



# NEVADA COUNTY

## CALIFORNIA

# Biomass Pilot Project



**GRASS VALLEY**  
A PLACE TO LIVE AND THRIVE



# Biomass Pilot Project



# Intent



**Cost effectively condense wood close to the source**



**Improve the safety of existing wood management methods, including reduction in the number of road miles traveled**



**Reduce GHG emissions associated with wood management**



**Find productive end uses for biochar created during vegetation management**



# Biomass Pilot Project

**Who:** The Nevada County Public-Private Partnership

- Nevada County Consolidated Fire District
- City of Grass Valley
- Nevada City
- Gold Country Senior Firewood Program
- PG&E
- Mountain Enterprises
- Earth Foundries

**What:** A one-season biomass pilot project

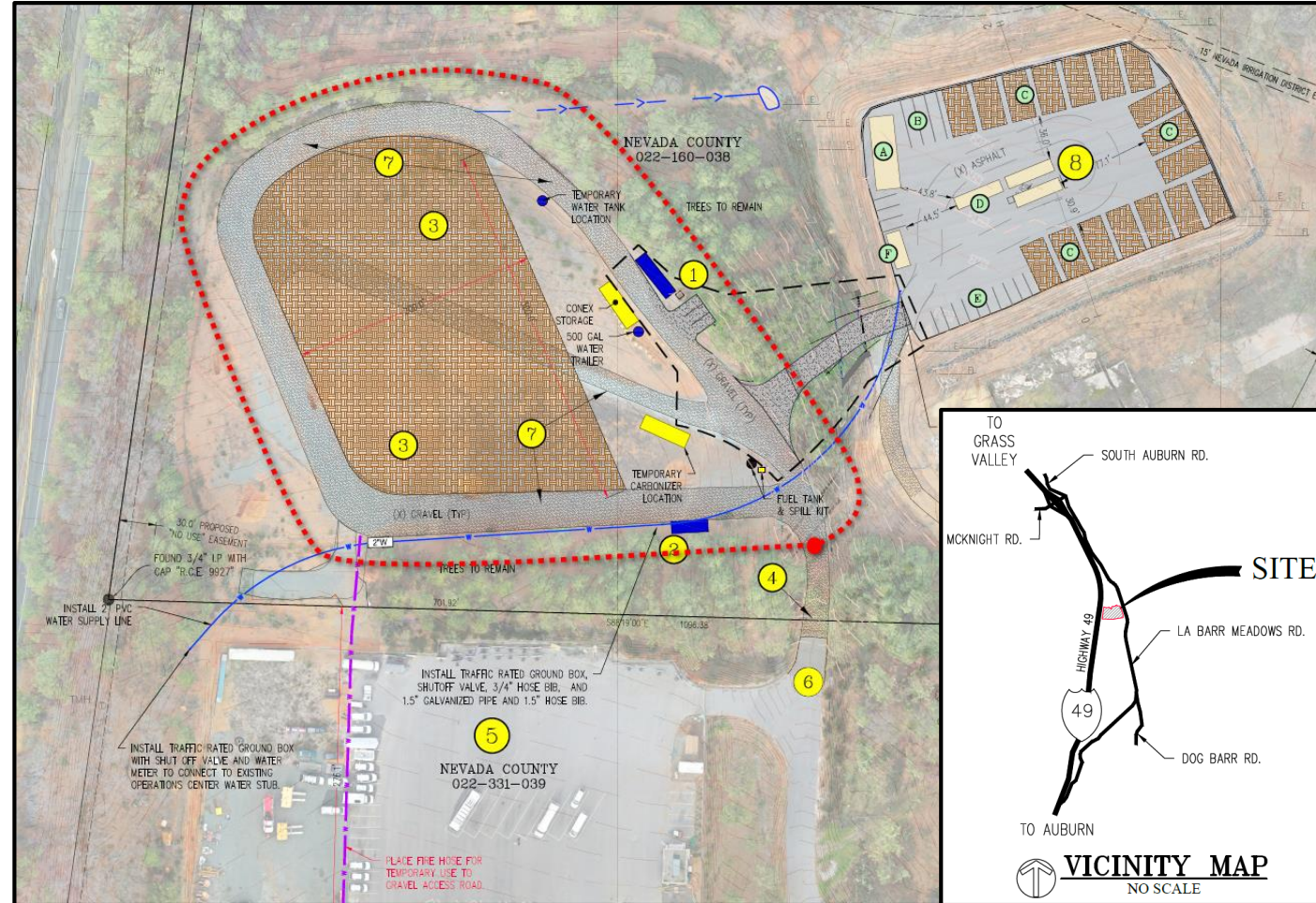
- 2x Tigercat 6040 Carbonizer Systems

**When:** October 2024 – June 2025

**Where:** 12270 La Barr Meadows, Grass Valley

**Why:**

- Enhance wood management practices
- Reduce carbon footprint
- Green-waste disposal opportunity from private properties and fuel reduction projects





