

Forest Biomass Market Enhancement: Northeastern CA Biomass Aggregation Pilot Project

Fall River RCD
OPR Cohort Meeting
January 29, 2025

Fall River Resource Conservation District





CALIFORNIA'S WILDFIRE AND FOREST RESILIENCE ACTION PLAN

**A Comprehensive Strategy
of the Governor's
Forest Management
Task Force**

January 2021

CALIFORNIA WILDFIRE REDUCTION GOALS

MANAGE FORESTS TO
ACHIEVE THE STATE'S
ECONOMIC AND
ENVIRONMENTAL GOALS





OPR'S KEY ACTIONS

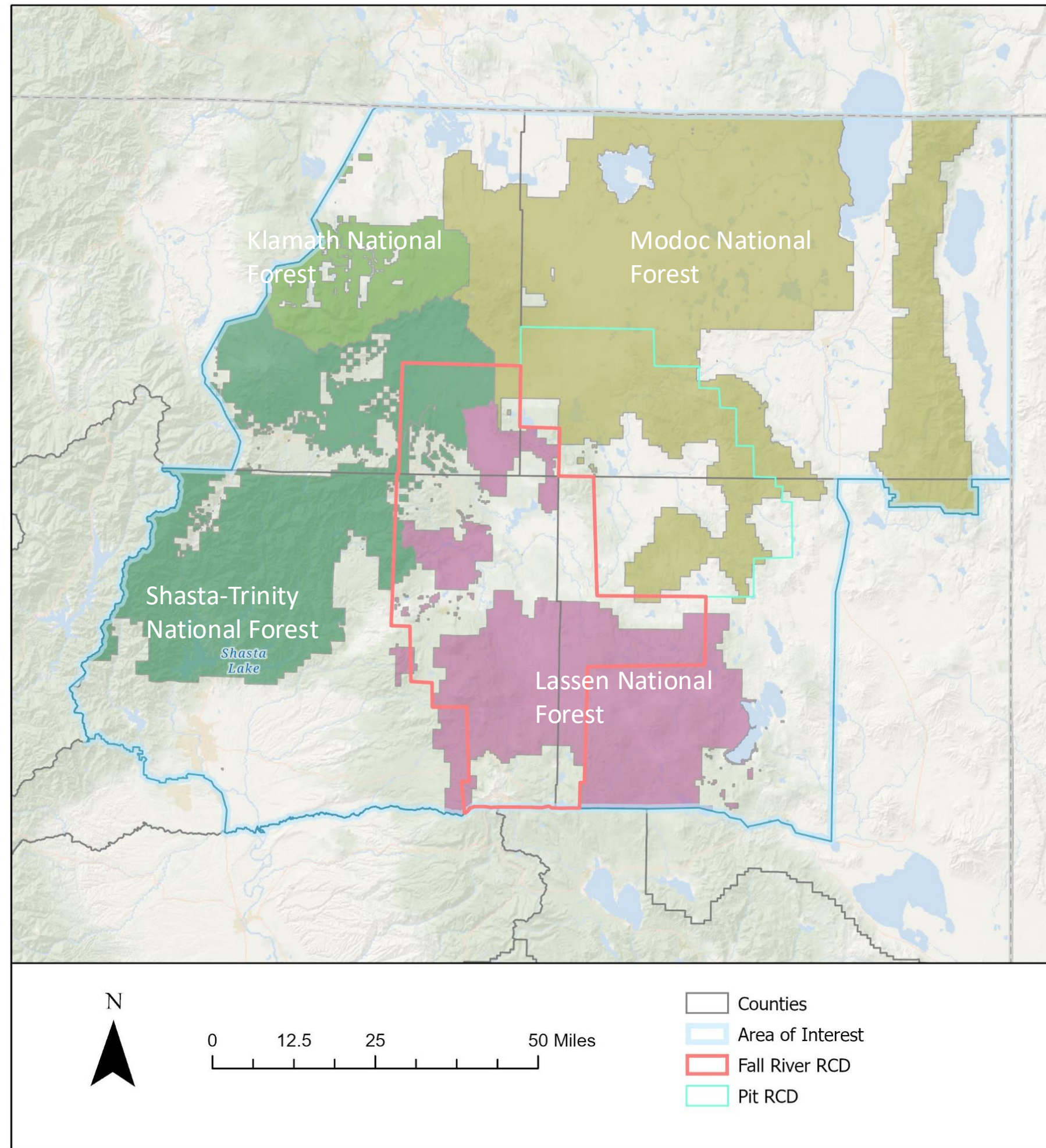
Problem: Fuels reduction is ineffective when biomass is left in-woods.

