

Tree Inventory Findings for Taylorsville City Council

**Presented by
Merrill LeBaron**

Important Information for Members of:

- Community Development
- Long-Range Planning
- Budget Committee
- Economic Development
- Public Safety Committee
- Green Committee
- Parks and Recreation Committee



SLC.gov Urban Forestry – Public Lands Department

Parks Inventoried

• Millrace Park	25 acres	519 trees
• Vista Baseball Park	14 acres	68 trees
• Vista Park	12 acres	221 trees
• T. John Labrum Memorial Park	10 acres	253 trees
• Vista Softball Park	8 acres	83 trees
• Taylorsville City Cemetery	6 acres	116 trees
• Bennion Park	4 acres	20 trees
• Autumn Meadow Park	1 acre	3 trees
• Cabana Park	>1 acre	20 trees
• Azure Meadow Park	>1 acre	12 trees
• <u>Little Confluence Trailhead</u>	>1 acre	52 trees

Approximately 82 acres 1367 trees

250+ Volunteer Hours

>\$50,000 savings

What Benefits Do Trees Provide?

- Cost savings
- Filter pollution & give oxygen
- Carbon sink
- Reduce urban heat island
- Save water
- Reduce noise pollution
- Increase property value
- Assist stormwater management
- Reduce soil erosion
- Visual appeal
- Ecosystem biodiversity for Wildlife and Pollinators
- Increase economic stability
- Provide a sense of community
- Improve mental wellness
- Reduce crime rate

How Long Does A Tree Live?

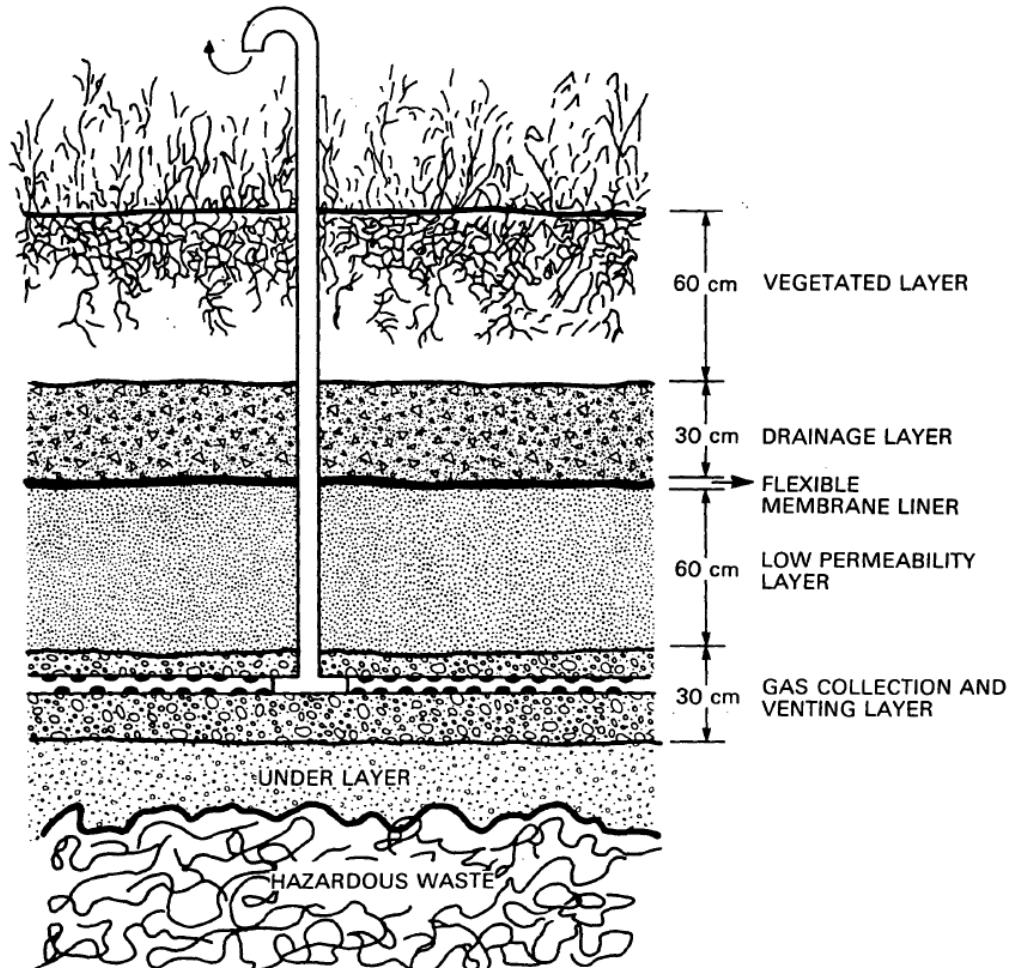
- Kwanzan Cherry, 14-25 years
- Flowering Pear, 15-50 years
- Honeylocust, 60-125 years
- Norway Maple, 60-200 years
- Bur Oak, 200-400 years
- Ginkgo, 1000+ years
- Bristlecone Pine, 5000+ years

