

# Tahoe Donner Fire Safety

Board of Directors Meeting -January 26, 2019



# Presentation Outcomes

- Understanding the fire hazards to the community
- Understanding of fire hazard mitigation program
- Status of treatment success on Tahoe Donner owned property and homeowner properties
- Review of 2019 amplified approach of fire hazard mitigation programs
- Provide further areas of improvement to address fire safety and forest health

# Fire Hazard Mitigation + Forest Health Basics

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UNDERSTANDING HAZARDS, RISKS AND TREATMENT  
APPROACH

# Forestry Department Mission

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

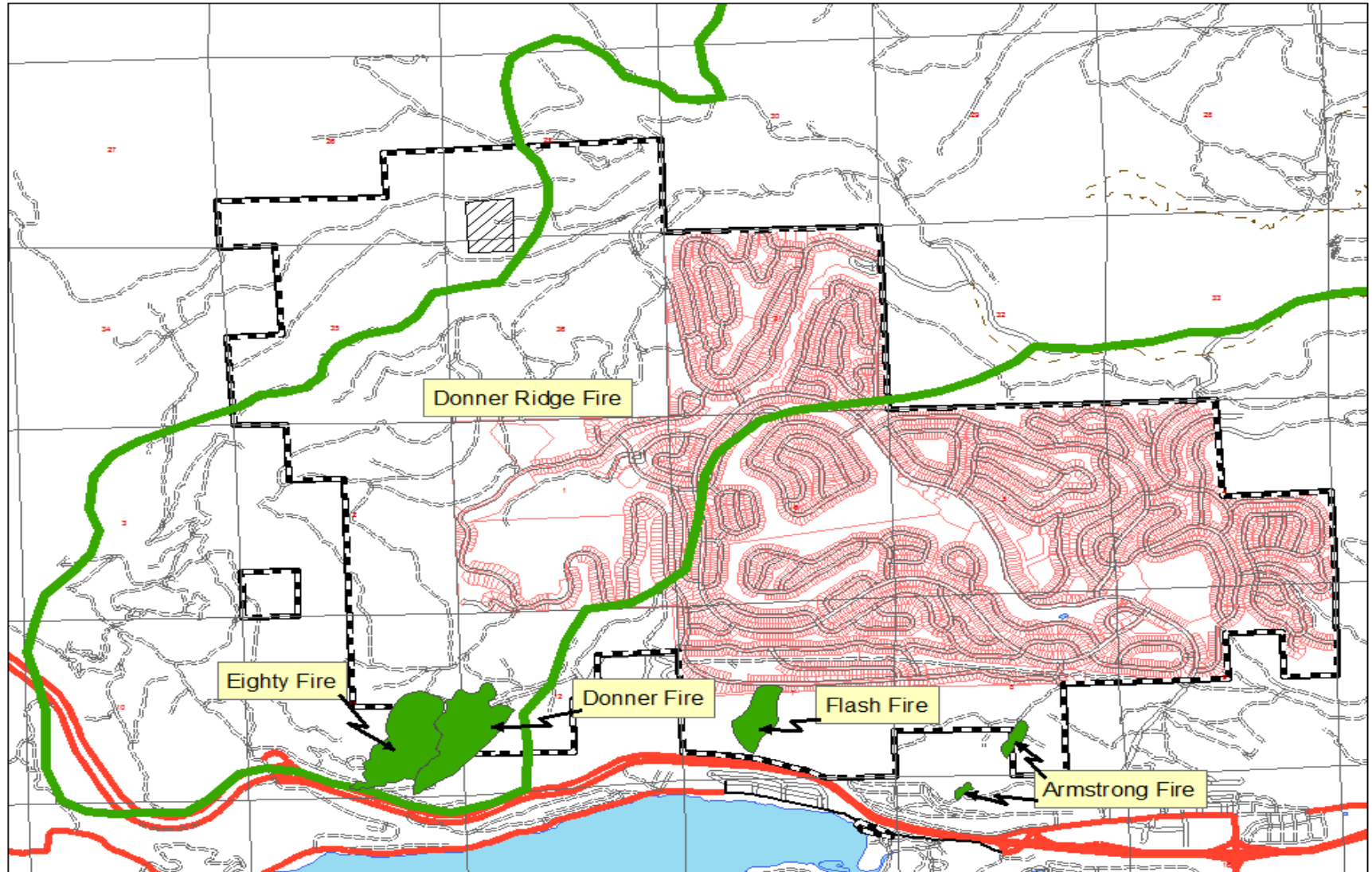
# Management Guidelines

- Return area to pre-settlement era vegetation conditions
- Looking at 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
- 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



# Management Priority Areas

Create fuel reduction and forested zones within:

1. Areas adjacent to 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 of suitable topography and soil type.
  - Areas along access routes in the forest (system roads).



