

Tahoe Donner Forestry

January 31, 2020



Forestry Department Mission

- Maintain a healthy, resilient forest
- Reduce the effects of a catastrophic wildland fire to the property

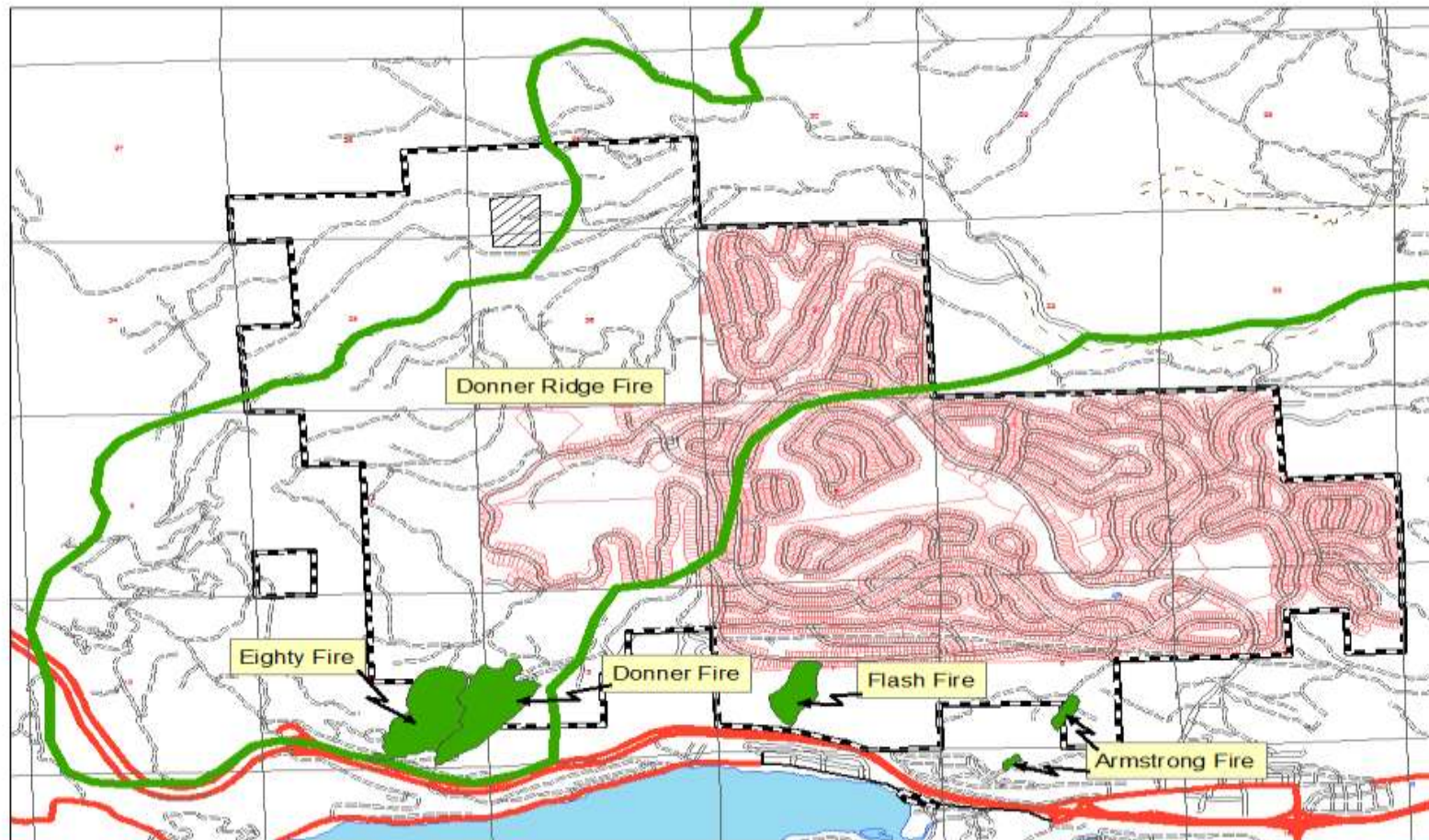
Management Guidelines

- Return area to pre-settlement era vegetation conditions
- Looking at computer programs that simulate fire behavior:
 - Fire moves 3 to 4 times faster through mature brush than an area of younger, more sparse vegetation
 - Fire moves 4 to 5 times faster through a natural forest than a one that has been thinned with some control of the ground fuels (managed forest)
 - Fire moves 32 times faster through mature brush than a managed forest
- Utilizing the U. S. Forest Service (SPLATS) Strategically Placed Landscape Treatments in areas of concern of wildfire reaching the developed portion
- Utilizing the U. S. Forest Service GTR-220 technical report to manage property where wildfire typically will not reach the development
- Apply past fire history and patterns to fuel reduction efforts
- Provide a safe transportation system for use by fire fighting agencies