OPR manages six pilot projects to test mechanisms to move biomass out of the forest and into sustainable utilization pathways.

Focus: look at how local agencies can work together to provide transparent, accountable contract and financial management services for funding sources that support forest biomass removal and utilization.

Northeastern California Pilot Project

Geographic Area of Influence





What is the problem with biomass markets?

THE CHALLENGES

- Prices of biomass are sensitive to external factors
- Wildfires change supply availability
- Wood is expensive to transport
- There is high risk to commit to long term feedstock supply contracts

THE OPPORTUNITIES

- The State and the public are beginning to recognize that forests are overgrown; subsidy is available
- Cleaner technologies are becoming available
- The NE CA Region has a relatively strong timber and biomass market
- Creation of Joint Powers Authorities could support efforts

TASKS

- Market Capacity Assessment
 - A regional biomass supply assessment, including economic and market validation
- Biomass Pricing Mechanism
- Partnership Recruitment and Engagement
- Selection of Organization Structure
- Entity Action Plan & Long-Term Objectives Plan
 - Integrate task findings, and explore:
 - Partnerships with landowners and private sector
 - Ways to improve NEPA/CEQA processes to increase project implementation biomass outcomes
 - Developing new entity budget
 - Developing educational programs
 - Align existing long term planning efforts with Cal FRAME objectives

MARKET CAPACITY ASSESSMENT

GOAL

Estimate current business activity and forest-based fiber flow within the region to identify how much additional capacity exists for new and existing wood utilization business development

OBJECTIVES

- Develop a terrestrial condition assessment
- How much biomass is being generated within the RSA?
- How much biomass is being utilized within the RSA?
- How much biomass will there be based on desired treatment levels?

METHODS AND FINDINGS

BIOMASS GENERATED

- 10year avg. 39,796 ac. public and private lands
- 773,926 BDT Potentially Available Biomass on a “Reliable Basis”
- 938,098 BDT Practically Available Biomass + Utility Veg +Sawmill Residues

BIOMASS UTILIZED

- 783,505 BDT Existing Bioenergy Facilities
 - 402,529 BDT sawmill residues
 - 381,497 BDT in-woods



Net Availability of Practically Available Biomass

- Practically available estimates were subtracted from current biomass utilization capacity
- Net available biomass from current market conditions are ~409,646 BDT per year
- This does not consider future projections of biomass or improved economics