# Tahoe Donner Area before 1960



# Desired Future Condition - Shaded Fuel Break in a Pine Forest



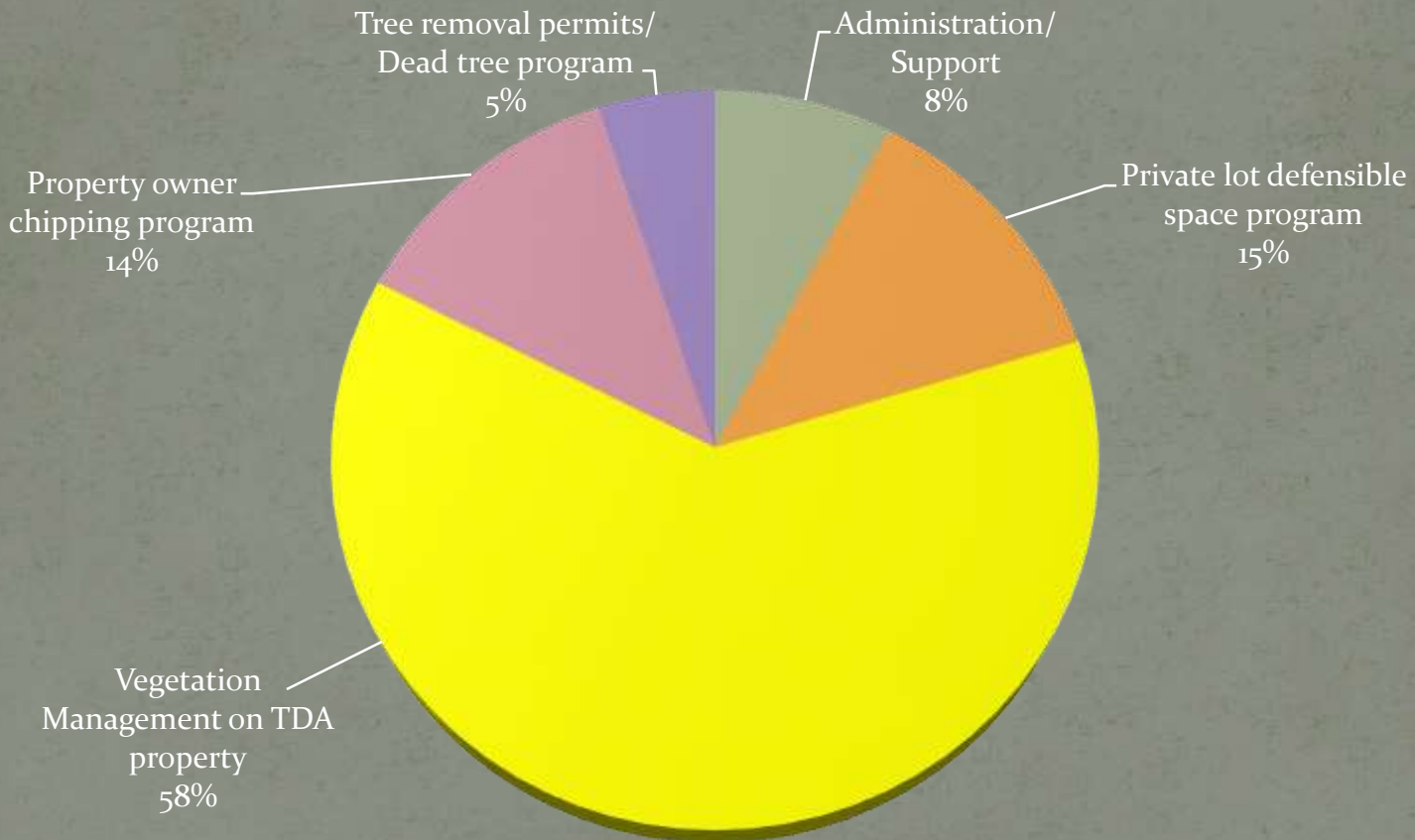
# Desired Future Condition - Shaded Fuel Break in a Forest Dominated by Fir



# Forestry Programs

- Vegetation management on TDA property
  - Common area
  - Plantation/Fuel breaks
  - Fuel breaks
  - Natural stands
- 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
- Property owner chipping program
- Firewood , timber and chip sales

# Forestry Operational/Capital Budget Spread



# Fire Hazard Mitigation + Forest Health

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TAHOE DONNER OWNED PROPERTY- COMMON AREA AND  
OTHER ASSOCIATION REAL PROPERTY

# 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 based operational plan which is updated annually

# Forestry 5-Year Plan

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

- Common Area
- Plantation/Fuel Breaks
- Fuel Breaks
- Natural Stands, not under a treatment regime 2,641 acres