Longevity vs short-lived



National Geographic

Landfill Converted to Park



Environmental Protection Agency

Sealing Layer	Vegetative Layer (Topsoil)	3 feet (5 feet)
	Drainage Layer (Sand)	1 foot
	Flexible Membrane Liner	3/4 inch
	Drainage Layer (Sand)	1 foot
	Under Layer / Low Permeability Layer (Compacted Fine Clay)	2 feet
	Gas Vent Layer (Sand)	1 foot
	Fill material	Undefined
	Buried Waste	Undefined

Soil Compaction



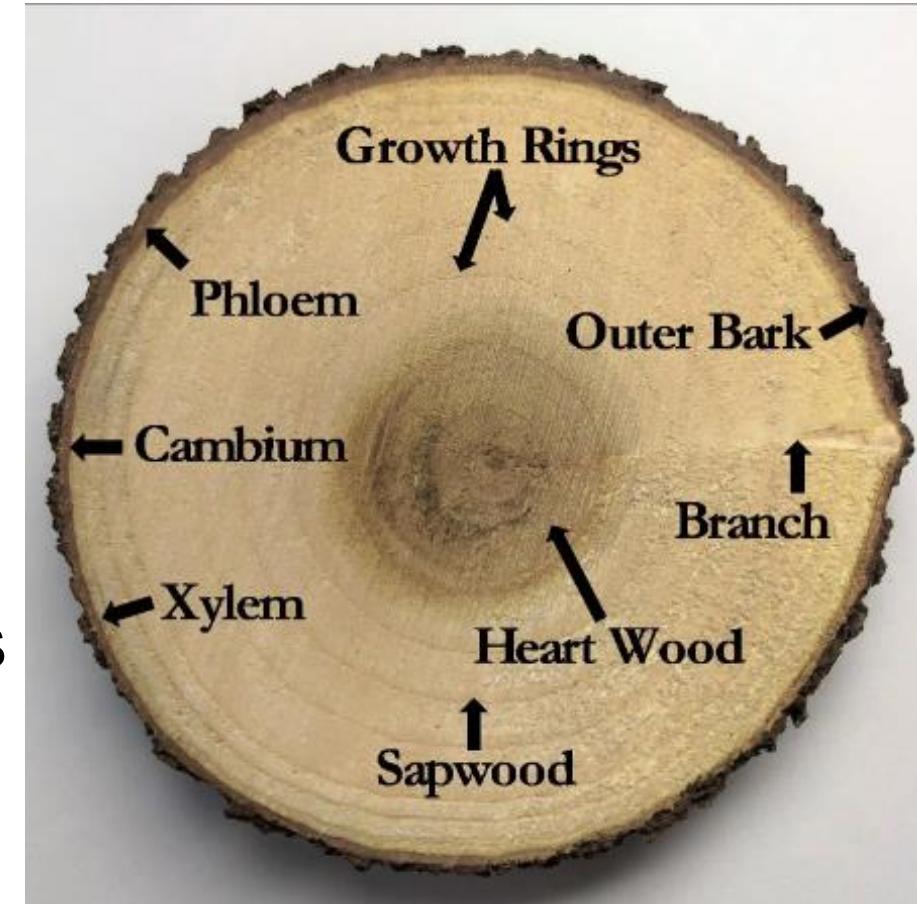
Soil Textures: Clay, Loam, Sand

Weed Barrier Fabric and Rock Mulch

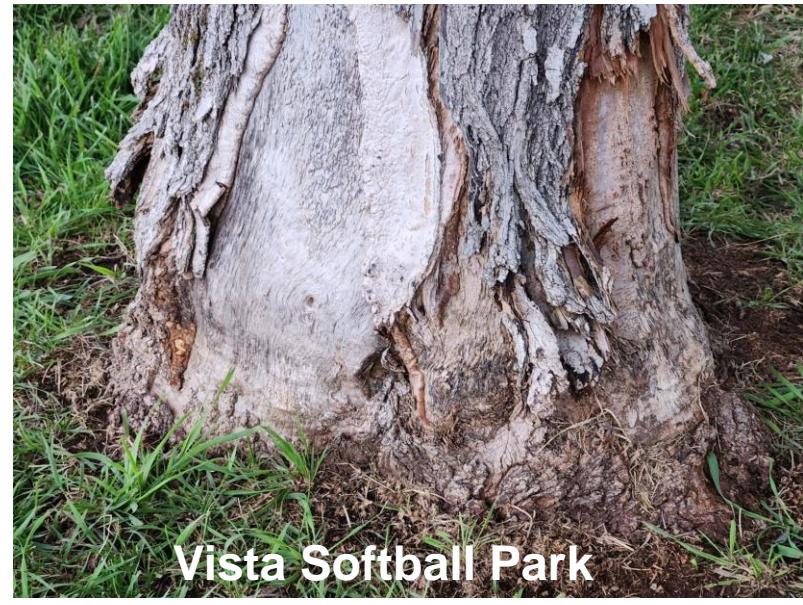


A Tree's Vascular System

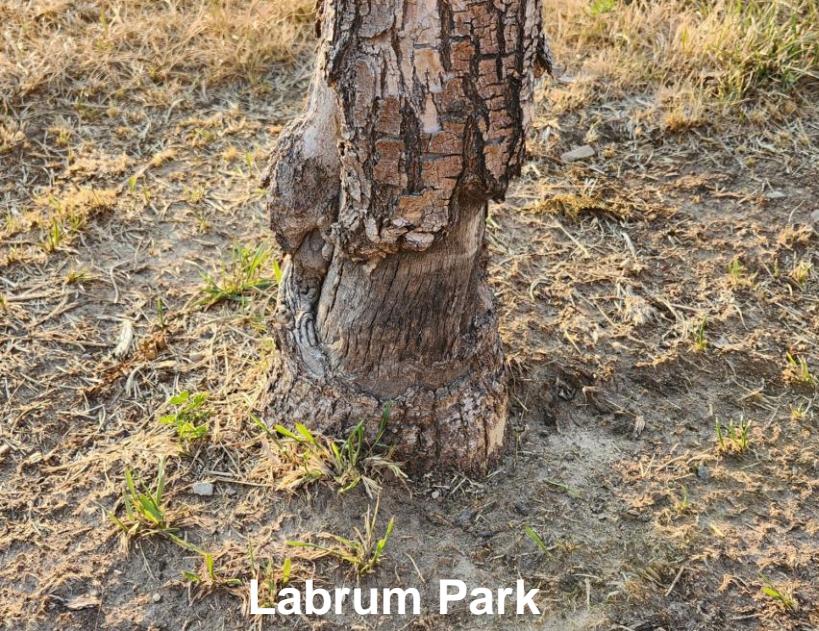
- **Cambium:** a thin sheath of dividing cells.
- **Xylem:** conducts water and minerals upwards.
- **Phloem:** conducts carbohydrates produced in the leaves throughout the tree.



Mower Damage



Vista Softball Park



Labrum Park



Vista Park



Vista Baseball Park



Vista Park



Millrace Park

Parks with Mower Damage

PARK	Approx. Acres	Total # of Trees	# of Trees in Turf	# of Trees with Mower Damage	Mower Damage %
Autumn Meadows Park	>1	3	3	0	0%
Azure Meadows Park	>1	12	12	2	17%
Bennion Park	4	20	20	12	60%
Cabana Park	>1	20	0	n/a	n/a
<i>Little Confluence Trailhead</i>	>1	52	0	n/a	n/a
Millrace Park	25	519	131	107	82%
T. John Labrum Park	10	253	12	10	83%
Taylorsville Cemetery	6	116	93	73	78%
Vista Park	12	221	141	67	48%
Vista Baseball Park	14	68	36	27	75%
Vista Softball Park	8	83	80	39	49%
	82	1367	528	337	64%