Local Fire History

- Carol Rice of Wild Land Resource Management completed a fire history report for Donner State Park that showed a recurrence of fire on average every 9.1 years between 1635 and 1990
- Donner Ridge Fire 1960
44,800 acres , burned approximately 3,200 acres in TDA
- Flash Fire 1977
30 acres
- Armstrong Fire 1994
10 acres
- Donner Fire 2003
78 acres
- “80” Fire 2007
85 acres

Recent Fire History - 1960 to Present



Donner Ridge Fire 1960



Donner Fire 2003



“80” and Donner Fire Scars



“80” Fire 2007

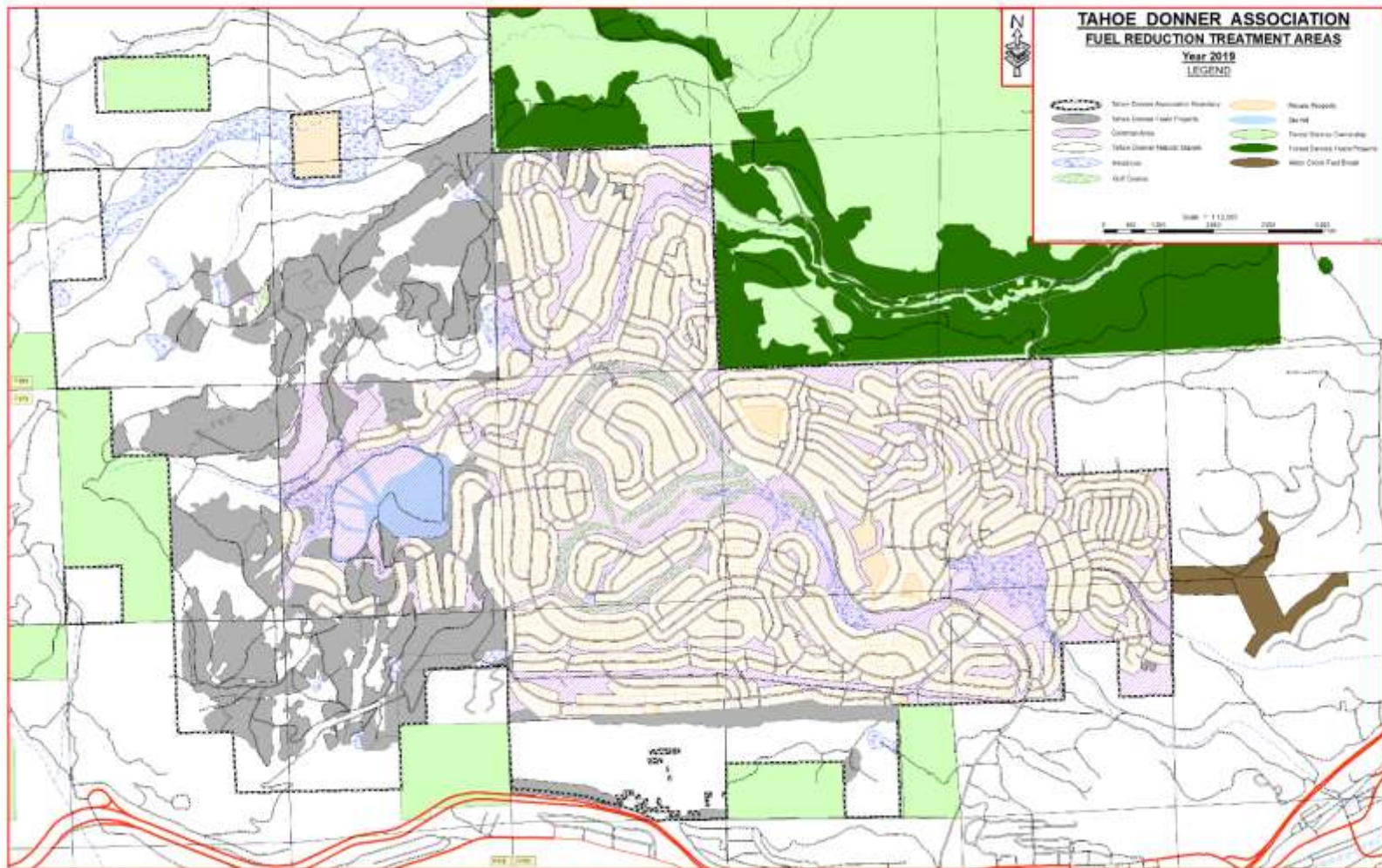


Management Priority Areas

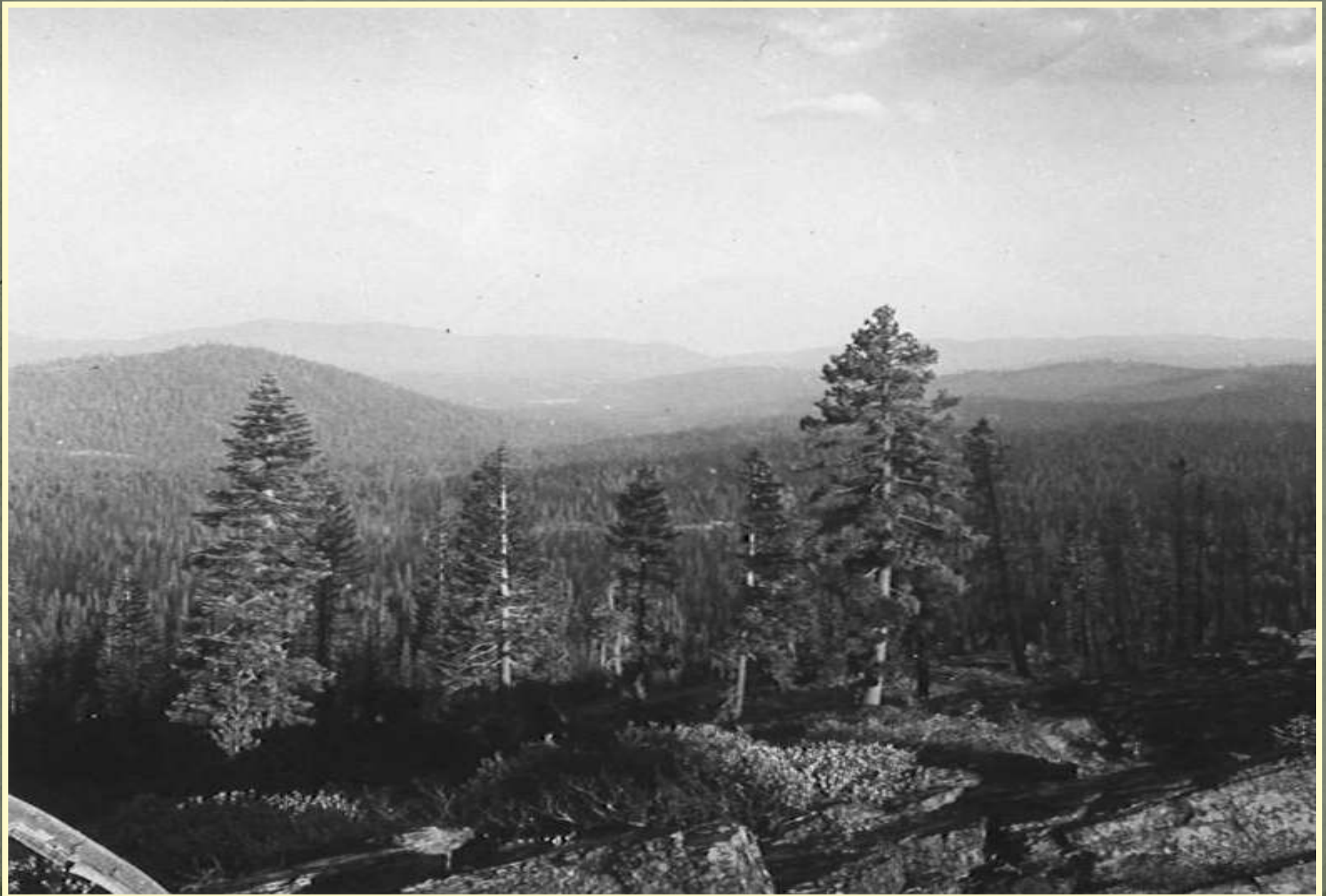
Create fuel reduction and managed forest zones within:

1. Areas around homes (common areas).
2. Southwestern border areas – prevailing winds out of the southwest
3. Other property locations where predicted fire could reach the development
 - Areas along access routes in the forest (system roads).
 - Areas of suitable topography and soil type.