# Common Area

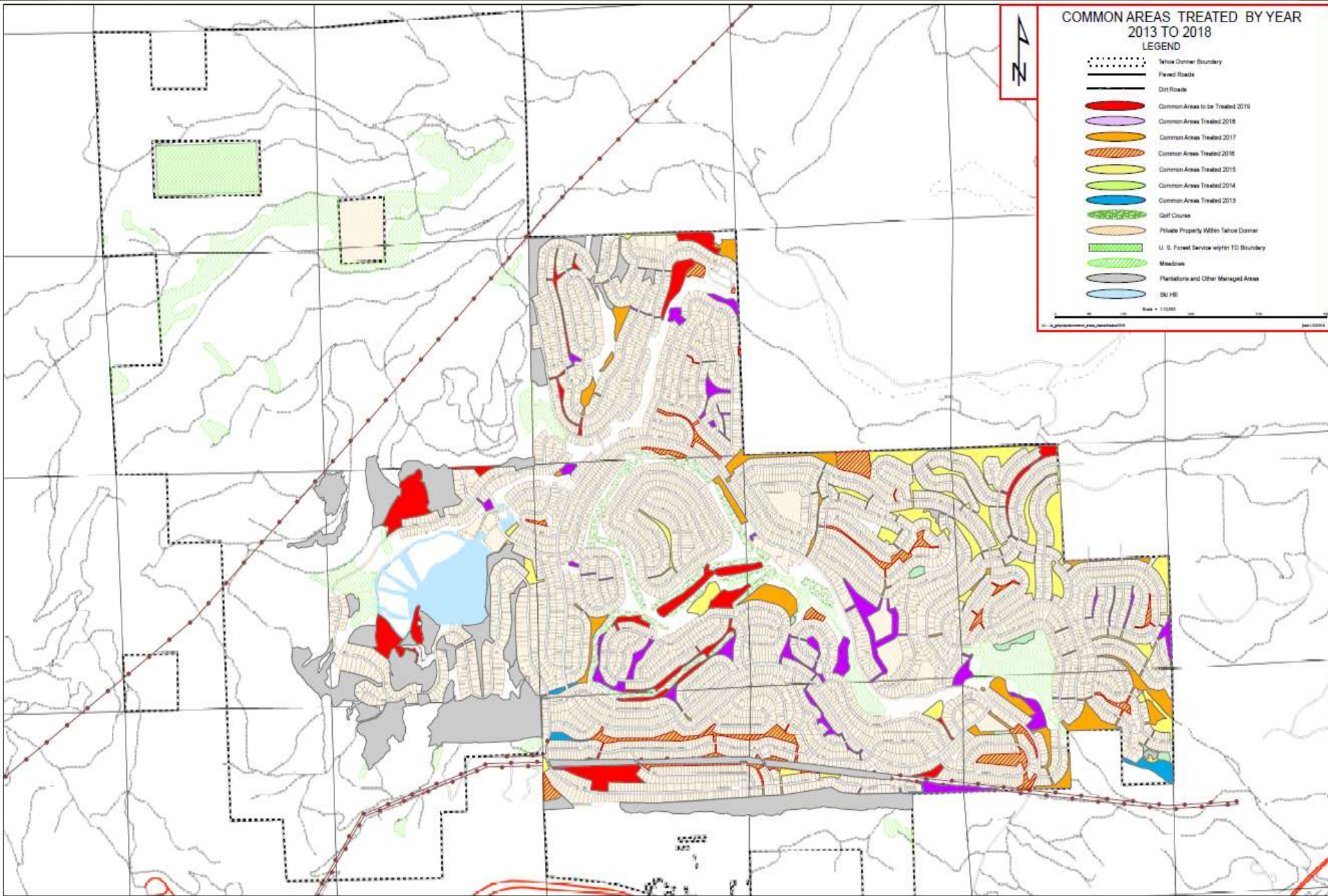
1. 1,341 total acres
2. 801 acres under management
3. The other 540 acres consist of the downhill ski area; golf course greens, trees and fairways; meadows; converted to fuel breaks or plantation/fuel breaks
4. 6 year maintenance rotation or 133.5 acres/year

# COMMON AREAS TREATED BY YEAR 2013 TO 2018

## LEGEND

- Telox Corner Boundary
- == Paved Roads
- - - - - Dirt Roads
- Common Areas to be Treated 2019
- Common Areas Treated 2018
- Common Areas Treated 2017
- Common Areas Treated 2016
- Common Areas Treated 2015
- Common Areas Treated 2014
- Common Areas Treated 2013
- Golf Course
- Private Property Within Telox Corner
- U. S. Forest Service w/in TD Boundary
- Meadows
- Plantations and Other Managed Areas
- Skc Hill

