

TREE MANAGEMENT PLAN

Prepared For:

Wildflower Condominiums

Mammoth Lakes, CA 93546

Inspection Date: May 9, 2018

Prepared By:

Rochelle Hair

International Society of Arboriculture (ISA) Certified Arborist WE-9413A
Tree Risk Assessment Qualified (TRAQ)



CA LIC #814516

SCOPE OF WORK:

Following the ISA guidelines and Best Management Practices for a Tree Management Plans. Item(s) agreed upon by client and Eastern Sierra Tree Service are as follows:

1. Create a Tree Maintenance Plan showing recommended tree work to be performed over 5 years, with estimated cost for budgeting purposes for the Condominium Complex known as Wildflower. Property is confined by local roads Arrowhead Drive to the West, Sierra Nevada Road to the South, residential housing to the North, Timberline Condominiums to the East.
2. Provide a plan of scheduled maintained and improvement over next 5 years to maintain public safety, health and aesthetics of trees.
 - a. Priority of tree management plan is as follows:
 1. Reduce risk of injury to persons and property due to tree part and whole tree failure.
 2. Prevention of damage to property from tree and property interference.
 3. Long term health and aesthetics of trees on property.

Special note of concern is

1. Property damage to buildings and hardscape due to tree root and root balls.
2. Increasing solar exposure to buildings containing units 61 to 70 which have ice dam issues in the past.
3. Inspection for Red Turpentine Beetle.

b. Priority of trees to be evaluated for pruning or removal will be as follows:

1. Trees with defects that may cause injury or hazard to property or person.
2. Pruning for defensible space to meet MC#08-03
3. Trees causing or having potential to cause property damage that cannot be corrected by pruning or cabling.
4. Trees showing decline or disease.
5. General placement and density of trees.

3. Including Level 1 (visual inspection) assessment of general tree health of site and identification of trends in arboriculture health.



Level 1 Inspection Includes:

- Identification of occupancy rate for different zones.
- Identification of imminent or probable hazards with area of frequent to continuous occupancy.
- Identify trees requiring Level 2 or 3 assessment.
- Identify trees that should be monitored for future recommendation.
- Recommendations for annual pruning, cabling, and removal of trees to reduce risk of damage, risk to life and property and to improve the health and aesthetics of the trees.
- Identify conditions that may violate fire code.
- Make work recommendations.
- Assist in prioritizing work to be completed.
- Written report.

4. Monitor and report condition of trees on property and other conditions that could affect trees on property

ROUTE OF INSPECTION

This inspection is performed on foot by walking around each building, along each sidewalk, each public area rated with a minimum of occasion occupancy (spa, pool, tennis court, etc.) through the parking areas and around the entire complex along local roads and trails. Inspection routes will begin on the North West corner of each area and shall proceed counter clockwise, heading south, then East, then North and then West.

OCCUPANCY RATES OF POTENTIAL TARGETS

Occupancy rates of targets within target zone influence the likelihood of the tree or tree parts impacting a target. Potential targets have been assigned with the following occupancy rates:

- | | |
|---|-------------------------------|
| 1a. Buildings, structures and installed amenities | Constant |
| 1b. Person in buildings, structures | Occasional to Frequent |
| 1c. Person on sidewalks and entrances | Occasional |
| 1d. Cars parked in parking areas | Frequent |
| 1e. Person using amenities, courts, pools, spas, ect. | Occasional |
| 2. Users of Arrowhead and associated sidewalk | Occasional |
| 3. Users of Sierra Nevada Road and pedestrians | Occasional |



Occupancy Rate Definitions:

Rare: Site not commonly used

Occasional: Sites occupied by potential targets infrequently or irregularly

Frequent: Target is present in target zone a large portion of each day or week

Constant: Target is present in target zone at all time

SITE FACTORS

History of Failures: No whole tree failure is known in the past 20 years. Low instance of tree part failure. Management has been proactive on removing declining trees.

Tree Mortality: No removals in complex in past 10 years due to tree mortality.

Site Changes: None.

Soil Conditions: Decomposed granite, lawn areas are fertilized twice a year, some trees have up to 100% pavement over roots.