# Tigercat 6040 Carbonizer

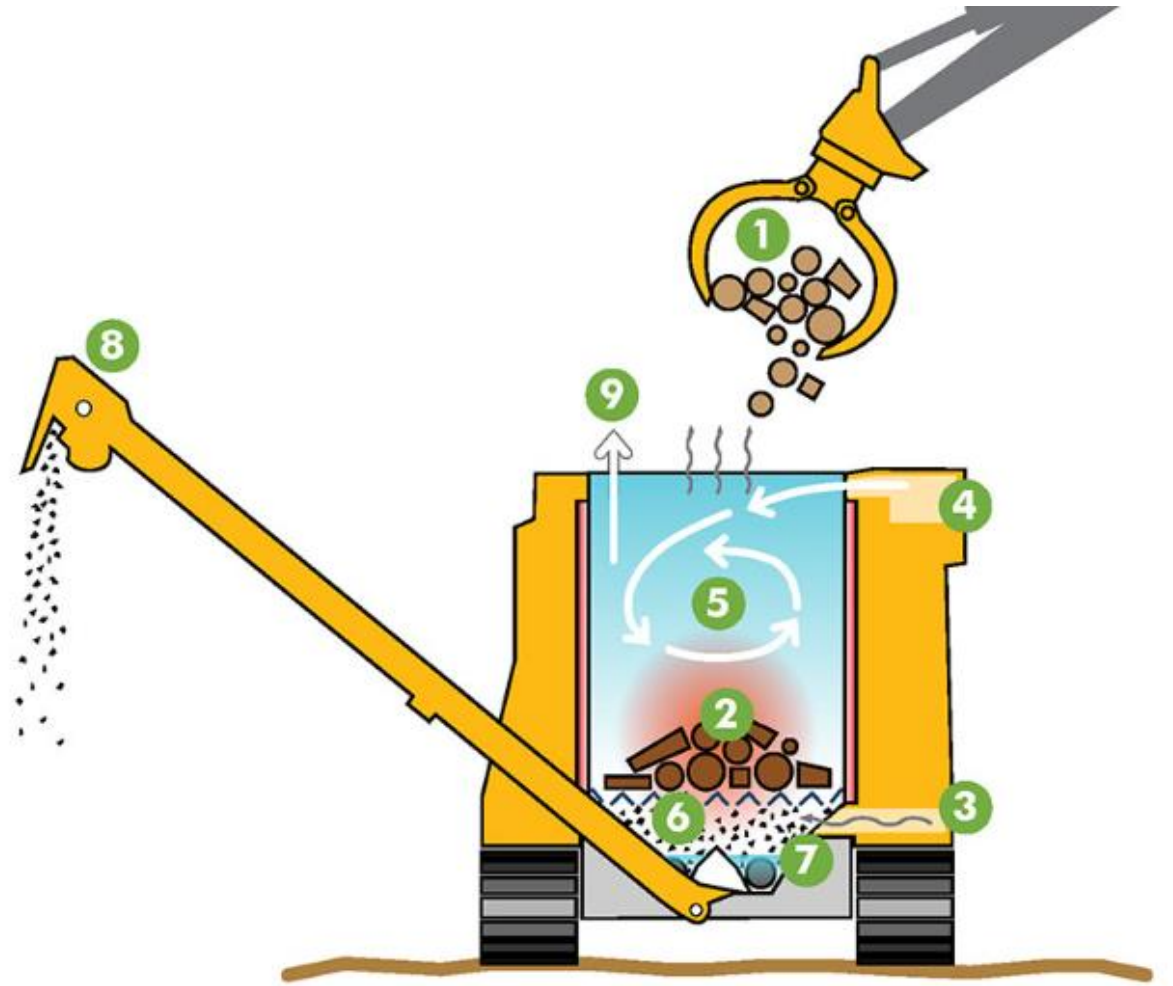
The 6040 Carbonizer is an efficient, high throughput onsite wood waste reduction and conversion system. The end product sequesters carbon for potential carbon credits and beneficial reuse while significantly reducing total volume onsite.