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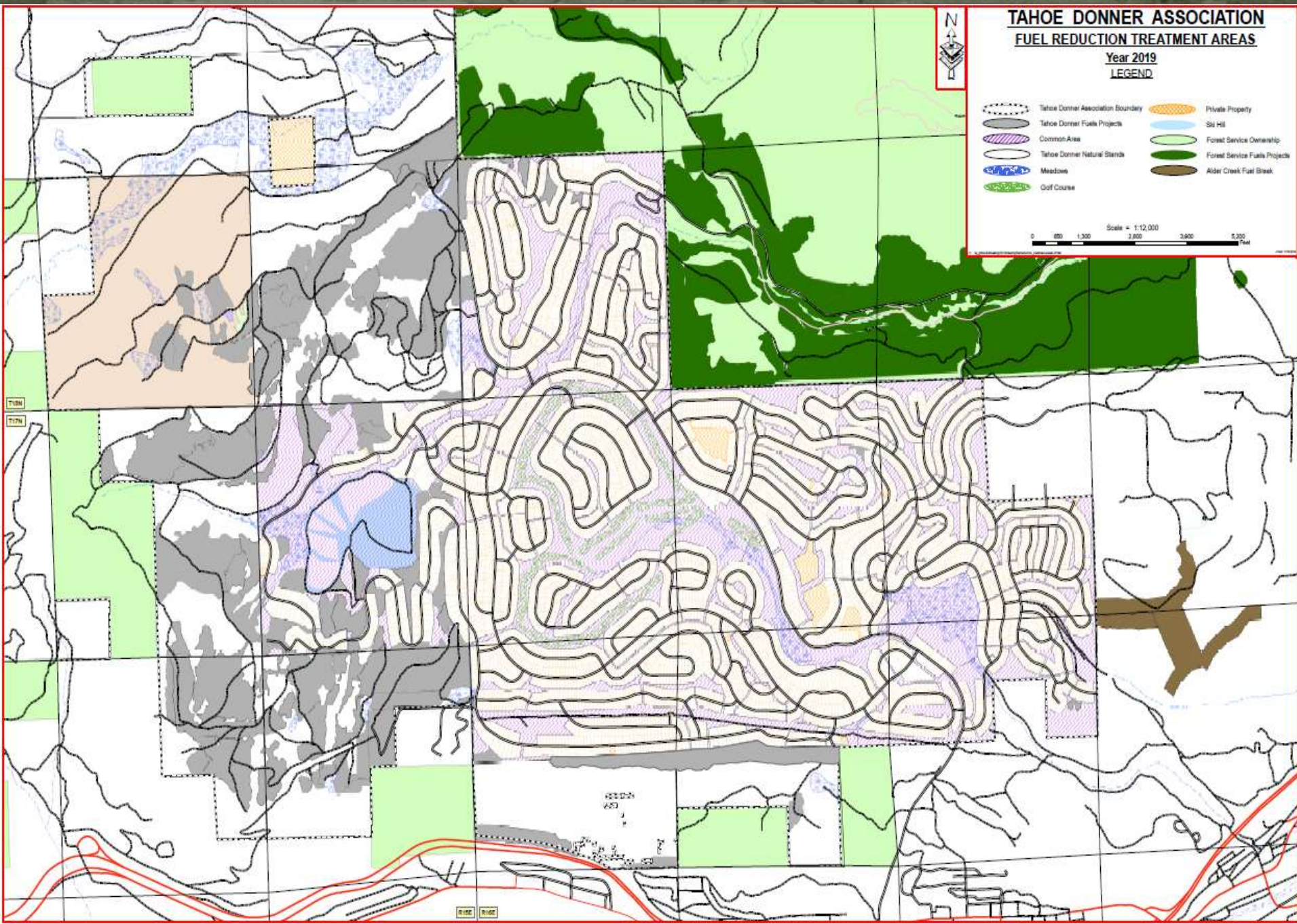
# TAHOE DONNER ASSOCIATION FUEL REDUCTION TREATMENT AREAS

Year 2019  
LEGEND



- |  |                                   |  |                              |
|--|-----------------------------------|--|------------------------------|
|  | Tahoe Donner Association Boundary |  | Private Property             |
|  | Tahoe Donner Fuels Projects       |  | Ski Hill                     |
|  | Common Area                       |  | Forest Service Ownership     |
|  | Tahoe Donner Natural Stands       |  | Forest Service Fuels Project |
|  | Meadows                           |  | Alder Creek Fuel Break       |
|  | Golf Course                       |  |                              |