Prevailing Winds: North and West

Common Weather: Strong winds from West, Radial wind patterns during storms, heavy snow, high winds not uncommon.

Density: Tree density is high in some areas of the complex.

Environmental

Conditions: The State of California experienced 4 years extreme drought in prior 6 years and 1 year of record breaking snow fall. The recent winter precipitation provided 75% normal moisture. Trees will need multiple years of normal precipitation to recover from drought stress. USFS Forester information has projected up to 50% tree mortality in the Eastern Sierra in the next 15 years.

OVERALL TREE HEALTH AND SPECIES PROFILE

The overall health of the trees at Wildflower is not of concern. Management of the property and Wildflower trees has been excellent for more than a decade and the results are evident, the complex has no whole tree failures or tree mortality for more than 15 years of searchable records.



The majority of the trees on the Wildflower property are Jeffery Pines and observed to be in high vigor (overall tree health) with normal foliage, extended (longer) limbs and dense crown

for the species. Growth rate of the complex trees are known to be faster than average for the species and area.

The above average growth rate of the trees has resulted in longer limbs and denser foliage than usual for Jeffery Pines which increases the need to clear buildings as well as increases risk of limb failure during snow load and high winds. There are annual instances of this occurring at your complex. For this reason, an annual budget for clearing buildings and addressing limbs over high occupancy areas is recommended.

Trees located in higher density groves on the West side of the property may benefit from thinning for the benefit of the trees and help correct ice dam issues. The recommended density for Jeffery Pines is the use of the “diameter plus ½” rule. That is, the average distance in feet from each tree should be the one and a half times the diameter in inches. A 20 inch diameter tree should be 30 feet apart. (Forestry, 2018) The Town of Mammoth and general public opinion often does not agree with these recommendations. Therefore, I recommended that the removal of trees in less desirable locations such as roadways and near building be removed to help increase the solar access of the buildings. The recommended removal will still result in a density higher than recommended for the species but should assist in solar access.

The area of highest concern at Wildflower is the number of trees with high potential to affect foundations and walkways. Many of the trees in this situation are larger trees and have raised footfalls.

No signs of pest infestations were visible at the time of inspection. A specific inspection for Red Turpentine Beetle was requested and at the time of inspection, no signs of infestation were present, with the exception of three pitch tubes found. Two of the three pitch tubes identified had the beetle in the pitch tube showing trees ability to fight off isolated attacks. Below is a diagram and description of evidence for Red Turpentine Beetle.

The most obvious sign of RTB attack is large (up to 2 inches across) reddish globules of pitch (pitch tubes) at the point of entry (Fig. 3). These are located on the lower part of the tree trunk and on the root crown. Very weak trees may not produce much pitch in response to the beetle attack and pitch tubes may be missing. However, accumulations of reddish-brown boring dust will be present at the base of the tree and in bark crevices. Piles of coarse, granular pitch are often present with the boring dust



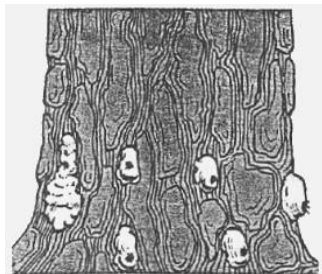


Figure 3 – Affected Area from Red Turpentine Beetle
(Forestry, 2018)

Stressed and weakened trees are the most at risk trees for all boring beetles. Therefore, maintaining healthy, vigorous trees is the best way to prevent problems. During drought, give trees a deep monthly watering. During drought stress it is wise to consider all trees potential targets. Beetle populations can become large enough to be the cause of the stress, allowing for infestation problems. When this cycle is started it becomes a very expensive and sometimes impossible situation to control. The population and infestations around your complex do not warrant alarm, but because of the recent drought and infestations in other areas of town I encourage the board to consider quick removal of trees in later stages of decline to remove beetle breeding habitat.