Fuel Modification Areas Around Tahoe Donner



Area before 1960



Area Today



Desired Future Condition Shaded Fuel Break in a Pine Forest



Desired Future Condition Shaded Fuel Break in a Fir Forest



Forestry Department Guiding Documents

- Fire Safety Master Plan 1994
- Forest Management Plan 1995, revised 2013
- A section of the Forest Management Plan contains the 2019 to 2023 5-year budget. This is a budget based operational plan.

Forestry 5-Year Management Plan

The 5-Year Plan breaks the property down into different treatment units:

- Common Area
 1. 1,341 total acres, 801 acres under management
 2. 6 year maintenance rotation or manage 133 acres per year
- Plantation/Fuel Breaks (site prep and plant)
 1. 541 acres
 2. 15 to 20 year maintenance rotation
- Fuel Breaks (naturally re-forested)
 1. 701 acres
 2. 15 to 20 year maintenance rotation
- Natural Stands, not under a treatment regime 2,641 acres

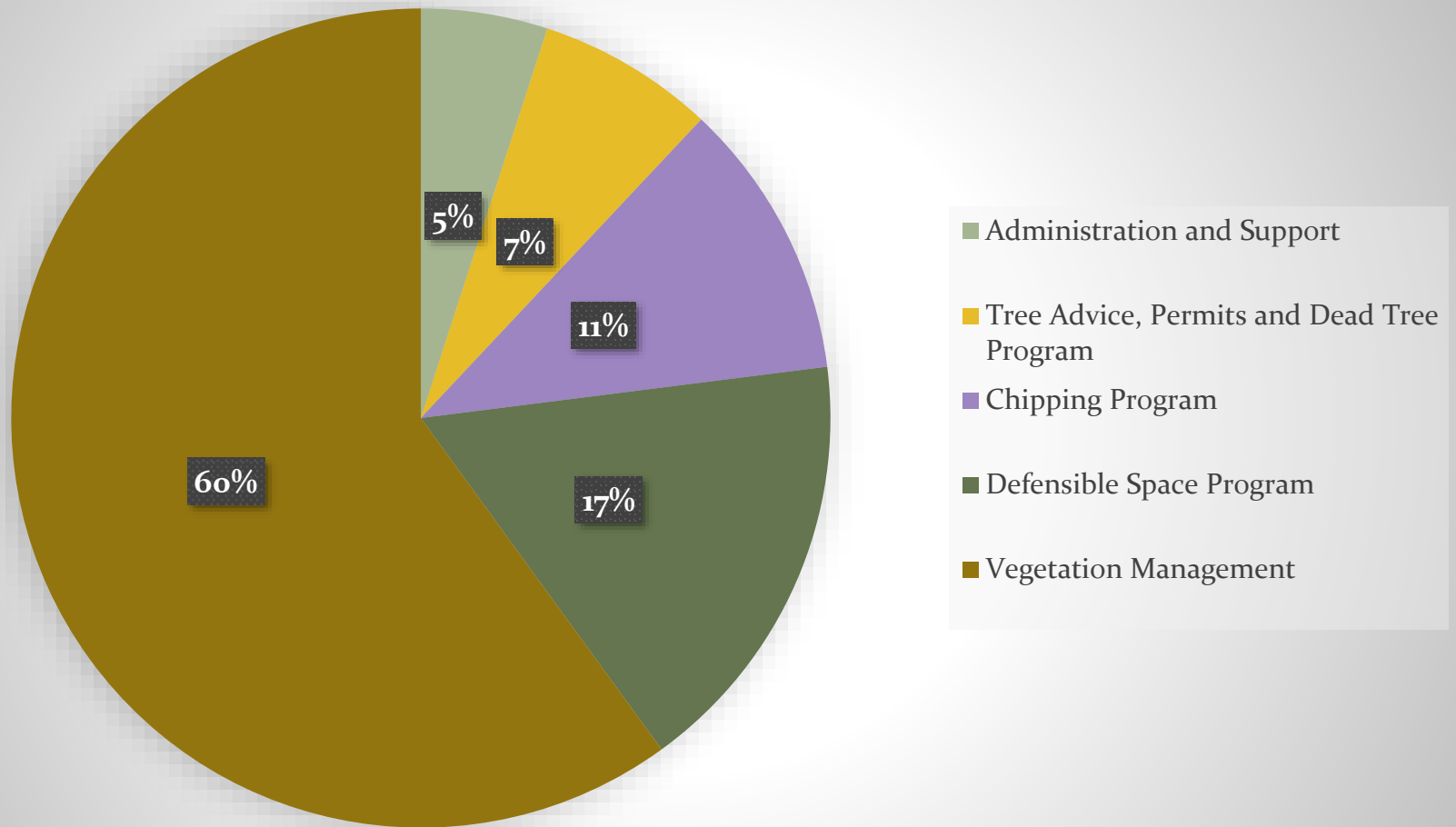
Management Objectives Found in the Forest Management Plan

