

Gustavus Disposal & Recycling Center (DRC) Quarterly Staff Report
Paul Berry, DRC Manager/ Operator
Monday, November 14th, 2022

My last quarterly report was at the August 8th General Meeting. My next quarterly report is scheduled for the February 13th, 2023 General Meeting.

General Operations and Management

Labor

Since my last report the most significant happening in the world of DRC labor was the City's hiring of Ian Barrier as the New DRC Operator. Ian started working at the DRC in July 2021 and now as a regular employee he is in a good position to take over management of the DRC after I retire. I am doing my best to go over the various aspects of managing the DRC in the time that I have left working with him.

With Ian's move to a regular position the DRC's Temporary Labor Pool (the Pool) currently has only one member, Paul Dzubay. Jeff Toms who had been working in the Pool since June has moved away.

Regarding the Pool, Ian and I may look at recruiting new members for the Pool on an on-going, year-round basis rather than using the once a year (November & December) method that I have traditionally used. The reason being there are more people around to recruit in the spring and summer and there is more work to offer them as well. Work in the winter for the Pool is generally just Saturday or the unplanned fill-in. Under the year-round, always advertising method, the application period for the Pool would be the entire year. As each application comes in, the individual would be interviewed and evaluated for inclusion in the Pool. If there were enough members in the Pool the application period could be closed for the rest of the year. Regardless of how the advertising period is managed, all hiring would continue to follow the City's procedure for the hiring of temporary staff.

Solid Waste Training Institute's (SWTI) proposal to turn waste plastic into lumber products

We all know there is too much plastic waste in the world. Traditional plastic recycling will never be able to catch up with how much plastic is generated as there is simply too much plastic material in circulation (much of that in the ocean) to be able to recycle it all. Worse still, much of the plastic in circulation is not considered recyclable. The plastic problem has fostered the development of technology and equipment for turning waste plastic into usable materials for construction, road paving etc.

Basically the process is:

1. sorting out the material you want to use from the waste stream
2. the selected material(s) is shredded and a blend of chosen materials is made
3. the material is heated and extruded into molds.

SWTI is a small Utah based company specializing in solid waste training. Chet Hovey, one of the directors for SWTI, first contacted me in July of 2017 and told me about his proposal to make building products out of our waste plastic and waste wood. They were also looking into the waste streams of Hoonah and Elfin Cove. Last year Chet was able to secure an EPA grant and together with some private funding to put together a pilot project to turn his idea into a reality.

Chet has purchased the equipment needed for the pilot project and installed it on a trailer and is planning on setting up the trailer in Juneau where there is three-phase power more easily available. At the DRC we would collect and package the various materials he is requesting and then transfer the materials to a pickup truck for a ferry ride to Juneau (these are small, pilot project quantities). For the pilot project the molds are 10" long and will be 2" x 2" or 2" x 4", textured and untextured. Feed stocks will be type 2(HDPE), types 1(PETE) & 2, mixed plastic, recovered landfilled plastics, Recovered textiles and all incoming

plastics and textiles.

This could be a very good solution to Gustavus's waste plastics. Rather than just landfilling the material, we could make it into a building product that can be sold to help recover the cost of making it or we could use the materials to improve the operation at the DRC such as using paving stones or planks that would help us deal with the mud in our waste mound. Projects like this would be supported by having a larger main building at the DRC to work in so that we can effectively house the machinery needed for the process. The timing of the pilot project is June – July 2023.

Bright Side wood chips

I would like to thank Bright Side Tree Service of Juneau for the donation of several loads of wood chips they generated when they did work in Gustavus earlier this fall. Wood chips are an important part of our composting operation that we cannot produce them ourselves.

Community Chest

Under the skillful management of Annie Mackovjak the Chest had a good summer and moved a lot of merchandise.

Since my last report our sales desk volunteers have been: Maribeth Jarvis, Beck King, Mary Williams, Vicki Bender, Annie, Robynn Jones, Jeanette DeHart, and Vikki Garrett.

Sorting, purging, stocking and other site work has been performed by some of the sales crew and Betty Hanson, Denise Pratschner, Michelle Bray, Deb Johnson, Rose Marie Gray, Cheryl Smith, Joyce Gallagher, Kim Ney, Paula Kitcheu?, Heleen Buttram, Maggie. Sorry if I missed anyone. Many thanks to all the individuals who keep the Chest alive and thriving – we are all the beneficiary.