Individual trees can be protected from Red Turpentine Beetle by applying pesticides. Certain pesticide formulations containing carbaryl, chlorpyrifos, or permethrin have been proven effective at preventing bark beetle attacks when applied to the bark of a tree. Pesticide applied to the lower 6-8 ft (2-2.5 m) of the tree trunk can be used to prevent red turpentine beetle attacks, but realize that other species of bark beetles may pose a threat to the tree. (US Forest Service, 2011) Eastern Sierra Tree Service is not a licensed applicator and can not advise of the application or use of these pesticides in California.



RECOMMENDED WORK AND ESTIMATED BUDGET

SEE ATTACHED WORK SHEETS AND MAP FOR TREE WORK RECOMMENDATIONS.

1. Imminent hazards. No imminent hazards were identified

2. Recommended work 2018		Quote:	\$ 10,944.40
Pruning:	Clean broken limbs, clear limbs near buildings and blocking snow shed.		\$ 3,215.32
Tree Removal:	Remove trees and grind stumps affecting buildings.		\$ 7,726.88

3. Recommended work 2019		Estimated Budget	\$ 9,300.00
Pruning:	Clean broken limbs, clear limbs near buildings. Cable Tree with codominant leaders.		\$ 3,000.00
Tree Removal:	Remove trees and grind stumps with potential to damage buildings and sidewalks. Removes small trees or spurs with poor attachments or poor location. Remove existing stumps in lawn areas.		\$ 6,300.00

4. Recommended work 2020		Estimated Budget	\$ 9,700.00
Pruning:	Clean broken limbs, clear limbs near buildings.		\$ 3,000.00
Tree Removal:	Remove trees and grind stumps leaning near building, remove trees and grind stumps to increase solar access near units 65-68		\$ 6,700.00

5. Recommended work 2021		Estimated Budget	\$ 10,300.00
Pruning:	Clean broken limbs, clear limbs near buildings.		\$ 3,000.00
Tree Removal:	Remove trees and grind stumps to increase solar access to units 61-64		\$ 7,300.00

6. Recommended work 2022		Estimated Budget	\$ 10,000.00
Pruning:	Clean broken limbs, clear limbs near buildings.		\$ 3,000.00
Tree Removal:	Remove trees for potential hardscape damage, and remove additional trees for solar access and desirability.		\$ 7,000.00

7. Ongoing monitoring.

No trees are on the ongoing monitoring list.



REASSESSMENT INTERVAL

Reassessment should occur in approximately one year. Reassessment is also recommended after major weather events with high or gusty winds.