- Increase the level of vegetation and fuels management to help lessen the effects of a wildfire on the property
- Maintain a “Healthy Forest” (looking forward to strategic guidance – Land Management Plan)
- Increase the recreational opportunities within the open space of the property
- Improve the wildlife and fish habitats throughout the property.
- Manage noxious weeds

Management of the Community Forest

- Forestry department programs
 - Private lot forest management
 - Forest health advice
 - Tree removal permits
 - Dead tree program
 - Private lot defensible space program
 - 6-year defensible space program
 - Homeowners insurance inspections
 - Change of ownership defensible space inspections (TFPD)
 - Property owner chipping program
 - Vegetation management on TDA property
 - Common area
 - Plantation/Fuel breaks
 - Fuel breaks
 - Natural stands
 - Firewood, chip and timber sales
 - Noxious weed abatement

Forestry Department Operational Budget for 2020 \$1,478,000



Administration and Support

- \$77,649 or 5% of the budget
 - 15 % of the forester's time
 - 10 % of a assistant forester's time
 - 5% of the office associate's time
 - Facility and utility support

Private property Tree Advice, Tree Removal Permits and the Dead Tree Program

- \$98,695 or 7% of the budget
 - 15% of the office associate's time
 - 10% of the forester's time
 - 40% of a forestry assistant's time
 - 20% of the other forestry assistant's time
 - 50 % of the 3 forestry aid's time
 - Transportation
 - Supplies

Tree Removal Permits/ Tree Advice



Dead Tree Program



Defensible Space Program

- \$248,010 or 17% of the budget
 - Includes 6-year inspection program
 - Out-of-cycle inspections
 - Homeowner's insurance inspections
 - Change of Ownership Inspections for Truckee Fire Protection District's ordinance
- 65% of the office associate's time
- 40% of the forester's time
- 20% of a assistant forester's time
- 10% of the other assistant forester's time
- 30% of the 3 forestry aid's time
- 100% of 3 defensible space inspector's time
- Transportation
- Supplies

Defensible Space Program 2019 to 2024



Private Lot Defensible Space



Chipping Program

- \$158,575 or 11% of the forestry budget
 - 15% of the office associate's time
 - \$109,518 of forestry crew wages
 - Transportation, fuel and maintenance
 - \$15,000 net loss with re-grind and haul over chip revenue