Capital Project Summaries

There are three important projects at the DRC which are in the planning and initial funding stages. Because these are such important, and expensive projects, I am developing an illustrated summary to help describe the projects and their importance to our operation. I will be expanding on my project descriptions for future reports as I get feedback from people and take in new information.

The three projects are:

1. New Composting Facility and Compost Yard Improvements
2. New Main Building
3. Purchase of a Horizontal Baler

The composting facility and new building projects have been in the works for a while and I have talked about them before. The idea of purchasing and installing the new baler to go along with the new building project is new. I figured since we are going to have a big price tag for the building, lets include the cost of purchasing and installing the new baler as part of the funding request. Also, the equipment on-site for building construction could aid in the installation of the baler.

Title: New Composting Facility/ Quonset replacement

Summary: the goals of this project are:

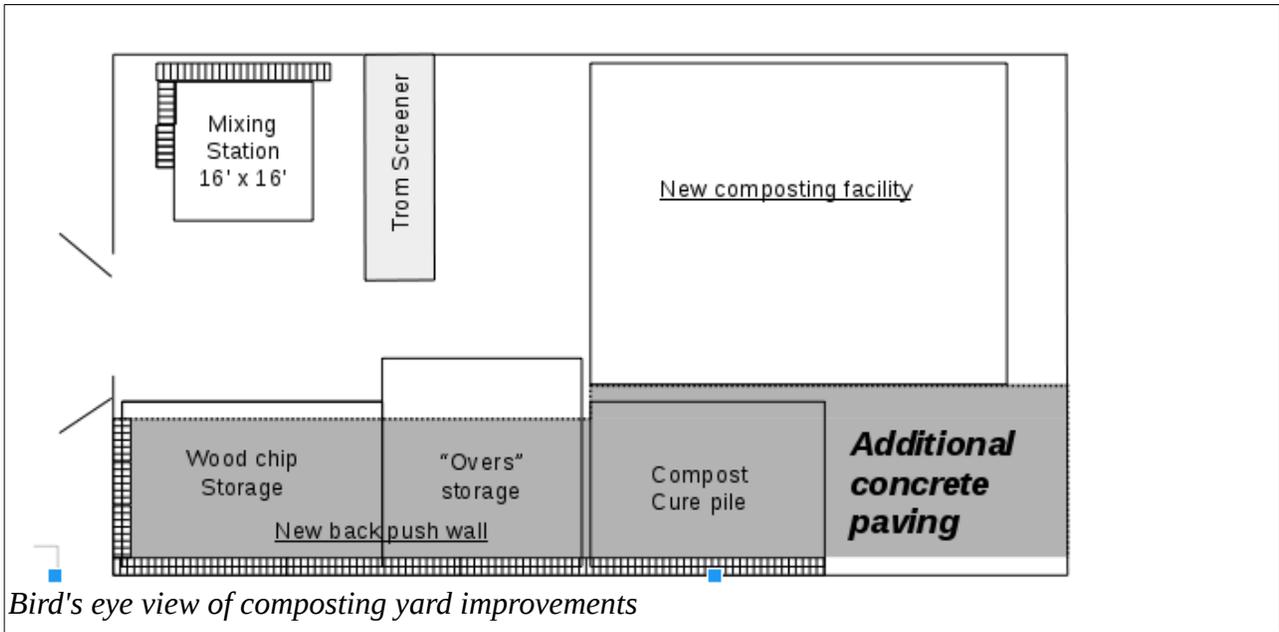
1. Replace the failing Quonset structure with a much more robust and usable composting facility. The new facility would be capable of processing greater amounts of material in a more temperature controlled manner by using ASP (aerated static piles). The new facility would have five bays for composting, would be constructed of concrete, and housed in a well built wood and metal structure
2. Pave most of the remaining unpaved area of the composting yard with concrete. Additionally, concrete push walls would be installed behind the piles of stored wood chips, sawdust, overs and curing compost. These improvements will make using the yard much easier for operator to use, allow for better recovery of stored materials and will reduce the spreading of invasive plant species by keeping invasive plants well away from the compost to be distributed.

