



Ecosystem Workforce Program

BRIEFING PAPER
NUMBER 39
SUMMER 2012



COST-EFFECTIVE HAZARDOUS FUELS REDUCTION AND BIOMASS UTILIZATION: A CASE STUDY FROM WALLOWA COUNTY, OREGON

EMILY JANE DAVIS, NILS CHRISTOFFERSEN, KYLE COUCH, AND CASSANDRA MOSELEY

Utilizing woody biomass from hazardous fuels reduction projects may make forest restoration more cost effective while creating local economic benefits. However, there is a lack of evidence about how projects can be designed for these outcomes. Wallowa Resources and the Wallowa-Whitman National Forest (WWNF) partnered to test if mechanical treatment with biomass utilization was cost effective in comparison to hand thinning, piling, and burning using a hazardous fuels reduction project called Reservoir Biomass. We studied the benefits and challenges of this approach.

Project process

The WWNF identified eight units for this treatment on 621 acres, and entered into an agreement with Wallowa Resources to plan, implement, and monitor fuels reduction on these acres. Wallowa Resources conducted a pilot to understand the operating costs and equipment capacities of local contractors. Wallowa Resources contracted with businesses to perform this work, and purchased the restoration by-products from the Forest Service to sell to local biomass utilization facilities.

Results

This case study showed that mechanical fuels reduction and biomass utilization can be more cost-effective than hand thinning, piling, and burning on the Wallowa-Whitman NF. Cost per acre was \$296, which is less than typical costs of \$300 to \$900/acre depending on prescription. Cost-efficient fuels reduction may be most possible when projects have total stand treatments, contain a commercial sawlog component, use stewardship contracting, are planned where roads are in good condition, and/or chipping and sorting take place off site. Local economic benefits may result

402 acres treated

758 green tons of material removed

- 60 tons for post and pole production
- 273 tons for firewood and densified firelog production
- 425 tons for local school biomass boiler

13 jobs created

Businesses engaged

- Two logging contractors from Wallowa County
- One trucking contractor from Grant County

Biomass end users

- One local wood products business
- School district

Cost: \$296 per acre

if a project is matched to local contractor capacity, there is an intermediary like Wallowa Resources to help businesses facing risk, and there are local biomass utilization facilities.

More information

The complete study can be found in the EWP Working Paper #29, "Forest restoration and biomass utilization for multiple benefits: a case study from Wallowa County, Oregon," which is available at ewp.uoregon.edu/publications/working.



UNIVERSITY
OF OREGON

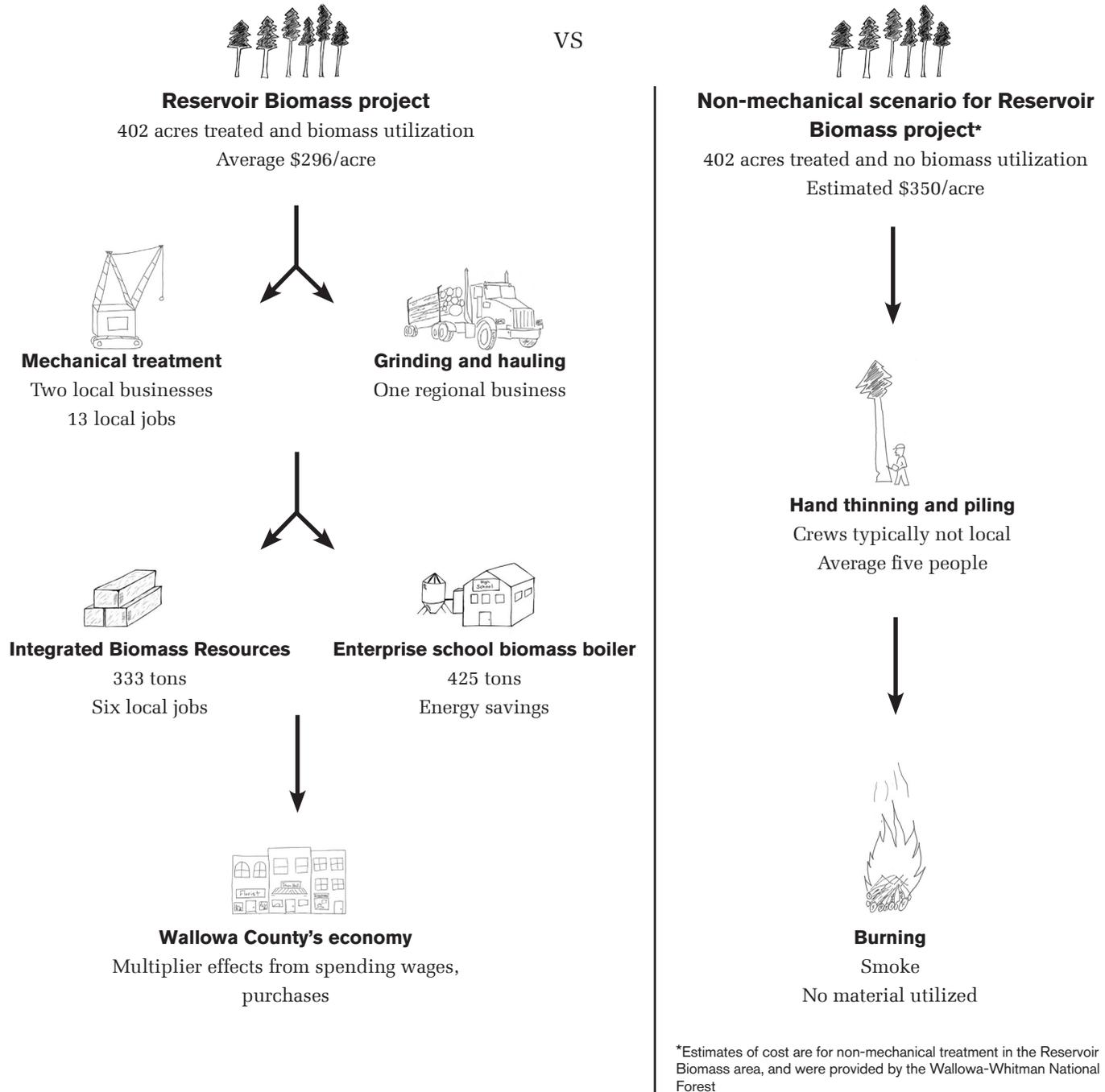


WATERSHED CENTER
MAYFORK, CALIFORNIA



Sustainable
Northwest

Figure 1 Comparison of cost and benefits between the Reservoir Biomass project and a hypothetical non-mechanical scenario



This briefing paper was made possible with funding from the US Endowment for Forestry and Communities and USDA Rural Development. The Dry Forest Zone project team is Sustainable Northwest, the Watershed Research and Training Center, Wallowa Resources, and the Ecosystem Workforce Program. For more information, please see www.sustainablenorthwest.org/programs/dfiz. Photo credit: Nils Christoffersen.

The University of Oregon is an equal-opportunity, affirmative-action institution committed to cultural diversity and compliance with the Americans with Disabilities Act.



UNIVERSITY OF OREGON

INSTITUTE FOR A SUSTAINABLE ENVIRONMENT

5247 University of Oregon

Eugene OR 97403-5247

T 541-346-4545 F 541-346-2040

ewp@uoregon.edu • ewp.uoregon.edu