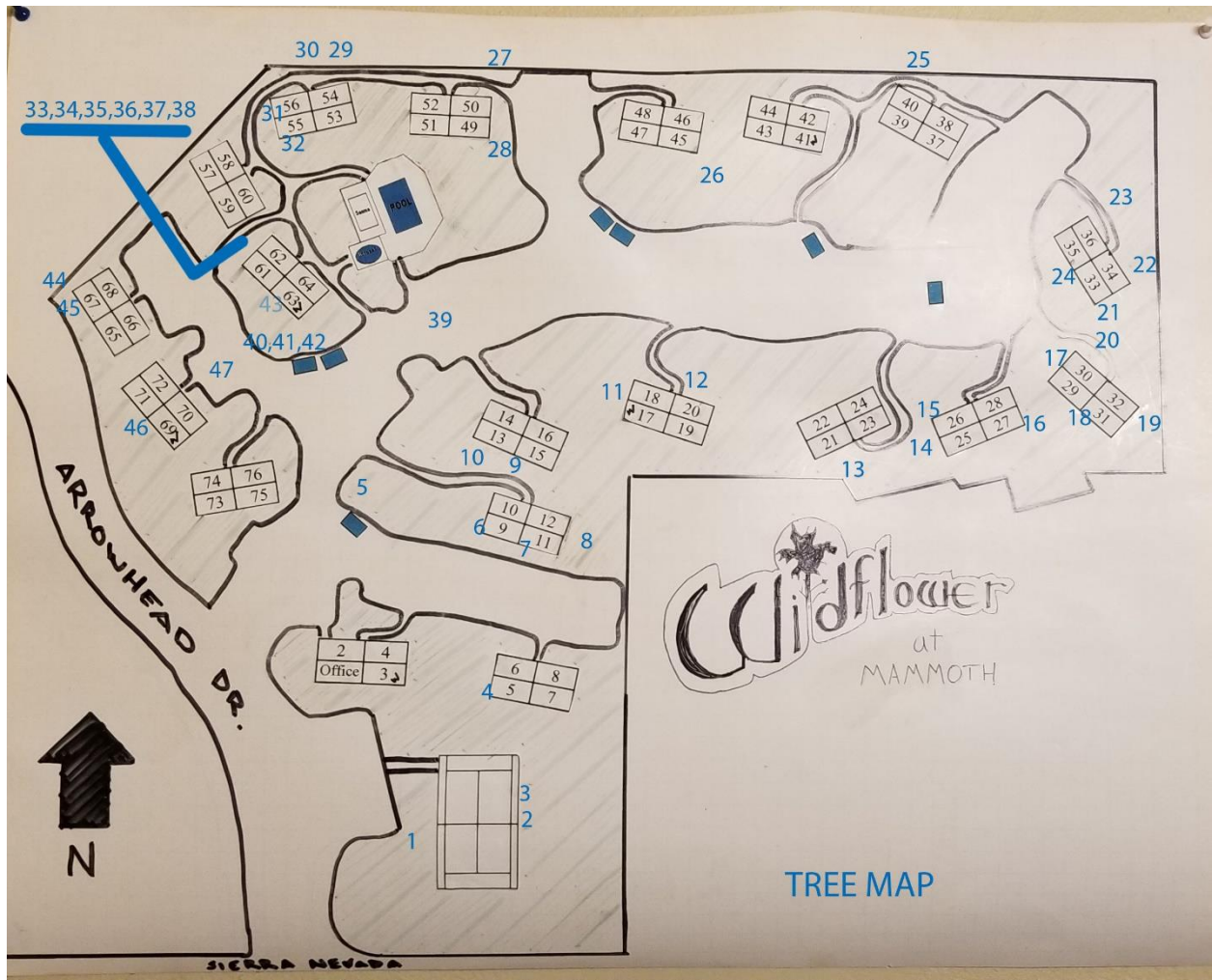
LIMITATIONS OF LEVEL 1 ASSESSMENT:

1. Level 1 Assessment is the most cursory evaluation of trees within a given area. This level of inspection does not evaluate each tree individually and does not provide a 360 degree inspection of each tree. This level of inspection and can miss potential hazards if signs of condition are blocked from view or on unviewed side of the tree. Sounding and root inspection are not part of Level 1 inspection but may be performed within the scope of work at the arborist's discretion.
2. Tree assessment considers only visible conditions within the scope of the assessment.
3. Trees with defects not on the recommended work or monitor list should not be considered free of risk.
4. Tree assessments only represent the condition of the tree and property at the time of the assessment.
5. The time frame for categorization should not be considered a guarantee period.
6. Only the property specified in the scope of the work was assessed, and assessment may be limited to certain defects as described in the scope of work.
7. Any tree, whether it has a visible weakness or not, will fail if the forces applied exceed the strength of the tree or its parts.
8. Subterranean root systems were not observed in this assessment.