Cost of 337 new trees = \$168,500

30 Donated Trees in Vista Park in 2022

40% of donated trees with >50% mower damage

Damage cost = \$6,000



Dead tree due to mower damage



University of Maryland Extension
The planting hole is too small

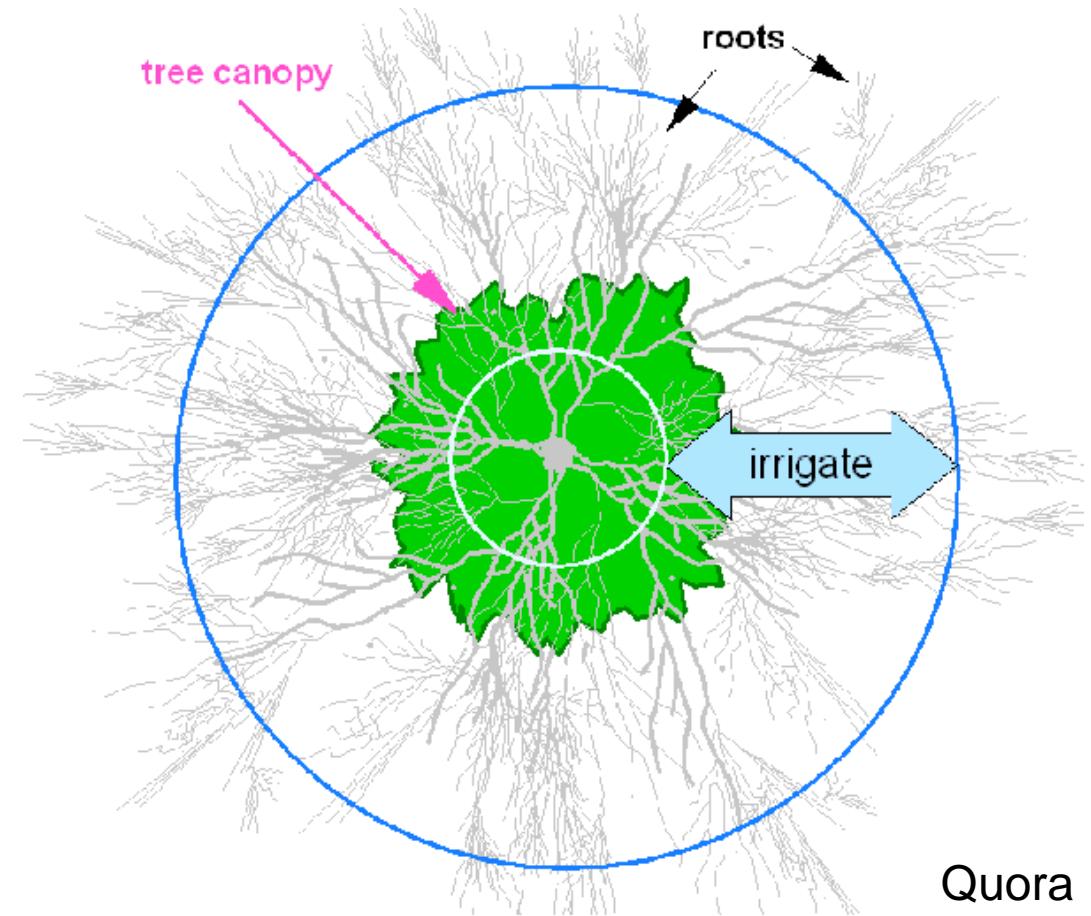


Planted too deep

Understanding Tree Roots

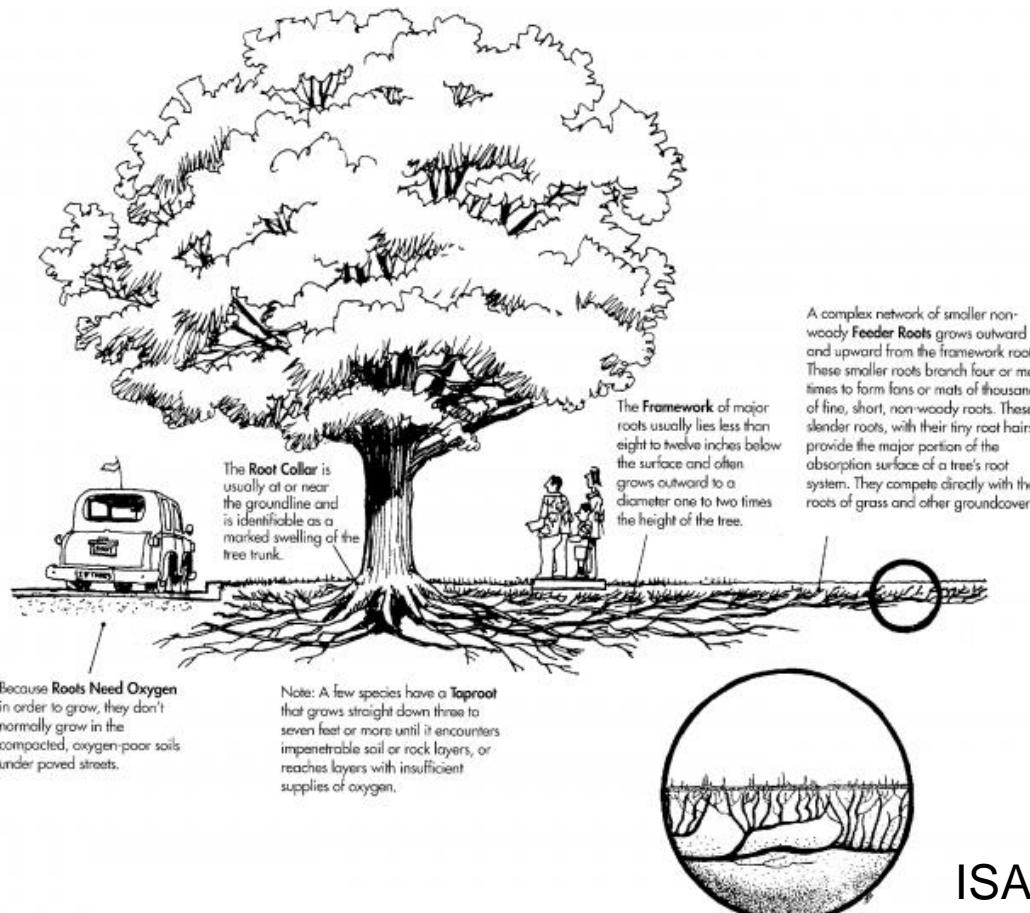


