



MG Feedstock Management

HREC Site (Operations)

Note: A trained forklift and HREC approved operator must load the feedstock

Daily Feedstock Loading

- a. Turn off the automated feedstock management system after the chips have dropped below the level of the door on the hopper (Image 1)



Image 1

- b. Remove old supersack using a forklift (Image set 2)
 - i. Open the door, and leave open for loading
 - ii. Insert forks into orange supersack holder, and remove from stand
 - iii. Bring holder to ground level and remove the bag



Image set 2

- c. Hang a new bag from the orange supersack holder, and record its lot, bag number and date(Image 3)



Image 3

- d. Weigh the new bag of chips, and record its weight (Image set 4)
 - i. Ensure that you tare the scale and set it's units to lbs before placing the bag on the scale



Image set 4

- e. Using the forklift, place the orange supersack holder and sack on the hopper stand (Image set 5)
 - i. Before lowering the sack, pull out the spout from the bottom of the bag
 - ii. Ensure that the spout goes into the chute when lowering the sack onto the stand



Image set 5

- f. Open the spout by untying the strings holding it closed, and shut the door, leaving the untied strings outside the door
 - i. Ensure that the chips are flowing freely before shutting the door.
- g. Turn the automation back to Auto

| Day | Bag ID | Bag Mass [lbs] |
|-----|--------|----------------|
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Snapshot of biomass worksheet

Weekly Feedstock Inventory

- a. Monitor how many bags are in stock and notify APL site manager if there are less than 10 bags
- b. Send old pallets and bags back to the Redwood Valley site for reuse
- c. Keep inventory area clean and organized

Notice: All operators of heavy equipment at Redwood Valley Gravel Products must be APL employees/have liability coverage.

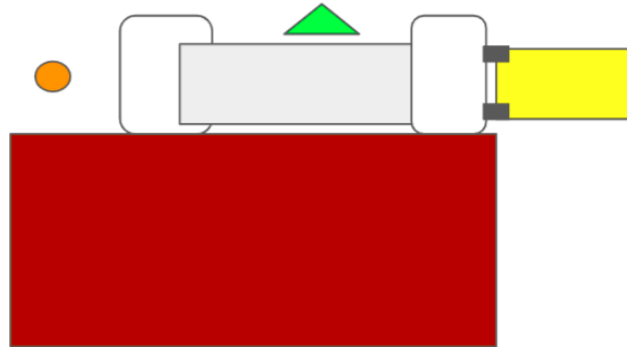
Redwood Valley Gravel Products (Feedstock Production)

Feedstock Sifting

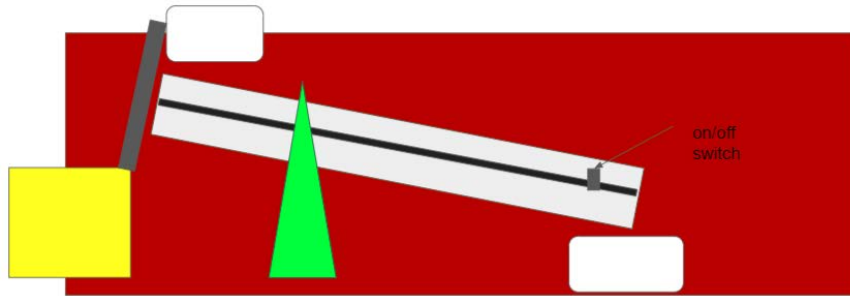
Notice: Feedstock sifting can be hot and dusty. Wear appropriate PPE to protect against sun,

inhaling wood dust, and heavy equipment hazards (e.g. gloves, boots)

1. Load bag of feedstock above the sifter from the rear
 - a. The set up should look like this, yellow is the forklift holding a new bag of fuel, grey is the sifter, the white at the other end is an empty bag to sift into. The red is the container the sifter is attached to. The green is a ladder to push fuel around on the top layer. The orange is the operator with a rake or broom to screen the unders



2. Open the bag and let fuel run on the top layer of the sifter
 - a. Open the bag up and try to spread out the fuel as much as possible. Before starting the screening.
3. Check that the bag at the bottom is attached to the sifter
 - a. There are bolts on both sides of the sifter at the bottom end that the bag loop can attach too. Also make sure there is a pallet under the bag as it will make it easier to fork the new sifted bag out once full
 - b. Ensure that the bag spout has been tied closed.
4. Turn the sifter on
 - a. There is a grey box at the bottom end of the sifter with a long plug attached. Insert the plug into the generator and start the generator. Then go over to the switch and flip it on. (as a note it would be good to use a VFD or frequency converter to find a good frequency for the sifting but will work without it)



5. Use a rake or broom to more thoroughly sift the unders
 - a. As the fuel drops onto the second layer its good to use a rake or broom to push the fuel up and brush or scrape the fuel so as to get rid of more unders
6. Once a bag is full move out of the way and load another bag
 - a. If a bag is full but you havent finished emptying the sack to be sifted turn off the sifter and put that bag down and remove the new filled bag and place a new empty one to finish emptying the bag needing to be sifted.
 - b. Also later on you can combine bags if they are only half full so there are less bags to transport
 - c. Ensure that bags are full by lifting the bag by its loops with a forklift to allow material to settle. Top up the bag with material from another bag as high as possible while still allowing for the duffle cover to be tied closed.
7. Tie off bag duffle top.
8. Label bag with the following information using the form shown below:
 - a. Date Bagged
 - b. Lot # (Confirm with Raymond Baltar)
 - c. Bag ID (increasing)
 - d. ULine Number (2-3 digit number found on ULine label on bag)
 - e. Type of Wood (e.g. Doug Fir, Oak, Madrone, Pine, etc)

Bag Label

| | |
|---------------------------------|-----------------------------|
| <hr/> DATE BAGGED | <hr/> LOT # |
| <hr/> BAG ID | <hr/> ULINE # |
| <hr/> BAG WEIGHT | <hr/> DATE DELIVERED |
| <hr/> # BAGS IN DELIVERY | <hr/> WOOD TYPE |

1. Ensure the tag or label is secured to the bag
2. The bag should be placed on a pallet and in a dry covered area