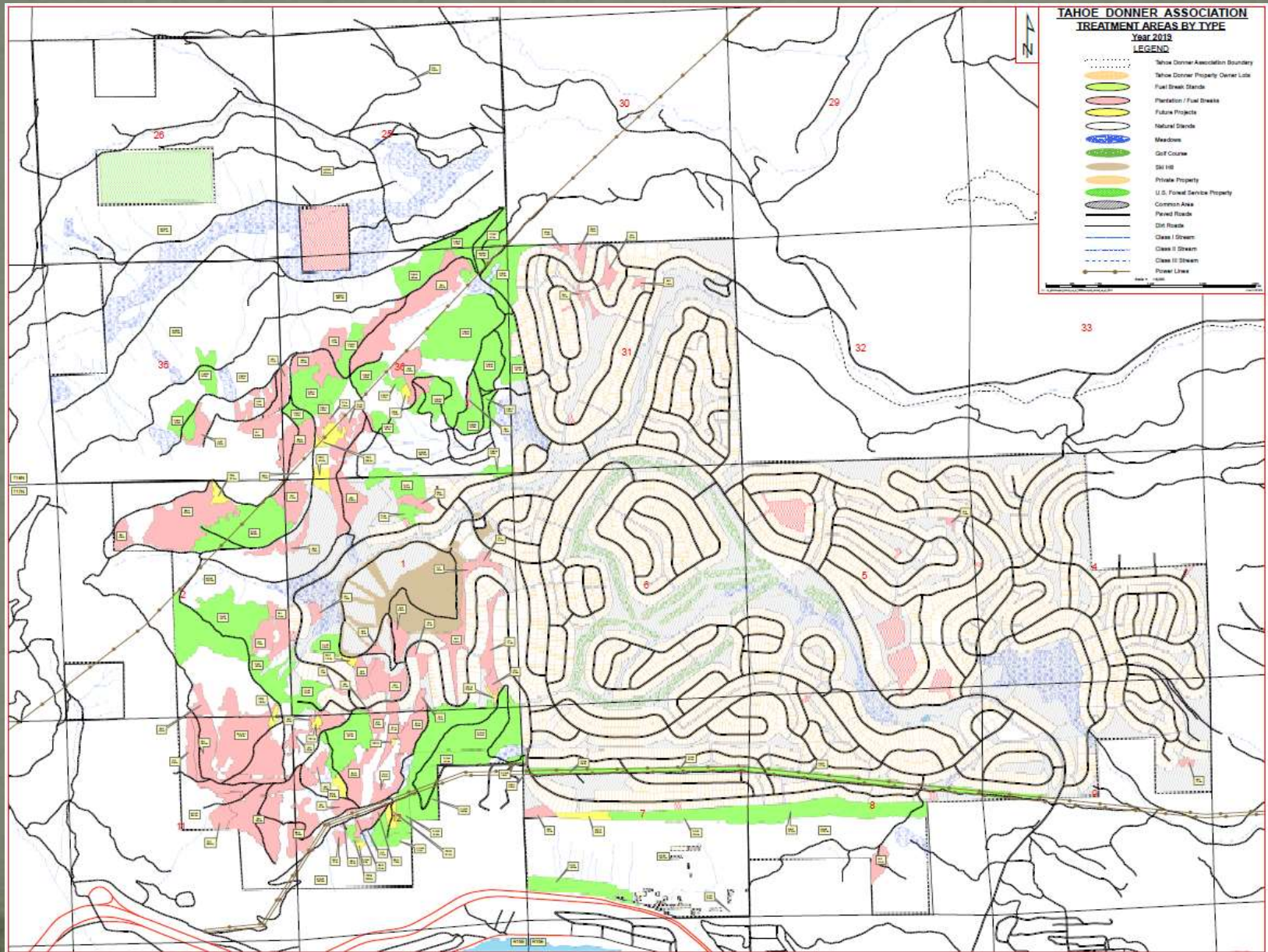
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0 600 1,200 2,400 3,600 4,800 Feet



# Plantation/Fuel Breaks vs. Fuel Breaks

- Plantation/Fuel Breaks
  1. Brush fields where the site is prepared and planted
  2. 562 acres
  3. Higher costs to create and maintain
  4. 5 to 10 year maintenance rotation until 25 years old
- Fuel Breaks
  1. Naturally re-forested areas after fire disturbance
  2. 652 acres
  3. 15 to 20 year maintenance rotation
  - Treat approximately 75 acres/year