# What is carbonizing?

## Carbonizing Process

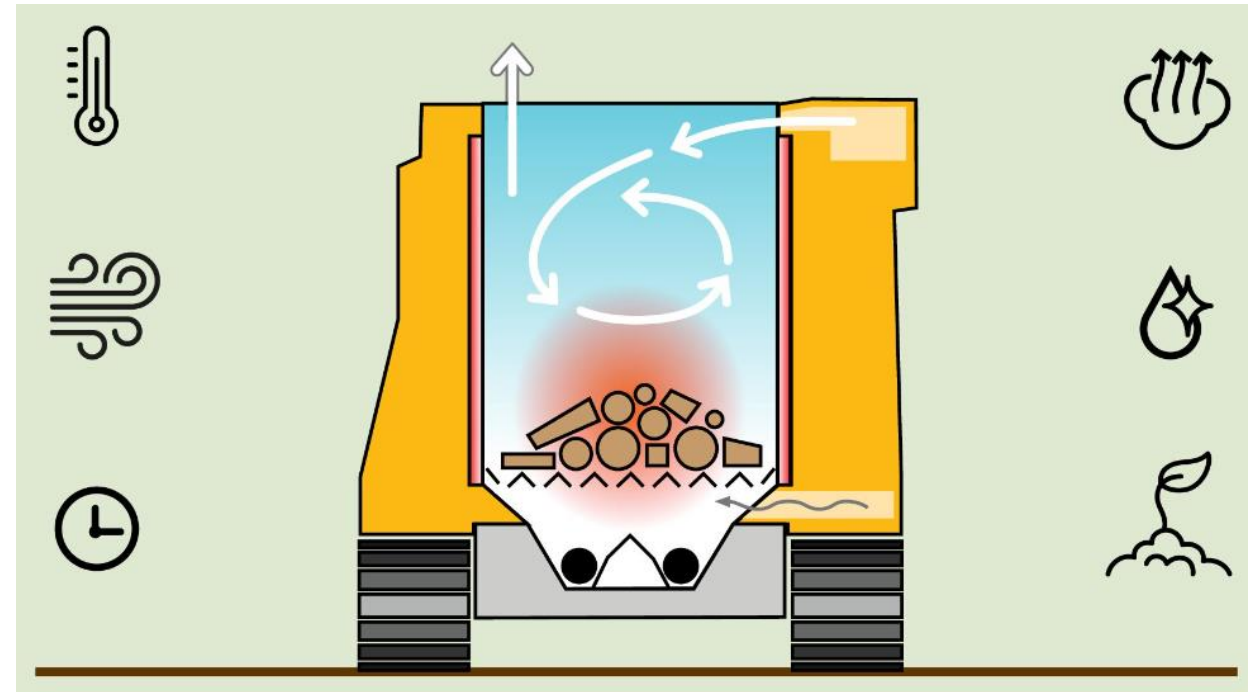
1. Load feedstock (no preprocessing required)
2. Primary combustion
3. Under-air supply provides upward pressure
4. Over-air supply creates vortex
5. Secondary combustion ( $1,095^{\circ}\text{C}$  /  $2,000^{\circ}\text{F}$ )
6. Organic carbon falls through grates
7. Organic carbon is quenched in waterbath
8. Organic carbon is conveyed away
9. Fresh oxygen mixes to cool exhaust



# Program Specifications

## “Clean and Green”

- All wood sizes accepted – larger wood shall be pre-processed to optimize throughput
  - Diameter: 2 - 14 inches
  - Maximum Length: 20 feet
- Wood from official forest health and vegetation management projects/programs
- No processed wood
- No construction or demolition material
- Softwood and hardwood acceptable





# Potential Debris Pickup Locations



*This load weighed approximately 20 tons for reference.*





# Stakeholder Interests & Relationships

## Pacific Gas and Electric - R&D and Innovation

Shall fund Carbonizer operations (to include 1,000 tons of Nevada County Community green waste) and intends to provide further financial support to Nevada County to subsidize grappling truck services

## Earth Foundries

Shall manage the worksite and oversee all Carbonizer operations and biochar handling