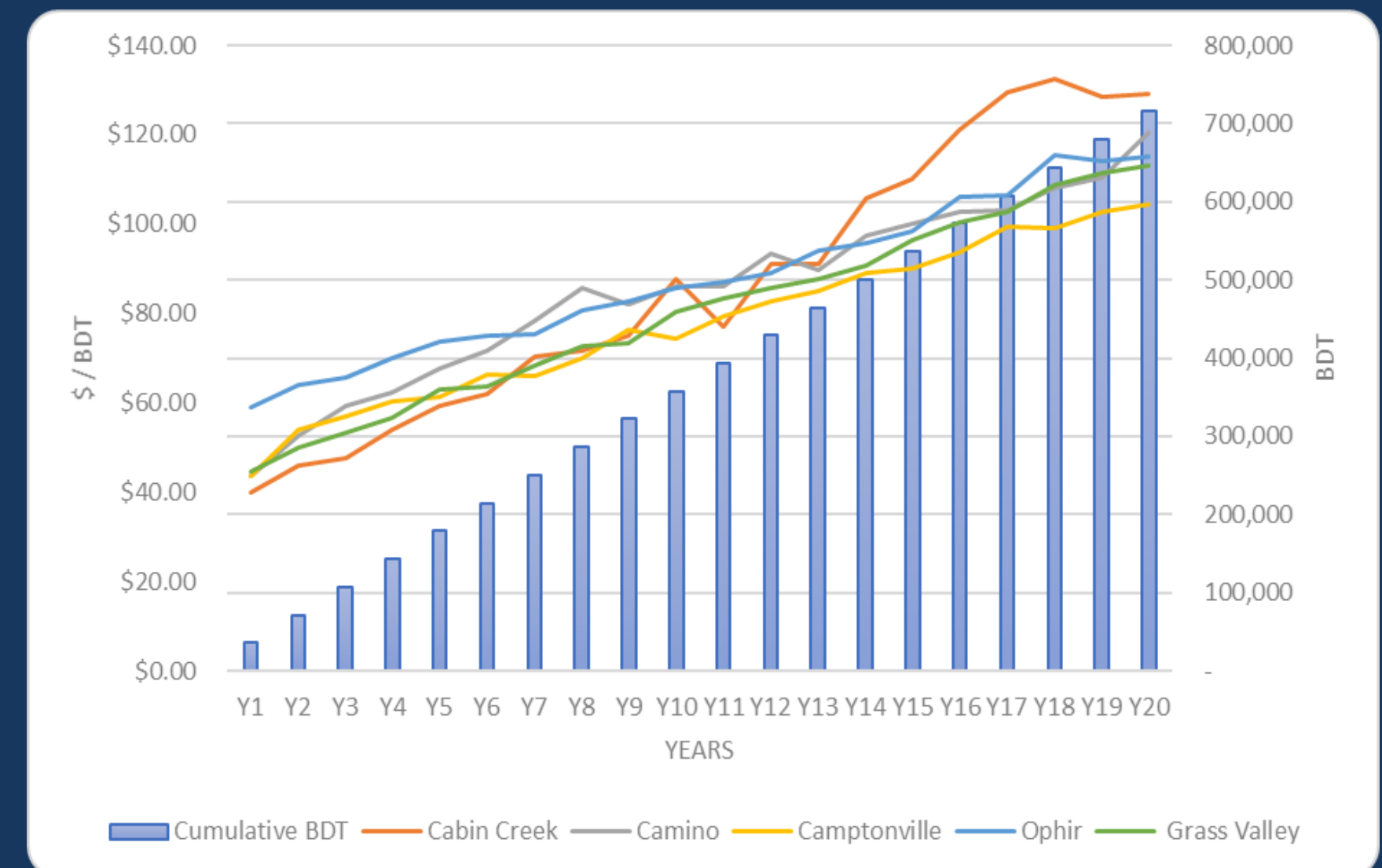
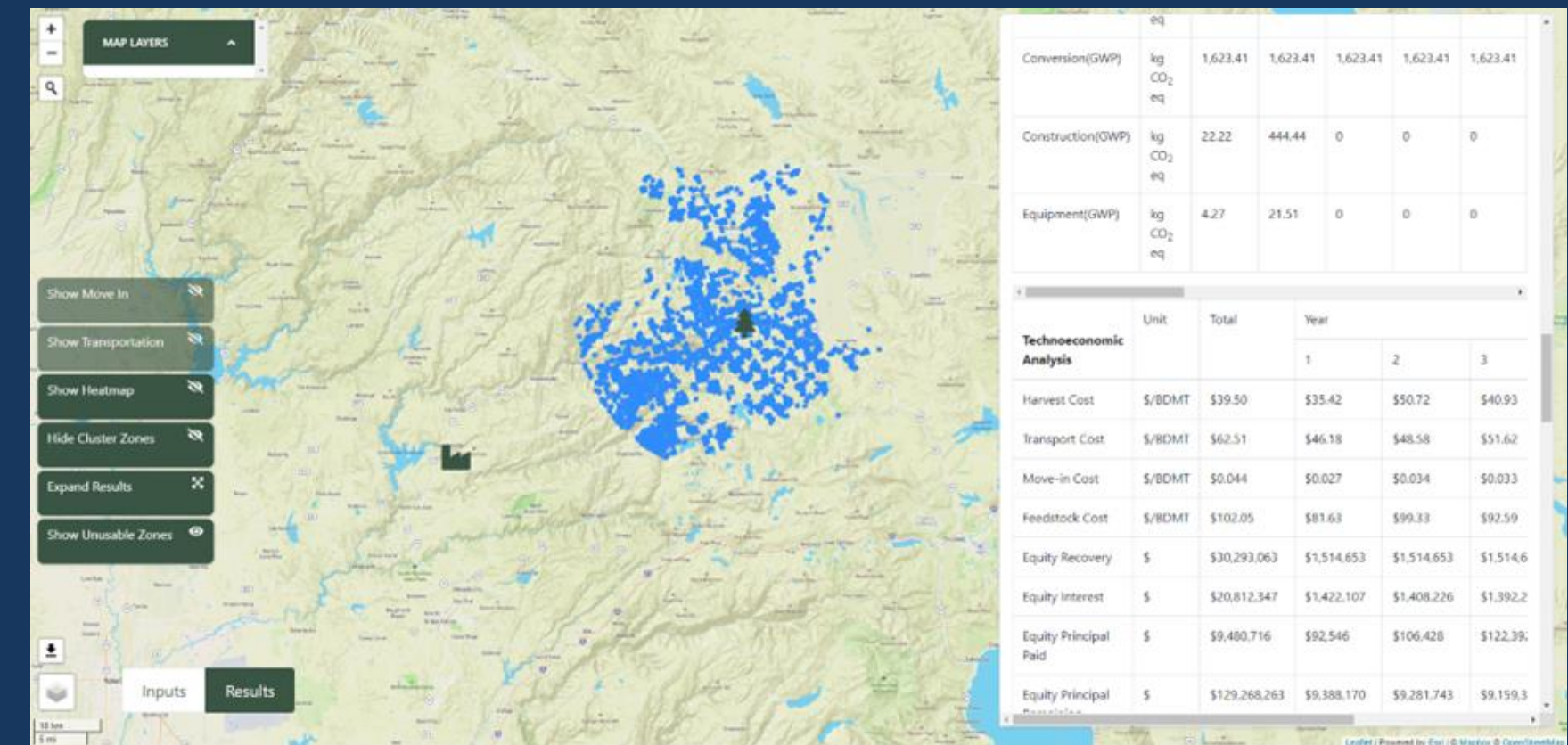
Procurement Source		Practically available feedstock Totals	Biomass Utilized	Net available
In-woods		620,960	356,117	264,843
	Reliable	418,922		
	Inflated	159,055		
Sawmill residue		519,175	374,893	144,282
GRAND TOTALS		1,140,135	730,489	409,646