Status: PND Engineers is putting together construction ready plans which are to be ready by December 2022

Scoping Document: Adopted February 2019. Needs to be updated once project costs are determined

Anticipated cost: Still being determined





Title: New main building

Summary: The new building will be designed to replace the functionality of the current landfill building. The current landfill building has two critical shortcomings:

- 1 It is too small to be able to properly accommodate the amount of waste throughput on a daily or weekly basis. It is also too small to house the proper equipment needed to process effectively the community's waste stream.
- 2 It was not constructed to allow the full use of powered equipment, such as a small loader or forklift, within the building. Evidence for this is a lack of concrete push walls or metal clad barrier posts beside drive through openings.

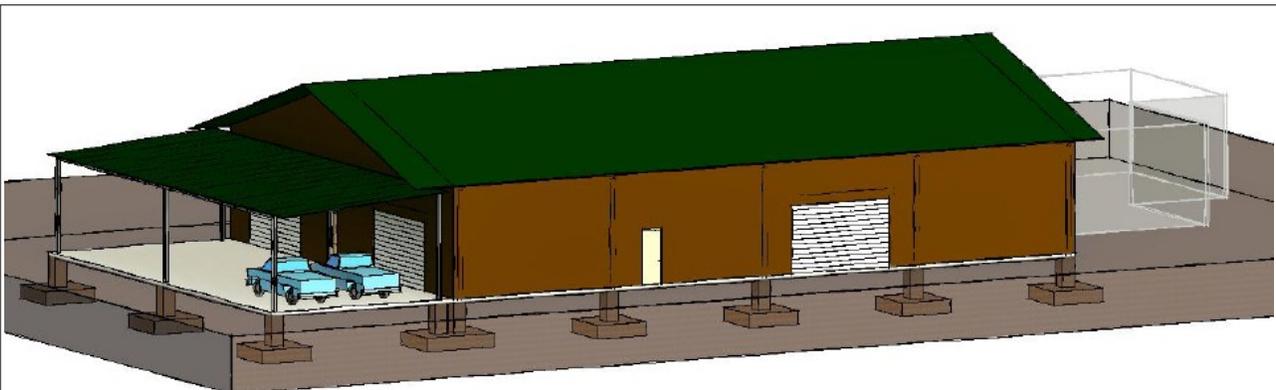
The new building will provide sufficient covered area for the public to deliver and sort their waste and provide adequate room for the equipment used to process that waste. An adequately sized building means our facility can continue to recycle over 50% of the communities waste stream well into the future. Recycling requires equipment such as a baler, shredder and glass pulverizer and we would like to be able to load the processing equipment with a loader when incoming volumes are high. All of this requires push-walls, ventilation and adequate space.

The existing landfill building will remain in place during the construction of the new building and will be converted to a storage area and maintenance shop

Status: PND Engineering has completed an initial conceptual drawing packet and estimated construction costs

Scoping document Adopted February 2020. Needs to be updated

Anticipated cost: depending on size \$3 - \$4.4 million



70' x 110' building with covered entry

Title: New horizontal baler

Summary: The baler is one of the cornerstone pieces of processing equipment in our facility. It turns a pile of loose garbage or several bins of aluminum cans into a single, compact bale. Baling densifies material which then makes it possible to efficiently move that material – either 150 feet to the mound or a thousand miles to the recycling facility. Shipping is expensive in a small, rural, end-of-the-spoke community like Gustavus and we need a baler that can produce as dense and compact bales as possible. The more weight you can get in a shipping container the lower your overall shipping costs per pound will be. Also, the more dense our bales of non-recyclable waste are the more material we will be able to get into our waste mound and the longer we will be able to use our finite disposal area.

Horizontal balers, while typically more expensive than vertical balers are much stronger as they can use more steel in the baling chamber without making the device top heavy. Horizontal balers have the additional advantage of using the force of the large hydraulic ram used for compaction to push finished bales out of the baling chamber. Vertical balers rely on a dump tray mechanism for bale removal that is simply not as robust and bales can get stuck in the baling chamber requiring powered equipment such as a loader with forks to remove the bale.

Status: Researching and soliciting quotes for the most suitable model baler

Scoping document: Being drafted for adoption in December

Anticipated cost: \$190,000 + shipping and installation



The end, thank you.

Report compiled by paul.berry@gustavus-ak.gov

11/09/22