Chipping



Re-grind and Haul of Chips



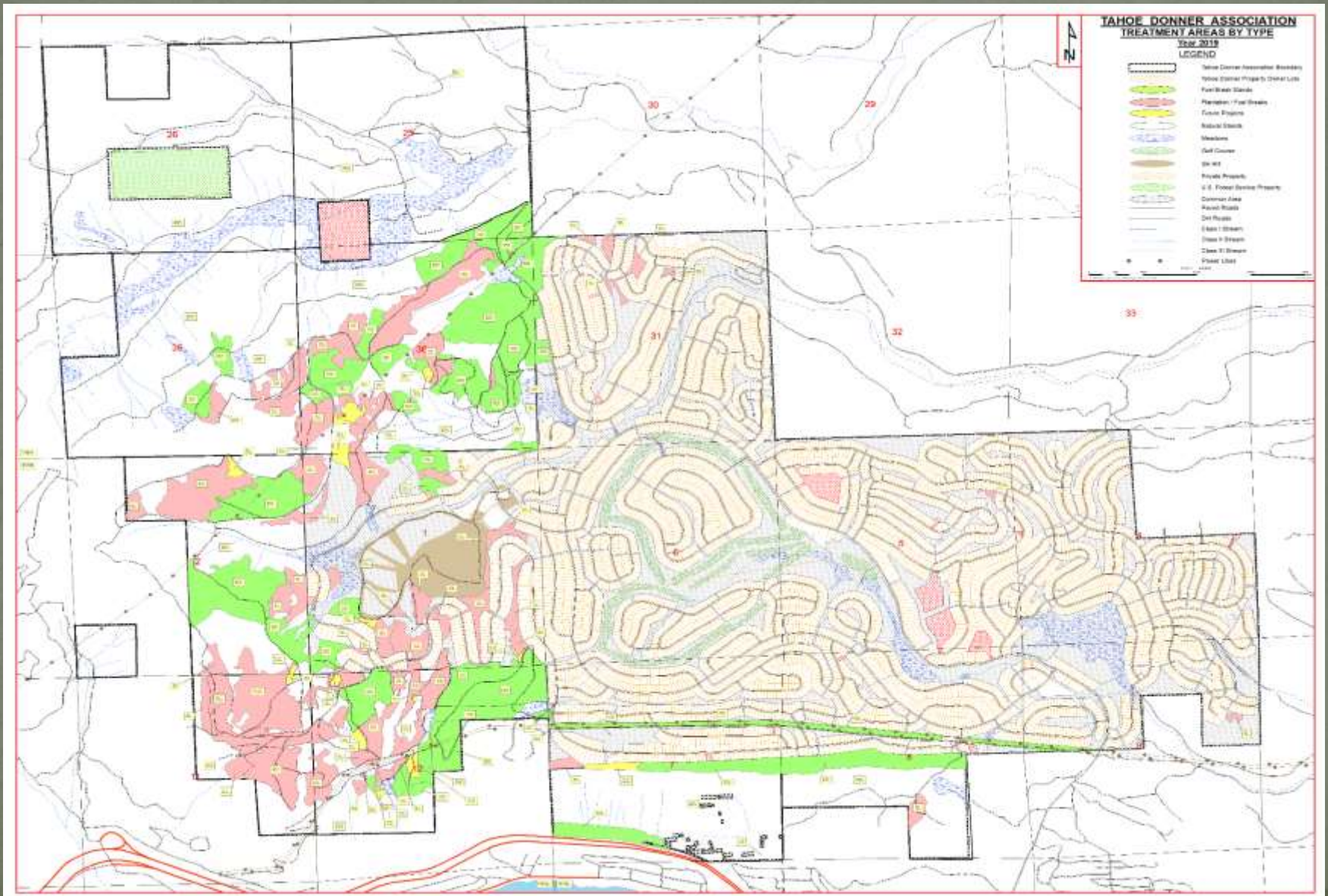
Vegetation Management

- \$881,370 or 60% of the forestry budget
 - 35% of the forester's time
 - 30% of a forestry assistant's time
 - 70% of the other forestry assistant's time
 - 20% of the 3 forestry aid's time
 - \$262,174 of forestry crew wages
 - \$464,560 in contract work
 - Transportation
 - Additional \$121,882 in capital projects contracts

Plantation/Fuel Break System



Plantation/Fuel Breaks vs. Fuel Breaks



Site Preparation by Mastication (before)

Initial entry \$800 to \$1,200/acre
Secondary entry \$700 to 950/acre



Site Preparation by Mastication (after)