Searle Design Group Landscape Architects

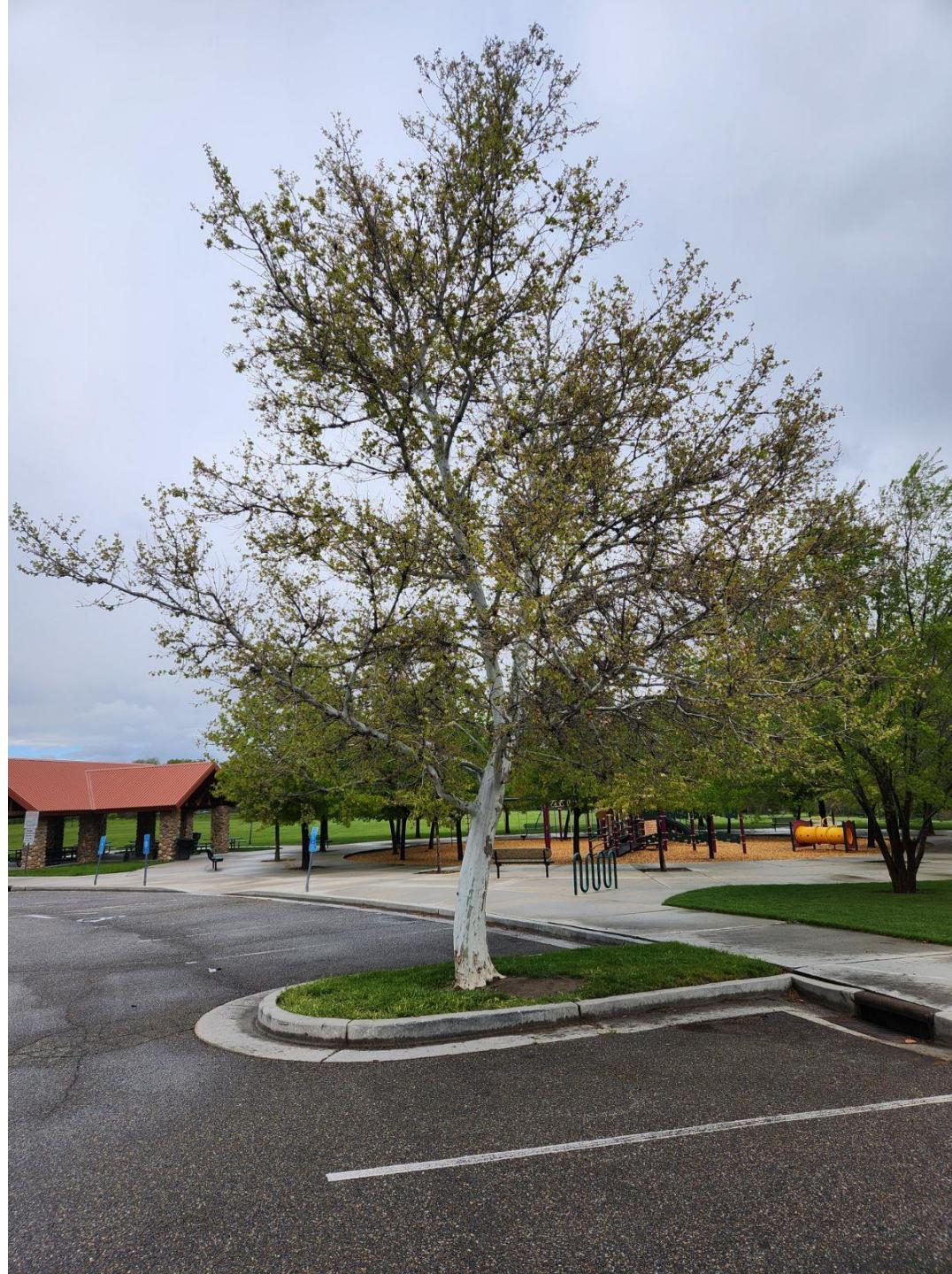


Quora

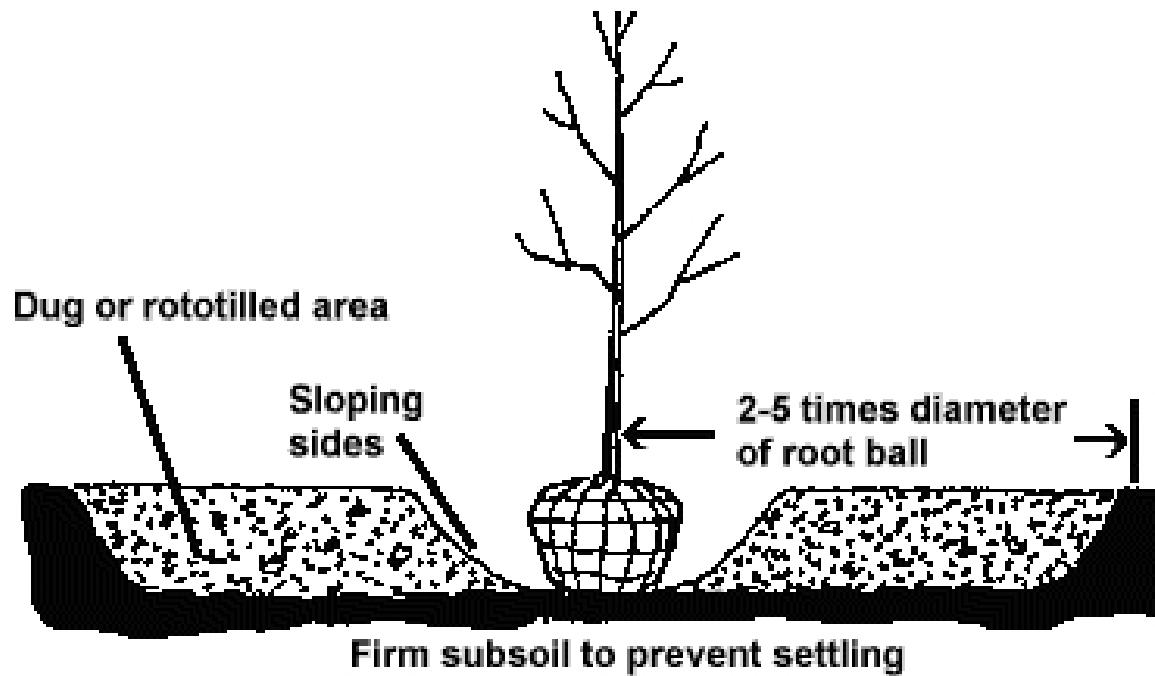
Understanding Tree Roots and Tree Placement



