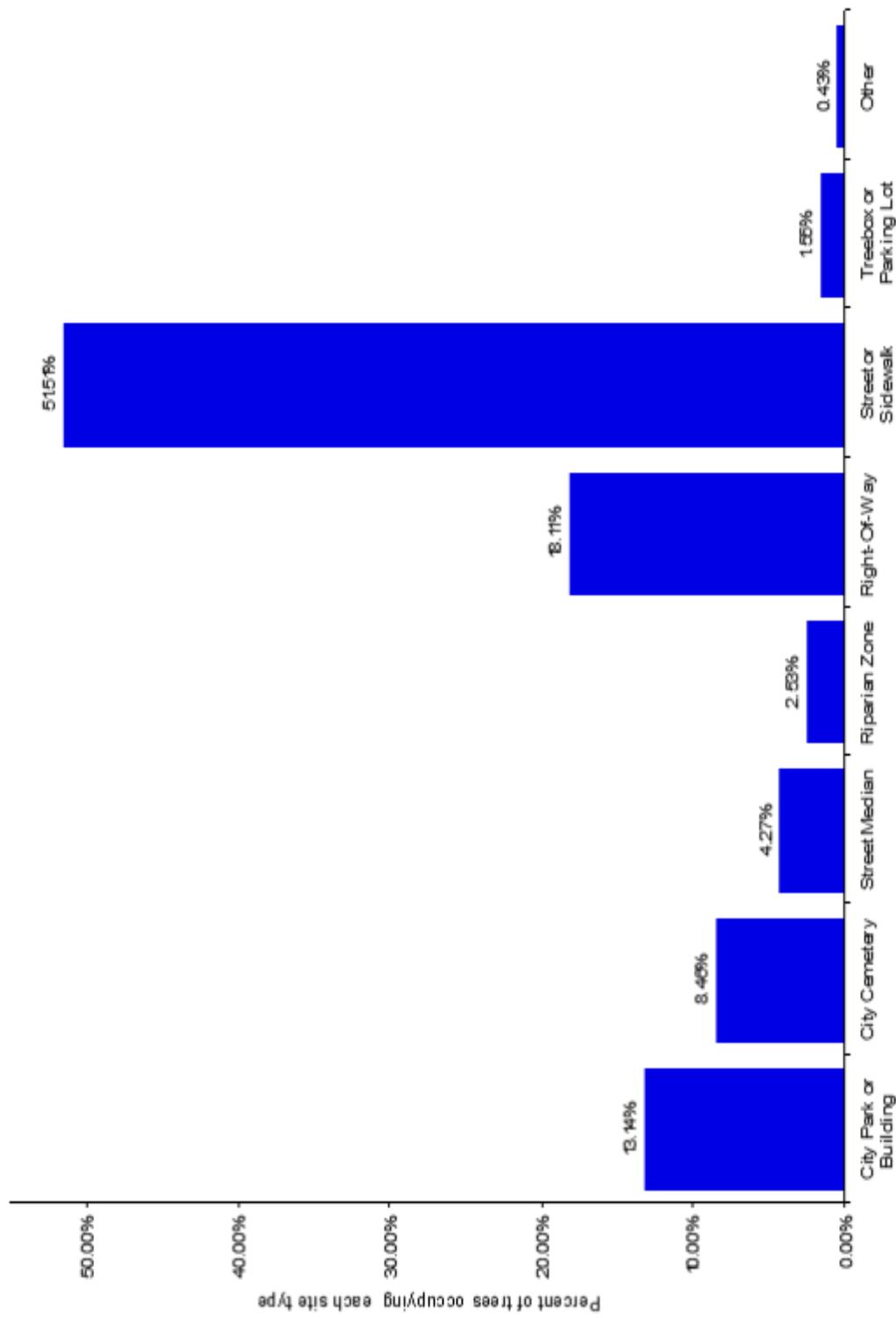
Scientific Name	Common Name	Tree Species Rating Factor	Totals	Percent of All City Managed Trees
<i>Acer ginnala</i>	Ginnala Maple	0.6	37	0.52%
<i>Prunus serotina</i>	Cherry	0.75	36	0.51%
<i>Quercus macrocarpa</i>	Bur Oak	0.8	32	0.45%
<i>Sorbus spp.</i>	European Mountain Ash	0.75	31	0.43%
<i>Pinus sylvestris</i>	Scotch Pine	0.75	25	0.35%
<i>Salix babylonica</i>	Weeping Willow	0.55	25	0.35%
<i>Picea spp</i>	Other Species of Spruce	0.8	24	0.34%
<i>Robinia pseudoacacia</i>	Black Locust	0.65	23	0.32%
<i>Thuja occidentalis</i>	American Arborvitae	0.6	20	0.28%
<i>Populus acuminata</i>	Lanceleaf Cottonwood	0.6	18	0.25%
<i>Fraxinus pennsylvanica</i>	Urbanite Ash	0.75	17	0.24%
<i>Fraxinus spp.</i>	Other Species of Ash	0.75	17	0.22%
<i>Populus pyramidalis</i>	Bolleana Poplar	0.6	16	0.22%
<i>Pinus spp.</i>	Other Species of Pine	0.8	14	0.20%
<i>Pinus mugo</i>	Mugo Pine	0.8	13	0.18%
<i>Aesculus</i>	Buckeye	0.8	12	0.17%
<i>Prunus armenica</i>	Apricot	0.6	12	0.17%
<i>Populus nigra</i>	Lombardy Poplar	0.5	12	0.17%
<i>Quercus rubra</i>	Red Oak	0.8	11	0.15%
<i>Quercus alba</i>	White Oak	0.85	11	0.15%
<i>Pinus strobiformis</i>	Southwestern White Pine	0.75	10	0.14%
<i>Crataegus crussgalli var.inermis</i>	Thornless Cockspur Hawthorn	0.75	9	0.13%
<i>Salix matsudana</i>	Navajo Willow	0.55	8	0.11%
<i>Pinus aristata</i>	Bristlecone Pine	0.8	7	0.10%
<i>Quercus shumardii</i>	Shumard Oak	0.8	6	0.08%
<i>Gymnocladus dioicus</i>	Kentucky Coffeetree	0.75	5	0.07%
<i>Tilia tomentosa</i>	Sterling Silver Linden	0.8	5	0.07%
<i>Acer glabrum</i>	Rocky Mountain Maple	0.6	5	0.07%
<i>Quercus robur</i>	English Oak	0.8	5	0.07%
<i>Quercus spp.</i>	Other Species of Oak	0.8	4	0.06%
<i>Platanus spp.</i>	Sycamore	0.7	4	0.06%
<i>Alanthus altissima</i>	Tree-of-Heaven	0.5	4	0.06%
<i>Salix matsudana</i>	Corkscrew Willow	0.55	4	0.06%
<i>Abies concolor</i>	White fir	0.85	3	0.04%
<i>Acer spp.</i>	Other Species of Maple	0.6	3	0.04%
<i>Tamirix ramosissima</i>	Tamarisk	0	3	0.04%
<i>Cercis canadensis</i>	Western Redbud	0.7	2	0.03%
<i>Ulmus spp.</i>	Other Species of Elm	0.6	1	0.01%
<i>Morus spp</i>	Mulberry	0.75	1	0.01%
Totals			7128	100.00%