# Plantation/Fuel Breaks vs. Fuel Breaks



# Fuel Break in a 40-Year Old Pine Forest



# Naturally Re-forested Fuel Break ~ 55 Years Old



# Site Preparation by Mastication (before)





# Site Preparation by Mastication (after)



# Site Preparation by Tractor Piling



# Site Preparation Burning of Tractor Piles



# Planting Seedlings



# 5-Year Old Plantation



# Fuel Break System



# “80” Fire 2007



# “80” and Donner Fire Scars



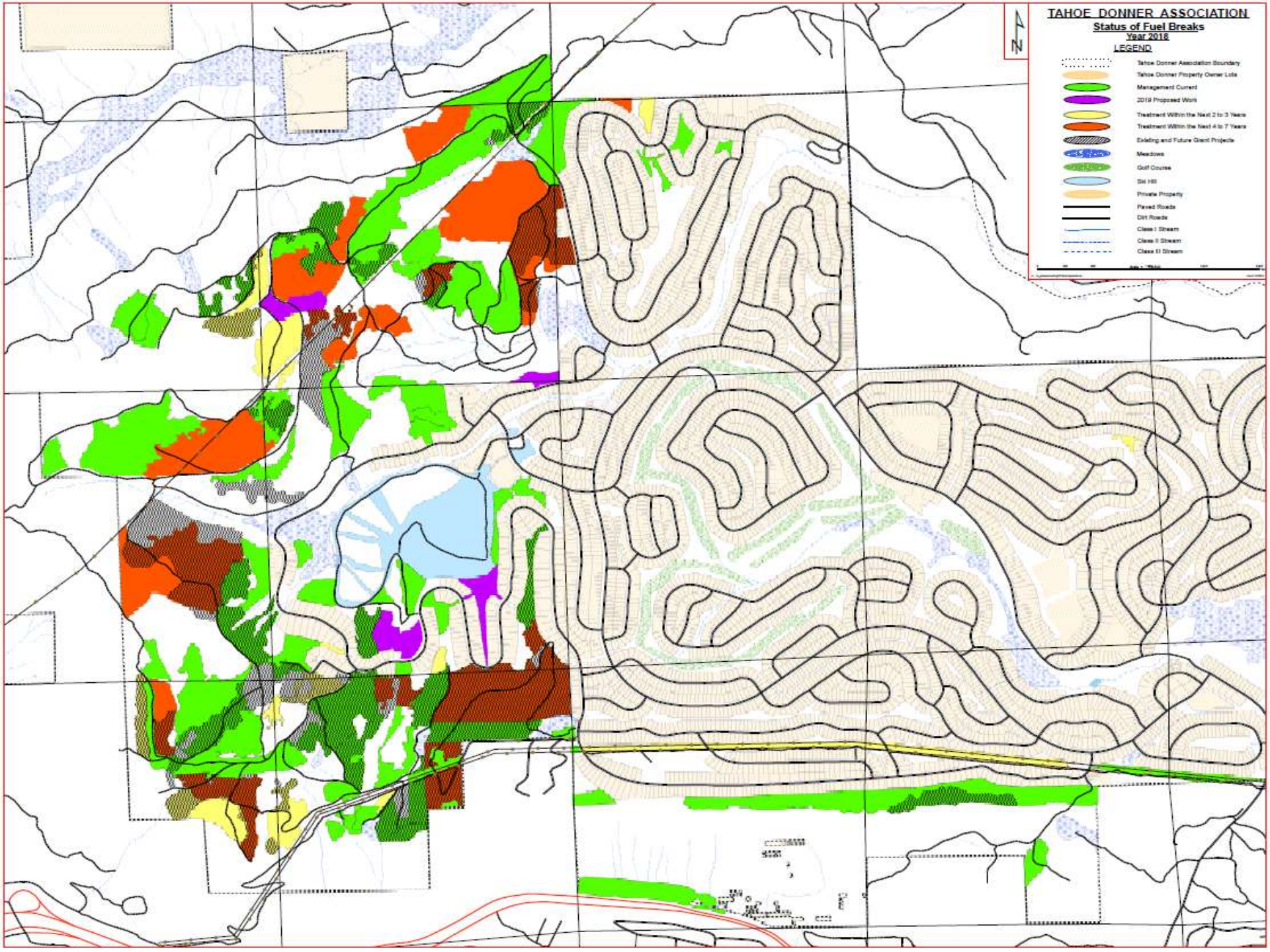


**TAHOE DONNER ASSOCIATION**

**Status of Fuel Breaks  
Year 2018**

**LEGEND**

-  Tahoe Donner Association Boundary
-  Tahoe Donner Property Owner Lots
-  Management Current
-  2019 Proposed Work
-  Treatment Within the Next 2 to 3 Years
-  Treatment Within the Next 4 to 7 Years
-  Existing and Future Grand Projects
-  Meadows
-  Golf Course
-  Dirt Hill
-  Private Property
-  Paved Roads
-  Dirt Roads
-  Class I Stream
-  Class II Stream
-  Class III Stream



# Acres treated by year 2013 to 2018

YEAR	PROPERTY TYPE	ACRES TREATED	REMARKS
2013	Common area Plantation/FB	12.8 186.7	* South Skislope Way Fuel Break created, 58 acres 86.4 acres assisted by two grants and \$28,000 in additional funds approved by the Board of Directors.
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.

Targets set in the 5-year plan - 100.2 acres of common area and 75 acres of fuel break management/year.