ISA Rocky Mountain Chapter



Planting a Tree For Longevity Requires Tree Planting Specifications



Arbor Day Foundation



Tree Diversity 10-20-30 Formula

A. No more than 10% of any single tree species.

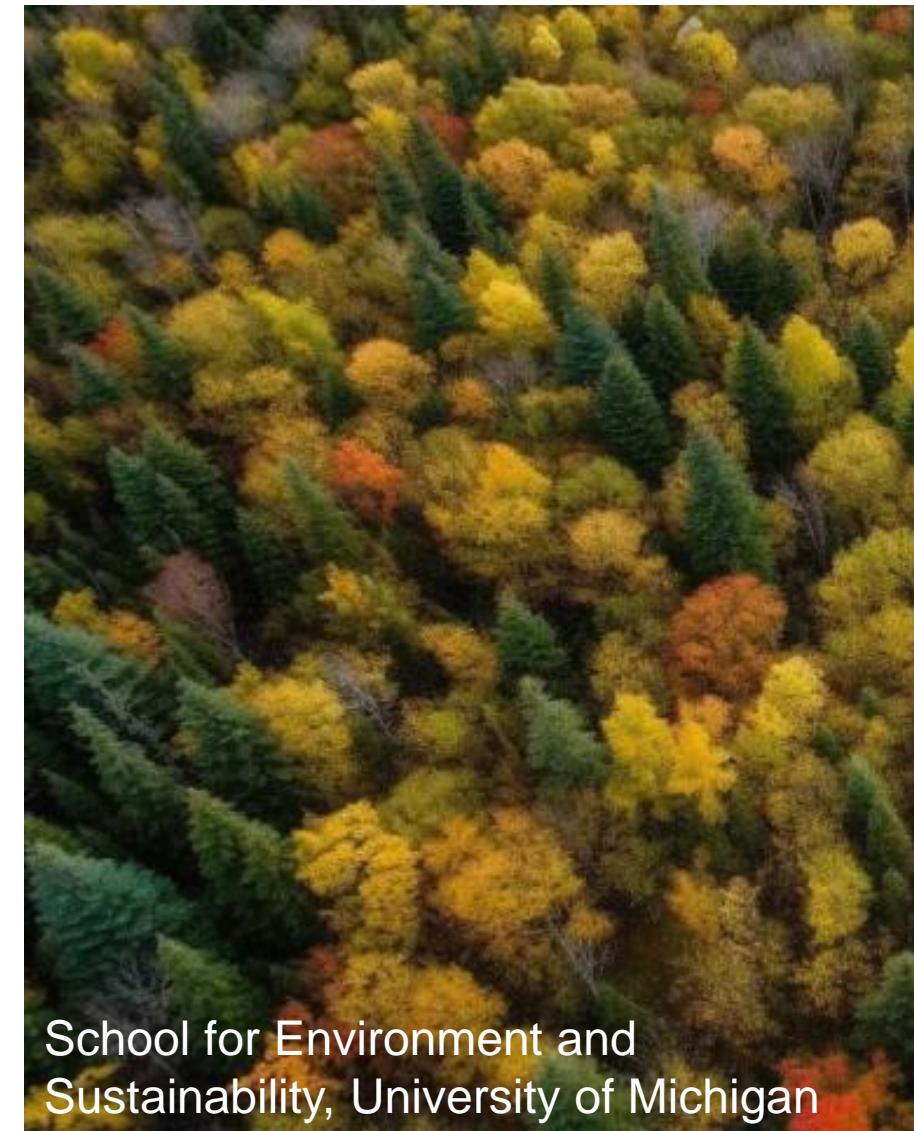
1. Aceraceae	<i>Acer buergerianum</i>	Trident Maple	10 species
2. Aceraceae	<i>Acer campestre</i>	Hedge Maple	10 trees 10% species
3. Betulaceae	<i>Alnus glutinosa</i>	Black Alder	10 trees 10% species
4. Betulaceae	<i>Betula nigra</i>	River Birch	10 trees 10% species
5. Betulaceae	<i>Carpinus betulus</i>	European Hornbeam	10 trees 10% species
6. Cupressaceae	<i>Juniperus chinensis</i>	Chinese Juniper	10 trees 10% species
7. Cupressaceae	<i>Juniperus osteosperma</i>	Utah Juniper	10 trees 10% species
8. Cupressaceae	<i>Thuja occidentalis</i>	Eastern Arborvitae	10 trees 10% species
9. Ebenaceae	<i>Diospyros virginiana</i>	Persimmon	10 trees 10% species
10. Fagaceae	<i>Fagus grandifolia</i>	American Beech	<u>10 trees</u> <u>10% species</u>
			100 trees 100%

B. No more than 20% of species in any tree genus.

		8 genera
1. <i>Acer</i>	20 trees	20% species in tree genus
2. <i>Alnus</i>	10 trees	10% species in tree genus
3. <i>Betula</i>	10 trees	10% species in tree genus
4. <i>Carpinus</i>	10 trees	10% species in tree genus
5. <i>Juniperus</i>	20 trees	20% species in tree genus
6. <i>Thuja</i>	10 trees	10% species in tree genus
7. <i>Diospyros</i>	10 trees	10% species in tree genus
8. <i>Fagus</i>	10 trees	<u>10% species in tree genus</u>
		100%