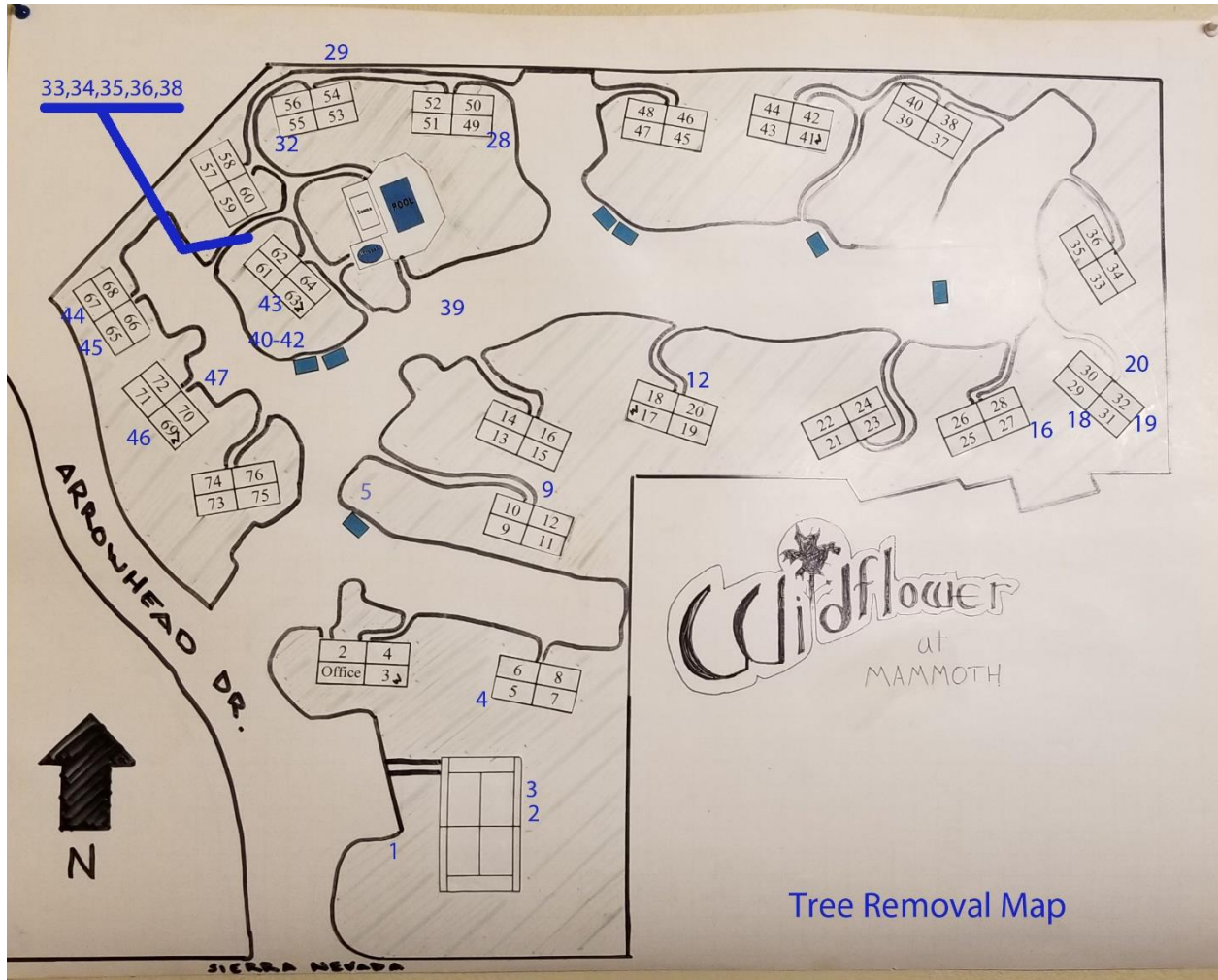
HAZARD ASSESSMENT AND RISK TOLERANCE

A level 1 Assessment is not a Risk or Hazard Assessment. The degree of risk that is acceptable to the land owner, manager, renter and controlling authority varies between individuals and is a personal decision. This assessment is a tool to help individuals and associations plan tree care by prioritizing recommended work. This assessment is not meant to be used a guide to acceptable risk.