IMPLICATIONS FOR PROJECT

- Report helps establish a baseline for market capacity
- Region has one of the most developed biomass markets West of the Rockies, and it still is unable to utilize all of its generated biomass
- Practically available conversion factors might change with continued investment in and development of the supply chain
 - Will require scaling market capacity throughout the supply chain (ie. more loggers, haulers, etc.). These companies might not occur until there is a facility built to pay. Who is responsible for this build out?

PRICE MECHANISM

- Goal: Investigate methods and tools to manage for feedstock price within the terms of a long-term feedstock contract
- Task: Validate UC Davis' FRREDSS model using a sensitivity analysis
 - 6 locations, 3 variables = ~40 model runs
- Result: strong potential, however prices were not comparable to actual contractor rates. Wood basket smaller than actual.
- Price Escalation needed more research



Total delivered feedstock cost per site location in Tahoe Central Sierra OPR region assuming a 5MW feedstock demand

PRICE FORMULA

- Goal: Build on FRREDSS research to look at market designs for long-term contracting
- Task: synthesize information and provide an example of how the price scheme could work
 - index-based pricing, tied to inflation
- Result: Index-based pricing is promising, however, complicated and requiring buy-in
- Ecostrat offers a similar option focusing on volume *guarantees* not price management

Cost components	Weighted influence on final costs
Diesel	40%
Wages	25%
Motor and tires	15%
Other costs*	20%

**Not included in the formula*

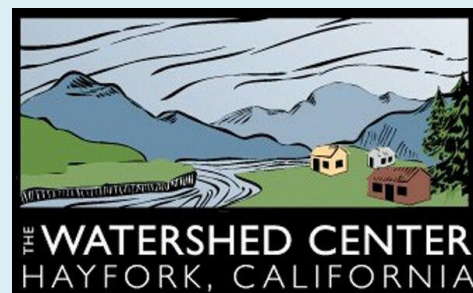
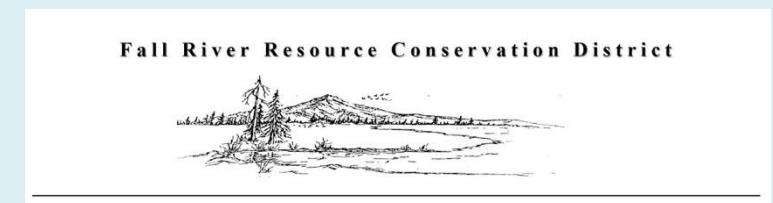


Changes in feedstock prices using a multi-component index-based formula with diesel (quarterly), wages (annual), motor parts (quarterly), and tires (quarterly).