# Fire Hazard Mitigation + Forest Health

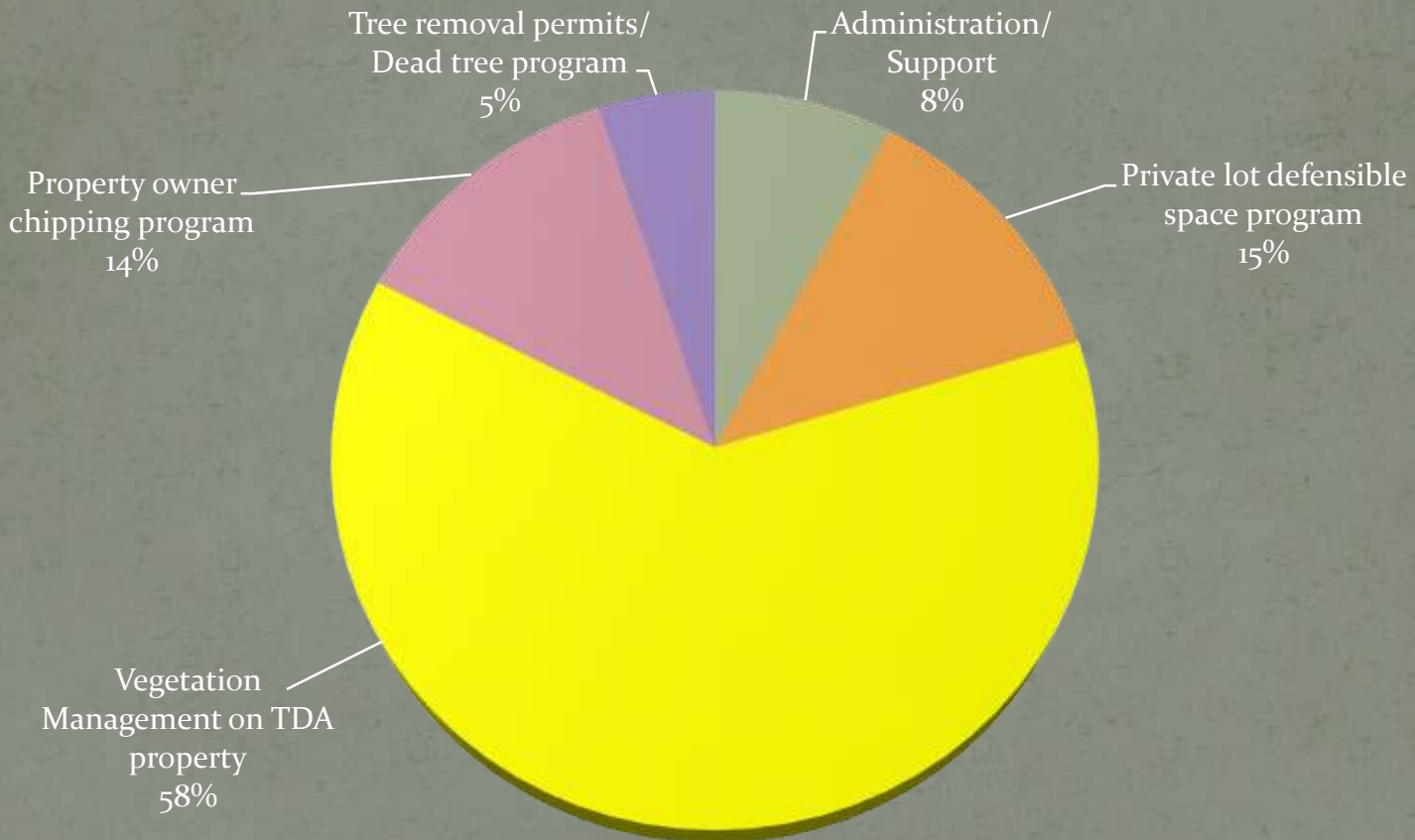
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HOMEOWNER PRIVATE PROPERTIES