TREE REMOVAL MAP



Wildflower Tree Care

2018

Recommended tree work over 5 year period

ID	DBH Species: Location	Tree Condition (Vigor) (Good, Fair, Poor, Dead, Hazard)	Objectives, Specifications	Address by	Price	Stump Grinding	Hauling And Tipping	TOTAL
1	50" Jeffery Pine W of tennis court	G	Remove broken branch in canopy	2018	185.00		22.20	207.20
3	12" Jeffery Pine E of tennis court	G	Clear fence	2018	45.00		5.40	50.40
5	36" Jeffery Pine near road W of #9	F	Remove dead branch 2/3 up and small broken top	2018	225.00		27.00	252.00
6	32" Jeffery Pine SE corner of #9	G	Clear building and chimney	2018	126.00		15.12	141.12
7	40" Jeffery Pine S of #11	G	Clear building and chimney, remove downward growth on NW limb in lower canopy and downward growing branches in lower canopy	2018	250.00		30.00	280.00
8	40" Jeffery Pine E of #11	G	Clear Building	2018	126.00		15.12	141.12
11	18" Jeffery Pine SW corner of #17	G	Clear building	2018	126.00		15.12	141.12
12	50" Jeffery Pine N of #19	G	Clear building	2018	90.00		10.80	100.80
13	42" Jeffery Pine SE corner of #21 on property line	G	Clear building	2018	144.00		17.28	161.28
14	8" Birch E of #23	G	Remove broken top	2018	36.00		4.32	40.32
15	50" Jeffery Pine SW corner of #25	G	Clear building	2018	180.00		21.60	201.60
16	26" Jeffery Pine NE corner of #27	G	Clear building	2018	126.00		15.12	141.12
17	24" Jeffery Pine W of #29	G	Clean broken branch from canopy	2018	120.00		14.40	134.40
18	34" Jeffery Pine S of #29	G	Damage to patio (already replaced), grind stump	2018	2313.00	220.00	303.96	2836.96
19	34" Jeffery Pine E of #31	G	Tree is hitting eve, , grind stump	2018	1700.00	220.00	230.40	2150.40
20	32" Jeffery Pine NW corner of #29 by sidewalk	G	Remove long branch to clear roof for snow removal	2018	90.00		10.80	100.80
21	18" Jeffery Pine SW corner of #34	G	Clear roof line to allow snow shed	2018	80.00		9.60	89.60
22	36" Jeffery Pine E of #33	G	Clear building	2018	150.00		18.00	168.00
23	26" Jeffery Pine NE corner of #35	G	Clear building	2018	80.00		9.60	89.60
24	30" Jeffery Pine SE of #35	G	Clear eves to allow for snow shed	2018	126.00		15.12	141.12
25	28" Jeffery Pine N of #39	G	Clear building	2018	90.00		10.80	100.80
26	36" Jeffery Pine SE corner of #45	G	Clear building	2018	72.00		8.64	80.64
28	40" Jeffery Pine SE corner of #49	G	Remove tree due to raising patio, grind stump	2018	2146.00	300.00	293.52	2739.52
34	18" Jeffery Pine SE of #59	G	Clear building	2018	80.00		9.60	89.60
37	18" Jeffery Pine W of #61	G	Clear building	2018	126.00		15.12	141.12
38	20" Jeffery Pine W of #61	G	Clear building	2018	126.00		15.12	141.12
39	32" Jeffery Pine in road E of pool	F	Clean broken branch from canopy	2018	72.00		8.64	80.64

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Wildflower Tree Care

2019

ID	DBH Species: Location	Tree Condition (Vigor) (Good, Fair, Poor, Dead, Hazard)	Objectives, Specifications	Address by
2	Group of Jeffery Pine Saplings E of tennis court on fence line	G	Remove group of voluteers to prevent damage to fence and court	2019
4	34" Jeffery Pine SW corner of #6	G	Remove to prevent damages from roots, grind stump	2019
20	32" Jeffery Pine NW corner of #29 by sidewalk	G	Damage to sidewalk, grind stump	2019
27	22" Jeffery Pine NE corner of #49	G	Clear building	2019
30	16" Jeffery Pine N of #55	F	Clear roof line	2019
31	44" Jeffery Pine SW corner of #55	G	Cable codominant leader	2019
33	22" Jeffery Pine SE corner of #59	G	Clear building and roof shed	2019
35	24" Jeffery Pine by sidewalk SE of #59	G	Remove tree to make room for more desirerable tree, and potential sidewalk damage and increase solar access, grind stump	2019
36	8"codominant spur W of #61	G	Remove spur, unhealthy growth	2019
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2019
	Stump W of 29		Grind Stump in lawn area	2019
	Stump W of 71/69		Grind Stump in lawn area	2019