Appendix B. The box diagrams illustrate diameter at breast height (DBH) of mature coniferous and deciduous trees at the 25th, 50th (median), and 75 percentiles with the upper and lower whiskers representing maximum and minimum diameters, respectively. Although 75% of all species are less than 20 inches-in-diameter, the median DBH of coniferous species is greater than the DBH of deciduous species indicating the city manages more mature conifers. The maximum value of the deciduous trees far exceeds the conifers due to a few very large cottonwood specimens. The minimum DBH values of 4 inches represents the lower limit of mature trees below which caliper measurements are recorded.

Unit	Total	Excellent (100%)	Good (80%)	Fair (60%)	Poor (40%)	Very Poor (20%)	Dead (0%)	TBD	Plant Sites	Values
1	656	28	491	99	24	7	7	0	59	\$2,440,700
2	1386	70	1133	129	27	12	6	9	48	\$4,555,428
3	204	35	153	12	2	1	0	1	14	\$945,707
4	509	63	363	67	11	2	3	0	28	\$2,734,256
5	207	20	165	11	5	2	2	2	3	\$168,844
6	282	18	237	17	5	1	3	1	0	\$303,498
7	291	1	283	7	0	0	0	0	1	\$136,458
8	783	121	569	41	17	10	24	1	1	\$24,546
9	320	18	277	20	3	1	0	1	0	\$305,917
10	206	0	192	7	4	0	3	0	0	\$28,895
11	393	84	225	30	13	4	36	1	0	\$101,061
12	100	1	67	21	8	0	3	0	0	\$6,952
13	132	0	73	48	3	3	5	0	0	\$3,004
14	214	6	173	15	8	2	4	6	0	\$505,042
15	235	12	206	6	5	2	2	2	0	\$326,292
16	93	3	69	8	1	3	8	1	0	\$21,656
17	45	0	38	7	0	0	0	0	0	\$33,298
18	114	1	105	8	0	0	0	0	0	\$22,018
19	729	57	587	63	16	0	2	4	0	\$2,970,715
20	229	2	194	26	4	0	3	0	0	\$364,423

Appendix C. The total number of trees per management unit, their numbers per respective condition category including trees to-be-determined (TBD), recommended plant sites, and cumulative appraised values by unit.



Appendix D. The percent of city-owned trees that occupy each of the different general site types are shown. The majority of trees managed by city foresters reside along the street or sidewalks of residential and commercial areas. Often these trees are within planter strips specifically established by the city for this purpose.

MAINTENANCE NEEDS	MANAGEMENT UNIT																				TOTAL	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Dead Tree, Remove	17	20	1	9	7	19	1	28	12	3	102	3	8	15	17	10	1	0	11	6	290	
Hazard Prune	2	7	0	1	0	0	0	2	0	0	0	0	1	0	1	0	0	2	0	1	3	20
Clearance Prune	162	298	24	66	23	24	2	73	17	0	13	8	0	38	21	4	17	1	35	52	878	
Form Prune	453	987	137	388	154	203	288	677	253	203	177	87	124	158	181	75	25	112	601	154	5437	
Stake or Fence	0	0	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	1	0	1	6	6
Remove the Staking or Fence	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	7	7
Aerate, Fertilize or Mulch	0	0	0	0	0	0	0	7	5	0	0	0	0	0	0	0	0	0	0	0	12	12
Sample, Stressed Tree	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Treat Insects	9	11	6	10	3	4	3	3	1	0	12	2	2	0	0	0	0	0	26	1	93	93
Treat Disease	2	18	0	3	1	0	0	1	0	0	3	0	1	0	1	0	0	0	1	0	31	31
Plant New Tree	59	48	14	28	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	154	154
No Management Needs	20	66	37	42	22	35	0	3	39	0	91	1	0	4	17	4	0	0	79	14	474	474

Appendix E. A summary of city tree maintenance needs by management unit. Form pruning is the most needed management task throughout Durango. Other pruning tasks, including limb removal for clearance and dead tree removal, are necessary.

Acknowledgements

The City of Durango would like to respectfully thank:

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