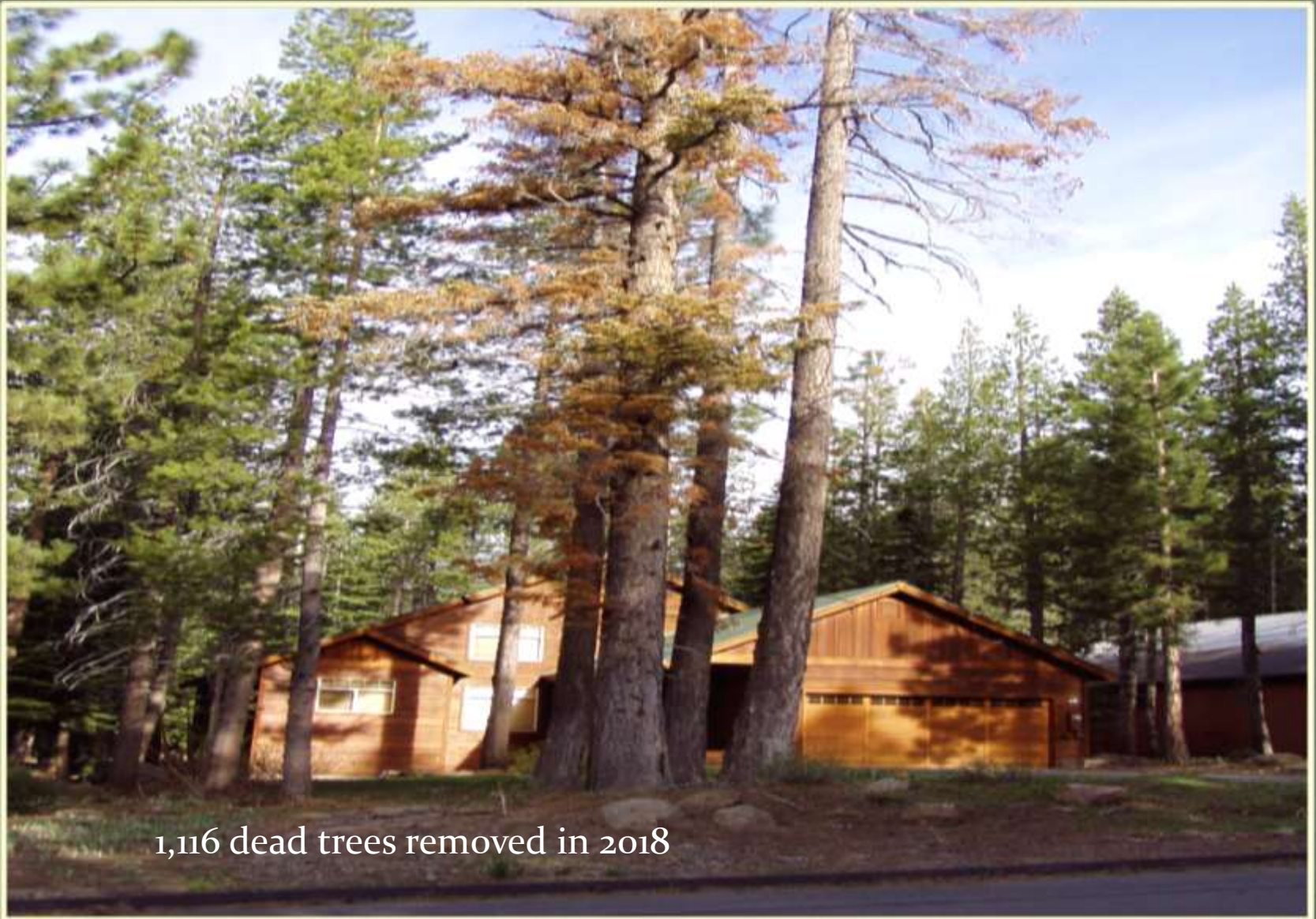
# Forestry Department Programs

- 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
- Property owner chipping program
- Firewood , timber and chip sales

# Forestry Operational/Capital Budget Spread



# Dead Tree Program



1,116 dead trees removed in 2018

# Chipping Program



Chipped 2,200 piles for 846 green tons of material in 2018

# Homeowner Defensible Space Program Standards

- Based on California Public Resources Code 4291
  - Last amended 2012
- Tahoe Donner Covenants & Restrictions
- Tahoe Donner Covenants Rules – Fire Safety and Forest Health
  - Last amendment to the Fire Safety and Forest Health rules occurred 2012 as a result of PRC 4291 amendment
  - Most notable changes: moving clearance from building from 30 to 100 feet and addressing empty lots



# Program History

- 2007 Angora Fire- Board of Directors directed management to establish an aggressive defensible space program to address private properties
  - 2008 – 2011: 4-Year Defensible Space Program Cycle
    - Approximately 1500 homes inspected and compliance/year
- 2010 Strategic Plan & Board Guidance to continue a defensible space program at management recommended pace
  - 2012 – 2019: 8-Year Defensible Space Program Cycle
    - Approximately 750 homes inspected and compliance/year
- 2018 Board guidance to continue defensible space program with modification to amplify frequency utilizing management recommendation
  - 2019 – 2024 – 6-Year Defensible Space Program Cycle
    - Approximately 1000 homes inspected and compliance/year

# Defensible Space Program 2019 to 2024



# What's Next and Where Do We Go?

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TAHOE DONNER PROPERTY + HOMEOWNER PRIVATE  
PROPERTY

# 2019 Implemented Changes

- Tahoe Donner Owned Property
  - More frequent treatment in fire break/plantations
  - Increase to acreage treated per year
  - Maximize grant application to further expedite treatment and increase acreage treated
  - Initiating coordination with UC Berkeley Fire Science Department
- Homeowner Private Property
  - Change to the Defensible Space Inspection Program from 8-Year to 6-Year cycle
  - Addition of Year-Round Defensible Space Coordinator
  - Addition of 3<sup>rd</sup> Chipping Crew to reduce curbside pile loading

# Further Recommendations

## Rules + Enforcement

- Amendment to Tahoe Donner Covenants Fire Safety and Forest Health Rules
  - Require 100% compliance annually
  - Warming fires: fire season standing rule prohibiting wood fires
  - Requirement for property transfer inspection – following TFPD Ordinance
  - Ban of shake roofs
- Amendment to Tahoe Donner Covenants Enforcement Procedures specific to Fire Safety and Forest Health rules violation
- Review staffing levels to expected increase of fire safety and forest health complaints, inspections, administrative activities

# Further Recommendations

## Other

- Prioritization of purchasing adjacent lands
- Insurance coverage and limits
  - Continue review and increase where appropriate of corporate
- Coordination with local agencies for
  - Improved emergency notification
  - Emergency evacuation signs
  - Shelter In Plan plan/locations
- Coordination with neighboring land owners for fire hazard and forest health projects
  - Maximize grant application to further expedite treatment and increase acreage treated