Estimated Budget

\$ 9,300.00

Wildflower Tree Care

2020

ID	DBH Species: Location	Tree Condition (Vigor) (Good, Fair, Poor, Dead, Hazard)	Objectives, Specifications	Address by
10	42" Jeffery Pine N of #9/ S of #6	G	Cable or remove N growing developing leader	2020
16	26" Jeffery Pine NE corner of #27	G	Proximity to building, density and lean towards building, , grind stump	2020
44	18" Jeffery Pine codominant spur west of #65	G	Increase solar access and remove spur with included bark	2020
45	18 leaning" Jeffery Pine W of #65	G	Increase solar access and make room for more desirable tree, grind stump	2020
46	40" Jeffery Pine NW of patio of #67	G	Increase solar access, grind stump	2020
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2020

Estimated Budget

\$ 9,700.00

Wildflower Tree Care

2021

ID	DBH Species: Location	Tree Condition (Vigor) (Good, Fair, Poor, Dead, Hazard)	Objectives, Specifications	Address by
32	16" Jeffery Pine SW corner of #55	F	Remove tree to make room for more desirable tree, grind stump	2021
38	20" Jeffery Pine W of #61	G	Remove to make room for more desirable tree, grind stump	2021
40	36" Jeffery Pine SE of #63 in paved area	G	Remove trees in road way to increase solar access to 61-64 and remove trees from paved area, , grind stump	2021
41	30" Jeffery Pine SE of #63 in paved area	G	Remove trees in road way to increase solar access to 61-64 and remove trees from paved area, grind stump	2021
42	26" Jeffery Pine SE of #63 in paved area	G	Remove trees in road way to increase solar access to 61-64 and remove trees from paved area	2021
43	18" Jeffery Pine SW of #61 near building	G	Increase solar access and make room for more desirable tree, grind stump	2021
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2021

Estimated Budget

\$ 10,300.00

Wildflower Tree Care

2022

ID	DBH Species: Location	Tree Condition (Vigor) (Good, Fair, Poor, Dead, Hazard)	Objectives, Specifications	Address by
9	30" Jeffery Pine N of #9	G	Remove tree when sidewalk is replaced, grind stump	2022
12	50" Jeffery Pine N of #19	G	Remove tree when sidewalk is replaced, grind stump	2022
29	14" Jeffery Pine N of #53	P	Tree is in decline for several years, grind stump	2022
34	18" Jeffery Pine SE of #59	G	Remove to make room for more desirable tree and increase solar access, grind stump	2022
39	32" Jeffery Pine in road E of pool	F	Clear building	2022
47	18" Jeffery Pine N of #71 by road	G	Increase solar access, grind stump	2022
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2022

Estimated Budget

\$ 10,000.00

Wildflower Tree Care

Recommended tree work over 5 year period

ID	DBH Species: Location	Tree Condition (Vigor) (Good.Fair.Poor.Dead.Hazard)	Objectives, Specifications	Address
1	50" Jeffery Pine W of tennis court	G	Remove broken branch in canopy	2018
2	Group of Jeffery Pine Saplings E of tennis court on fence line	G	Remove group of voluteers to prevent damage to fence and court	2019
3	12" Jeffery Pine E of tennis court	G	Clear fence	2018
4	34" Jeffery Pine SW corner of #6	G	Remove to prevent damages from roots, grind stump	2019
5	36" Jeffery Pine near road W of #9	F	Remove dead branch 2/3 up and small broken top	2018
6	32" Jeffery Pine SE corner of #9	G	Clear building and chimney	2018
7	40" Jeffery Pine S of #11	G	Clear building and chimney, remove downward growth on NW limb in lower canopy and downward growing branches in lower canopy	2018
8	40" Jeffery Pine E of #11	G	Clear Building	2018
9	30" Jeffery Pine N of #9	G	Remove tree when sidewalk is replaced, grind stump	2022
10	42" Jeffery Pine N of #9/ S of #6	G	Cable or remove N growing developing leader	2020
11	18" Jeffery Pine SW corner of #17	G	Clear building	2018
12	50" Jeffery Pine N of #19	G	Remove tree when sidewalk is replaced, grind stump	2022
12	50" Jeffery Pine N of #19	G	Clear building	2018
13	42" Jeffery Pine SE corner of #21 on property line	G	Clear building	2018
14	8" Birch E of #23	G	Remove broken top	2018
15	50" Jeffery Pine SW corner of #25	G	Clear building	2018
16	26" Jeffery Pine NE corner of #27	G	Proximity to building, density and lean towards building, , grind stump	2020
16	26" Jeffery Pine NE corner of #27	G	Clear building	2018
17	24" Jeffery Pine W of #29	G	Clean broken branch from canopy	2018
18	34" Jeffery Pine S of #29	G	Damage to patio (already replaced), grind stump	2018
19	34" Jeffery Pine E of #31	G	Tree is hitting eve, , grind stump	2018
20	32" Jeffery Pine NW corner of #29 by sidewalk	G	Damage to sidewalk, grind stump	2019
20	32" Jeffery Pine NW corner of #29 by sidewalk	G	Remove long branch to clear roof for snow removal	2018
21	18" Jeffery Pine SW corner of #34	G	Clear roof line to allow snow shed	2018
22	36" Jeffery Pine E of #33	G	Clear building	2018
23	26" Jeffery Pine NE corner of #35	G	Clear building	2018
24	30" Jeffery Pine SE of #35	G	Clear eves to allow for snow shed	2018
25	28" Jeffery Pine N of #39	G	Clear building	2018
26	36" Jeffery Pine SE corner of #45	G	Clear building	2018
27	22" Jeffery Pine NE corner of #49	G	Clear building	2019

