

Seattle Public Utilities – Wood Recycling Grant Final Report

Project: Wood Reuse and Recycling in King County

This project was established as a partnership between Seattle Public Utilities and King County Solid Waste in order to develop the circular clean wood supply chain through outreach, engagement, and training.

The Puget Sound region already had a strong foundation for harvesting, processing, and reusing salvaged wood and this project was designed to catalyze the growth of this sector to the next level. The projects funded by this grant have indeed been able to move forward the market development work which was already undertaken by Seattle Public Utilities (SPU) , King County Solid Waste Division (KCSWD), and the U.S. EPA – Region 10 (EPA).

The \$50,000 grant funding from Ecology's Recycling Development Center was split evenly between the 3 top scoring proposals received by SPU in response to a request for proposals. The selected entities were: ReUse Consulting, EarthWise, and Rainier/Sankofa. Each of these companies had fairly different visions for how best to approach market development for wood and they were all successful, in the short time available to them, to demonstrate the viability of their approaches.

Additional details on each of the funded projects are provided here....

ReUse Consulting

Proposed approach:

Increasing recovery of building materials from a building removal project through dismantling a house in panels such that the panel can be reused to create a new structure. Not only does this approach eliminate a lot of the waste that would be generated (even with hand deconstruction) but it eliminates a lot of waste (and carbon emissions) traditionally inherent in new construction.

Actions taken/accomplished: One 2400 sqft home with a detached garage was taken down in panels. The majority of the work was done by two companies new to deconstruction with Reuse Consulting providing training and education.

Results:

- House was successfully panelized into a number of different sections
- One person is buying panels to build a 12x14 shed, and is being provided (2) 7x12 floor panels, (2) 12 foot walls and (2) 14 foot walls.
- Crews from two different companies were trained on panelized deconstruction.

Summary:

Panelized deconstruction is a viable option for removing buildings. Crews are able to be successfully trained in this deconstruction technique. Market for the removed panels has initially been good though time is needed to see if additional panels can be easily sold. Panels which can not be sold will be disassembled and the materials either reused or recycled.

EarthWise

Proposed approach:

Processing undervalued salvaged wood to increase its value and marketability. Part of the intent of this project was to assess the viability of purchasing equipment to do in-house processing of lumber.

Actions taken/accomplished:

- Salvaged mahogany boards and bleacher boards were sent out to another company for planing on four sides
- The boards were displayed for sale in a new section of the lumber area with much interest from customers

Results:

- Shipment, processing, and return of the lumber occurred in 10 days (fairly quick turn-around though it could be done faster with on-house processing)
- The mahogany boards sold quickly
- The planed bleacher boards have been selling more slowly. This may be due to the market being flooded with bleacher boards at competitors' shops. Alternatively, these boards may be too long (at 19') for most customers to transport. If sale of these boards continues to be slow Earthwise will cut the boards down to more manageable lengths.

Summary:

Processing salvaged lumber in order to increase its value and marketability is a viable strategy that holds merit. Simply resurfacing the lumber may not be enough – it may need to be cut to a more manageable/marketable size. The results from this project would seem to indicate that the purchase of a planer to enable the processing to be done inhouse would be beneficial but the cost effectiveness is still being weighed - and dependent on how quickly, and at what price, the processed bleacher boards can be sold.

Rainier Wood/Sankofa:

Proposed approach:

Pulling salvaged wood from the inbound loads at a wood recycler and sending it to a wood products manufacturer – diverting the material from use as a fuel to reuse in new building products. Included training of staff at the wood recycler and the establishment of storage and shipping solutions to manage the lumber.

Actions taken/accomplished:

- Training of at wood recycling facility
- Establishment of on-site storage of materials destined for reuse
- Establishment of a system for shipping materials to the manufacturing facility in Portland
- Shipment of 2x4s and plywood (whole and $\frac{1}{2}$ sheets) to the manufacturing facility for processing
- Recovery of 150 pallets (7000 lbs) per week which were sold for reuse

Results:

- Sankofa has secured a lease on expanded warehouse space that can accommodate commercial-scale deliveries of material from Rainier (justified by the results of the collection pilot funded by this grant)
- The two partners are working on ways to gather data/info that will help them target sources of reusable wood waste as well as refine supply chain logistics.
- The wood recycler has a new source of income which pays higher rates for the same amount of wood than previous management techniques and the manufacturer now has a new source of material with which to work.
- Rainier now has 2 employees (and one owner) trained in identifying, and pulling for reuse, wood of value from the waste stream

Summary:

This partnership between a wood recycling company (primarily focused on producing a fuel product) and a processor of new wood salvaged from jobsites has proven to be fruitful for both entities and they are developing plans for moving forward together. The experience gathered has shown the viability of partnerships of this kind and demonstrated that there is value in the effort taken to remove the wood from waste stream.

Contacts:

Katie Kennedy
Seattle Public Utilities
206-386-9772
katie.kennedy@seattle.gov

Kinley Deller
King County Solid Waste
206-477-5272
Kinley.deller@kingcounty.gov