Site Preparation by Tractor Piling



Site Preparation Burning of Tractor Piles



Cone Collection



Tree Planting

Cost of 1-year old trees/acre \$152

Cost of 2-year old trees/acre \$604

Cost of tree planting \$200 to \$300/acre



Seedlings



5-Year Old Plantation



8 Year Old Plantation with Competition



Spraying \$250 to \$300/acre

8 Year Old Plantation After Herbicide Treatment



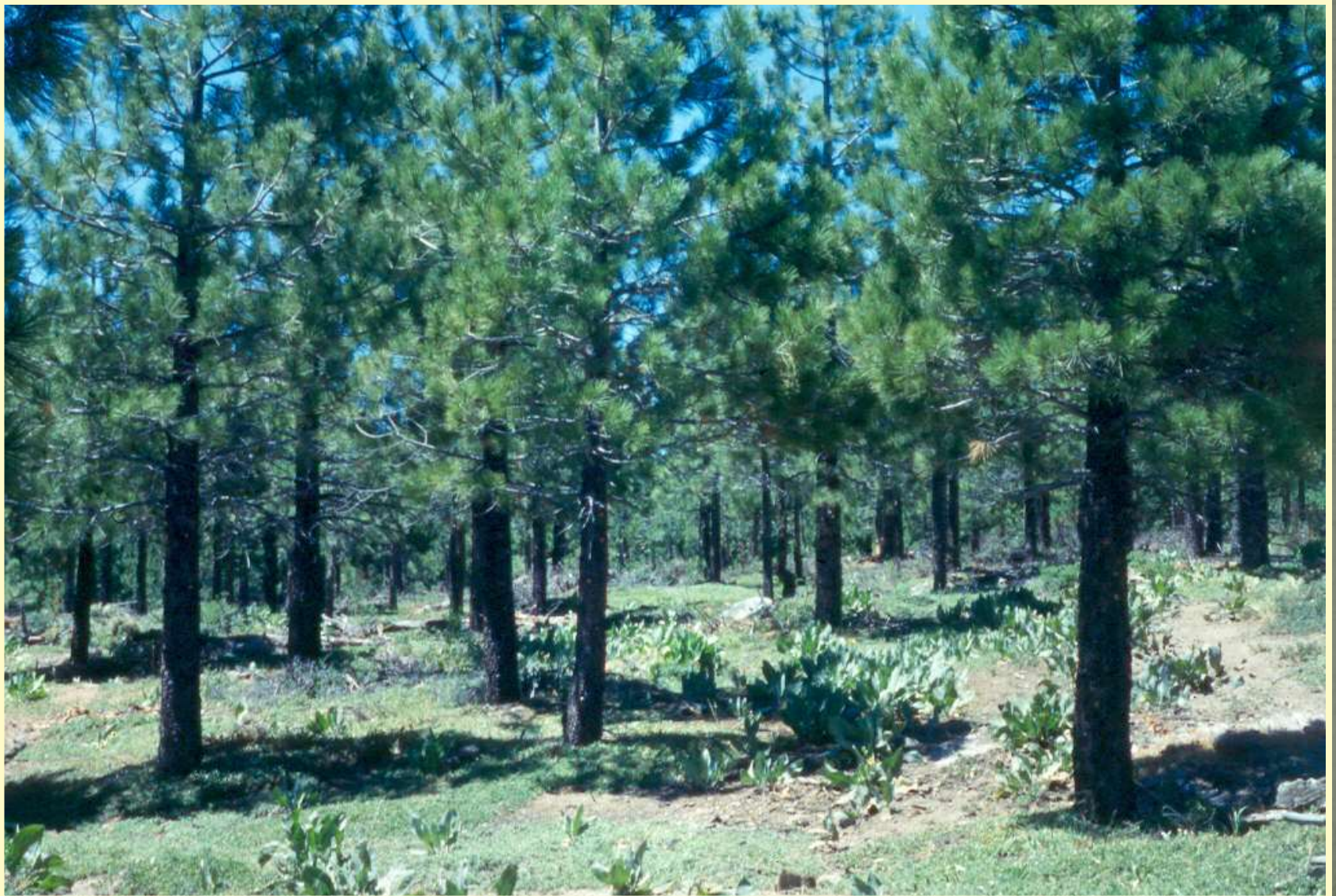
55 Year Old Stand After Herbicide Treatment



8 Year Old Trees After Herbicide Treatment & Mastication of Re-Sprouted Brush



40 Year Old Forest



Forest Thinning (before)



Forest Thinning (during)



Naturally Re-forested 55 Year Old Trees



Forest Thinning (after)



Forest Thinning (after)