ID	DBH Species: Location	Tree Condition (Vigor) (Good.Fair.Poor.Dead.Hazard)	Objectives, Specifications	Address
28	40" Jeffery Pine SE corner of #49	G	Remove tree due to raising patio, grind stump	2018
29	14" Jeffery Pine N of #53	P	Tree is in decline for several years, grind stump	2022
30	16" Jeffery Pine N of #55	F	Clear roof line	2019
31	44" Jeffery Pine SW corner of #55	G	Cable codominant leader	2019
32	16" Jeffery Pine SW corner of #55	F	Remove tree to make room for more desirable tree, grind stump	2021
33	22" Jeffery Pine SE corner of #59	G	Clear building and roof shed	2019
34	18" Jeffery Pine SE of #59	G	Clear building	2018
34	18" Jeffery Pine SE of #59	G	Remove to make room for more desirable tree and increase solar access, grind stump	2022
35	24" Jeffery Pine by sidewalk SE of #59	G	Remove tree to make room for more desirable tree, and potential sidewalk damage and increase solar access, grind stump	2019
36	8" codominant spur W of #61	G	Remove spur, unhealthy growth	2019
37	18" Jeffery Pine W of #61	G	Clear building	2018
38	20" Jeffery Pine W of #61	G	Clear building	2018
38	20" Jeffery Pine W of #61	G	Remove to make room for more desirable tree, grind stump	2021
39	32" Jeffery Pine in road E of pool	F	Clean broken branch from canopy	2018
39	32" Jeffery Pine in road E of pool	F	Clear building	2022
40	36" Jeffery Pine SE of #63 in paved area	G	Remove trees in road way to increase solar access to 61-64 and remove trees from paved area, , grind stump	2021
41	30" Jeffery Pine SE of #63 in paved area	G	Remove trees in road way to increase solar access to 61-64 and remove trees from paved area, grind stump	2021
42	26" Jeffery Pine SE of #63 in paved area	G	Remove trees in road way to increase solar access to 61-64 and remove trees from paved area	2021
43	18" Jeffery Pine SW of #61 near building	G	Increase solar access and make room for more desirable tree, grind stump	2021
44	18" Jeffery Pine codominant spur west of #65	G	increase solar access and remove spur with included bark	2020
45	18 leaning" Jeffery Pine W of #65	G	Increase solar access and make room for more desirable tree, grind stump	2020
46	40" Jeffery Pine NW of patio of #67	G	Increase solar access, grind stump	2020
47	18" Jeffery Pine N of #71 by road	G	Increase solar access, grind stump	2022
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2019
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2020
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2021
	Annual Pruning and Cleaning		Annual Pruning and Cleaning	2022
	Stump W of 29		Grind Stump in lawn area	2019
	Stump W of 71/69		Grind Stump in lawn area	2019