C. No more than 30% of species in any tree family."

		5 families
1. Aceraceae	20 trees	20% species in tree family
2. Betulaceae	30 trees	30% species in tree family
3. Cupressaceae	30 trees	30% species in tree family
4. Ebenaceae	10 trees	10% species in tree family
5. Fagaceae	10 trees	<u>10% species in tree family</u>
		100%



School for Environment and
Sustainability, University of Michigan

Tree Diversity in the Parks

PARK	Approx. Acres	Total # of Trees	10% SPECIES	20% GENUS	30% FAMILY	DIVERSITY %
Autumn Meadows Park	>1	3	0%	0%	0%	0%
Azure Meadows Park	>1	12	8%	8%	8%	8%
Bennion Park	4	20	30%	75%	100%	30%
Cabana Park	>1	20	0%	16%	0%	0%
<i>Little Confluence Trailhead</i>	>1	52	22%	46%	46%	22%
Millrace Park	25	519	70%	64%	64%	64%
T. John Labrum Park	10	253	33%	33%	33%	33%
Taylorsville Cemetery	6	116	55%	69%	66%	55%
Vista Park	12	221	44%	33%	33%	33%
Vista Baseball Park	14	68	28%	41%	41%	28%
Vista Softball Park	8	83	6%	46%	100%	6%

82 1367

Top 3 Most Diverse Parks: 1) Bennion Park, 2) Millrace Park, 3) Taylorsville Cemetery

Invasive Trees



Greg Blick – Woody Invasives

Siberian elm

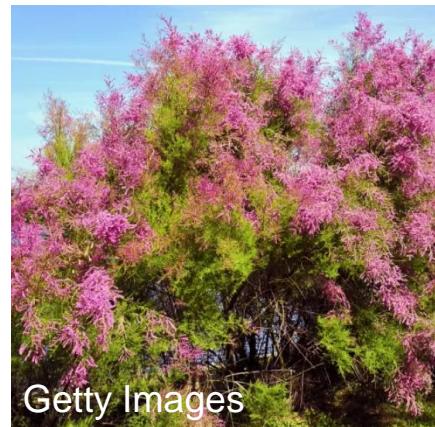


TreeTime

Russian olive



Hobby farms
Tree-of-heaven



Getty Images
Tamarisk (saltcedar)

PARK	Approx. Acres	Total # of Trees	INVASIVE %
Autumn Meadows Park	>1	3	0%
Azure Meadows Park	>1	12	0%
Bennion Park	4	20	0%
Cabana Park	>1	20	0%
<i>Little Confluence Trailhead</i>	>1	52	58%
Millrace Park	25	519	53%
T. John Labrum Park	10	253	74%
Taylorsville Cemetery	6	116	9%
Vista Park	12	221	25%
Vista Baseball Park	14	68	3%
Vista Softball Park	8	83	0%
	82	1367	

What Park Do You Want To Spend The Day At?



PARK	Approx. Acres	Total # of Trees	10% SPECIES	20% GENUS	30% FAMILY	DIVERSITY %	INVASIVE %	# of Trees in Turf	# of Trees with Mower Damage	Mower Damage %
Autumn Meadows Park	>1	3	0%	0%	0%	0%	0%	3	0	0%
Azure Meadows Park	>1	12	8%	8%	8%	8%	0%	12	2	17%
Bennion Park	4	20	30%	75%	100%	30%	0%	20	12	60%
Cabana Park	>1	20	0%	16%	0%	0%	0%	0	n/a	n/a
<i>Little Confluence Trailhead</i>	>1	52	22%	46%	46%	22%	58%	0	n/a	n/a
Millrace Park	25	519	70%	64%	64%	64%	53%	131	107	82%
T. John Labrum Park	10	253	33%	33%	33%	33%	74%	12	10	83%
Taylorsville Cemetery	6	116	55%	69%	66%	55%	9%	93	73	78%
Vista Park	12	221	44%	33%	33%	33%	25%	141	67	48%
Vista Baseball Park	14	68	28%	41%	41%	28%	3%	36	27	75%
Vista Softball Park	8	83	6%	46%	100%	6%	0%	80	39	49%
82 1367			528 337			64%				

Top 3 Parks Most Mower Damage

1. T. John Labrum Park
2. Millrace Park
3. Taylorsville Cemetery

Top 3 Most Tree Diverse Parks

1. Bennion
2. Millrace
3. Taylorsville Cemetery

Top 3 Parks with the Most Invasive Trees

1. T. John Labrum Memorial Park
2. Little Confluence Trailhead
3. Millrace Park