## Mountain Enterprises

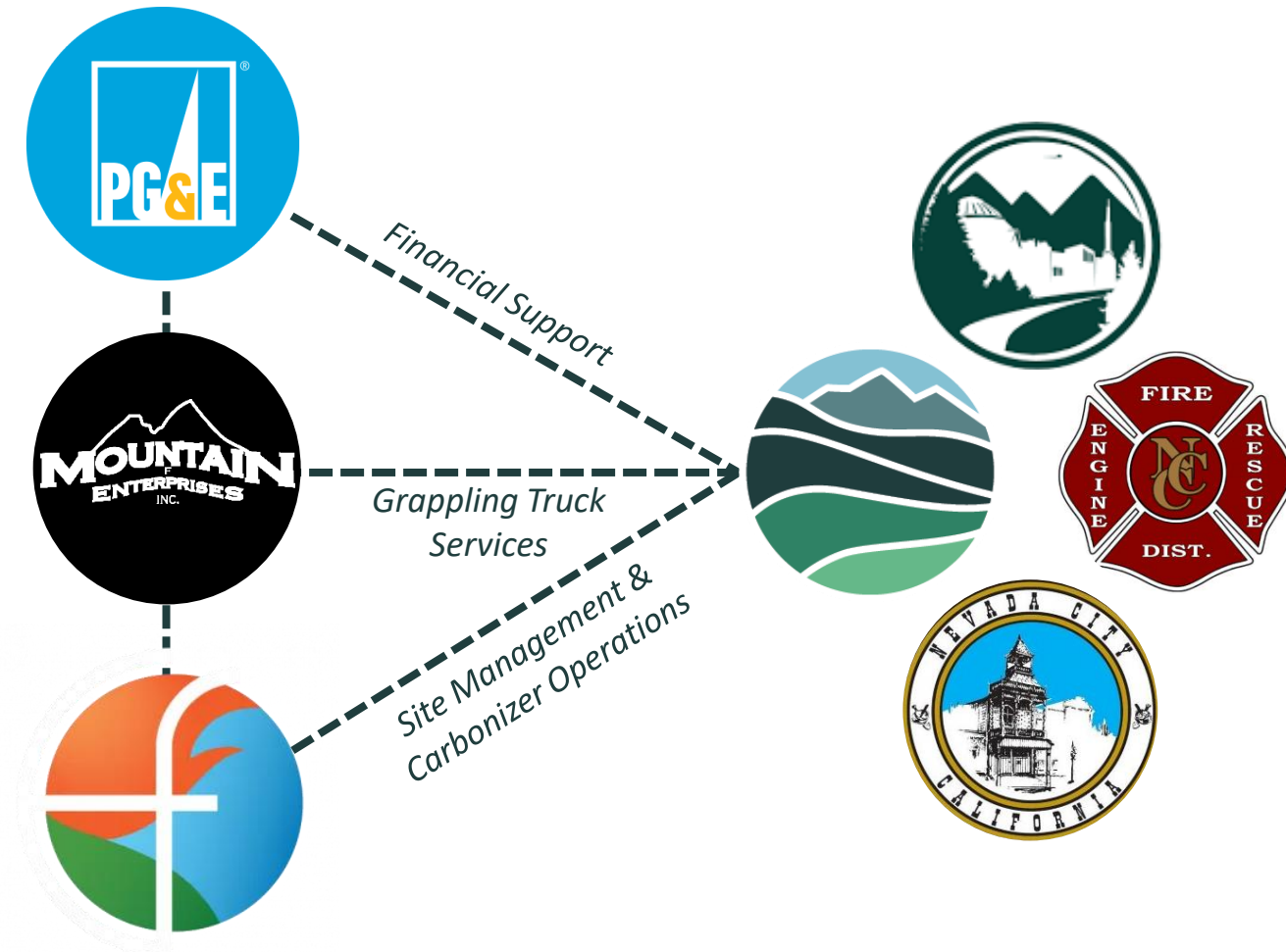
Shall provide grappling truck services for wood management and transport for PG&E and Nevada County

## Nevada County

Shall provide worksite access and use and oversee compliance to Professional Services Agreements

## NCCFD and City of Grass Valley

Shall advise and guide the project, ensuring compliance for safety requirements and support as needed



# Biomass Pilot Project – Nevada County Budget

Description	Expenditures
Acoustical Report	\$5,000
GV Use Permit Application	\$3,035
Coast Horned Lizard Report	\$1,750
Planning and Engineering	\$20,000
Grading Permit for Road & Waterline	\$5,400
Fire Suppression Equipment	\$3,627
Road & Waterline Improvements	\$57,780
Construction Management (120 hrs)	\$15,000
Contingency	\$10,000
Mountain Enterprises - Grappling Truck Services <i>(approx. 18 days at \$5,500 per day)</i>	\$90,000
Earth Foundries - Green Waste Processing <i>(approx. 250 tons of green waste)</i>	\$22,000
<b>Total Expenditures - \$233,592</b>	



# Recommendation

Approve resolution executing the Professional Services Agreement with Mountain Enterprises, Inc. and the County of Nevada in the amount of \$90,000 for grappling truck services for the Biomass Pilot Project during the period of October 22, 2024 through June 30, 2025 authorizing the Director of Emergency Services to execute the agreement, and amend the FY 2024/25 Emergency Services Budget

# Questions/Comments