STAKEHOLDER ENGAGEMENT

- Spring 2022. Extensive series of one-on-one meetings with biomass stakeholders.
- June 2022. Stakeholder kick-off meeting
- Oct 2022, March 2023 and August 2023. More stakeholder meetings!
- Many intervening interviews and ad hoc committees to address specific questions.
- Throughout, team shared project progress and work products and gathered feedback.





Outreach & engagement gave rise to further exploration of an RCD-led JPA

Why RCDs were identified as best members of a JPA in the North State...

- ✓ RCDs are public legal entities
- ✓ RCDs are flexible
- ✓ RCDs have engaged local boards
- ✓ RCDs have experience with managing grants and staff
- ✓ RCDs have a need to get forest biomass to utilization
- ✓ RCDs can increase capacity by expanding geography in which they work
- ✓ RCDs can provide workforce to USFS partners

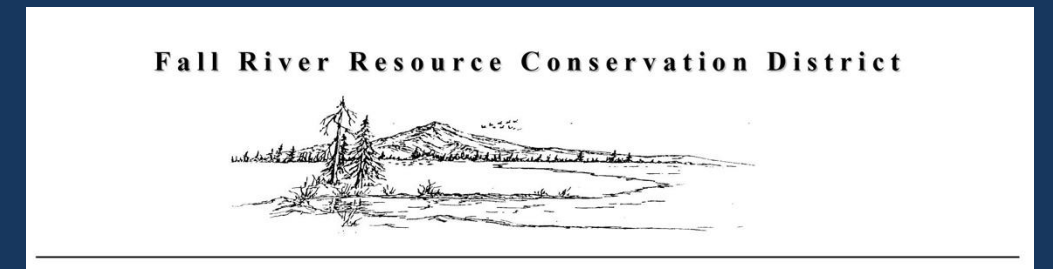
RCD ENGAGEMENT & JPA FORMATION

July 2023 – Present

- Informal presentations to governing boards
- Monthly group meetings with RCD staff
- Project document review & input
- Engaged key RCD partners

Progress to Date

- ✓ Confirmed participation
- ✓ Drafted working mission statement
- ✓ Identified key functions
- ✓ Considered governance and member contributions
- ✓ Explored key questions
- ✓ Evaluated funding mechanisms
- ✓ Exploring a possible first project (biomass sort yard)



Entity Action Plan

- Identifies regional assets, barriers, priorities, recommended actions for the proposed JPA, and next steps to establish the JPA



Entity Action Plan: Regional Priorities

1. Improve Business Environment for Existing and New Biomass Utilization
2. Improve USFS Capacity
3. Support Nonindustrial Timberland Owners and Expand Programming
4. Improve Outreach and Education and Develop a Unified Voice



Entity Action Plan:

Recommended Actions for the JPA

1. Establish Long-term Guaranteed Biomass Feedstock Contracts
 - Feedstock Supply Insurance policy with biomass pricing mechanism
2. Improve Market Economics and Business Environment
 - Elevate partnerships with USFS, explore GNA agreements
 - Perform strategic planning for a pipeline of supply
 - Leverage conservation finance

Entity Action Plan:

Recommended Actions for the JPA

3. Conduct Outreach and Advocacy
4. Explore Additional Services
 - a) Environmental/forestry permitting support
 - b) Legal services
 - c) Grant writing/funding pursuit

OTHER SUPPORT SERVICES THAT COULD BE OFFERED

- Provide environmental review assistance for fuel reduction projects
- Offer permitting guidance to streamline biomass removal initiatives

Insurance Assistance

- Support communities with homeowners insurance challenges
- Facilitate dialogue between residents and insurance providers, advocate for fair policies

Environmental Compliance

- Offer business support services to local biomass enterprises
- Provide GIS mapping and analysis for project planning

Local Biomass Initiatives

- Develop and manage green waste management projects
- Focus on forest biomass utilization within the community

Technical Support

Next Steps

- Meet with key partners for each RCD and present Entity Action Plan
- Present Entity Action Plan and overall project update to RCD Boards
- Further research revenue-generating mechanisms to ensure JPA's longer term financial sustainability, and refine the JPA's budget.
- Advocate for state seed funding and other funding sources
- Draft Foundational Documents, prepare for RCD Board approval

ongoing

February – March 2025

March 2025

April 2025

TBD

Questions?

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