Forest before Treatment



Completed Fuel Break



Forest before Treatment



Completed Fuel Break



Common Area Parcel before Treatment



Common Area Parcel after Treatment



Common area work



Common area work \$1,800 to \$20,000/acre

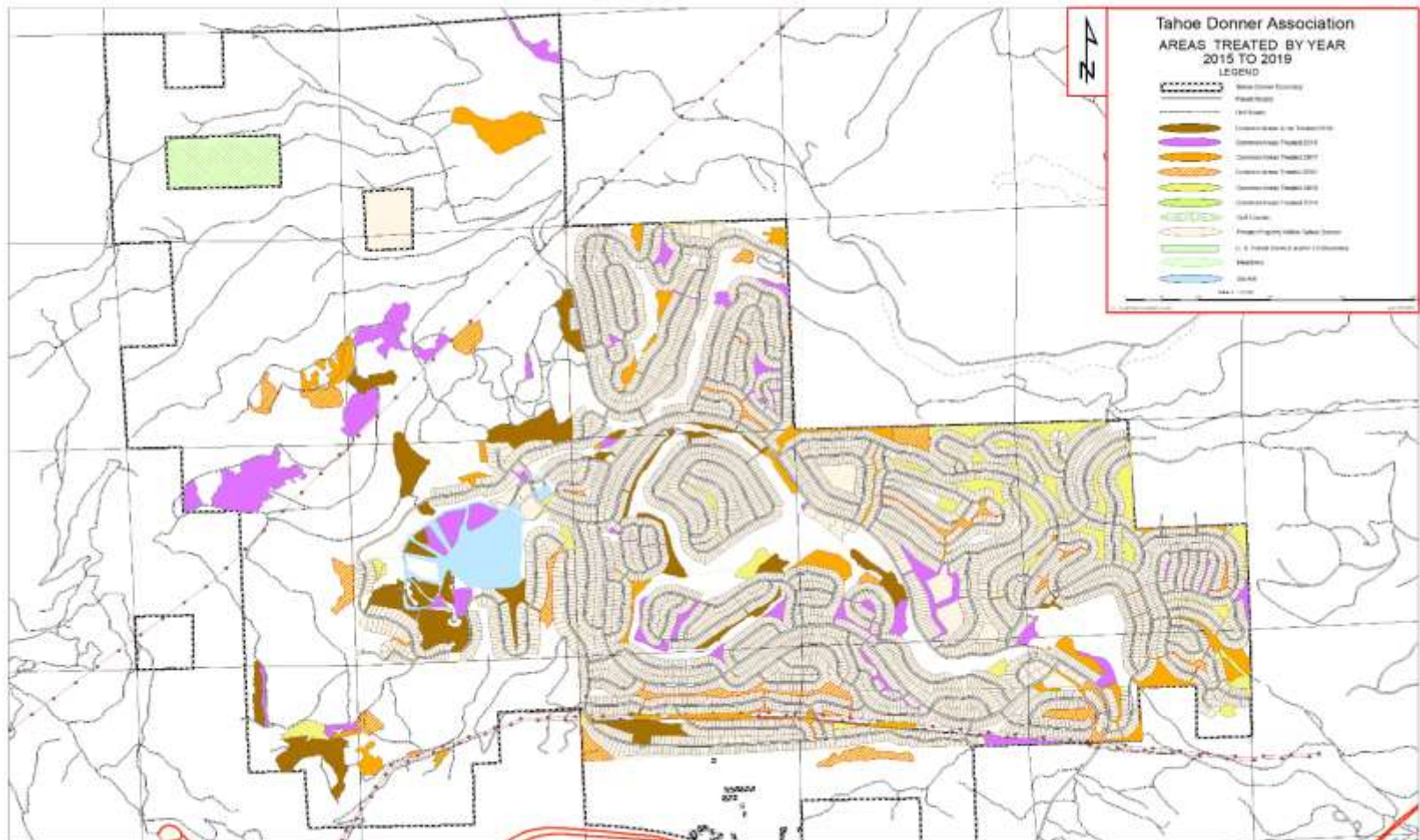
Variables:

- Desired fuel load after treatment
- Amount and type of work required
- Access and environmental constraints
- Equipment needed to complete the job

Common area work



Treated Project areas 2015 to 2019



Acres treated by year 2014 to 2019

YEAR	PROPERTY TYPE	ACRES TREATED	REMARKS
2014	Common area Plantation/FB	8.5 82.8	Forestry reduction due to poor winter revenue. Dead trees on the rise in common areas.
2015	Common area Plantation/FB	116.2 34.7	Very dry year – little mastication due to fire danger. Removed 641 dead trees from the property.
2016	Common area Plantation/FB	73.9 143.5*	Contract labor costs doubled as bidding changed from a per/hour rate to a per/acre rate. *104.8 acres assisted by a grant. Removed 577 dead trees.
2017	Common area Plantation/FB	90.8 84.7*	Board of Directors approved \$150,000 in additional funds, \$62,710 to storm damage and common area work. * 26 acres assisted by two grants. Removed 593 dead trees.
2018	Common area Plantation/FB	84.1 143.8*	Board of Directors approved \$153,929 in additional funds for storm damage removal and common area work. *103 acres assisted by two grants. Removed 1,116 dead trees.
2019	Common area Plantation/FB	83.5 103.5	Board of Directors approved \$153,276 in additional funds for storm damage removal and common area work. Removed 2,718 dead trees.

Targets set in the 5-year plan - 133.5 acres of common area and 75 acres of fuel break management/year.