

Gustavus Disposal & Recycling Center (DRC) Quarterly Staff Report
Paul Berry, DRC Manager/ Operator
Monday May 8th, 2023

My last quarterly report was at the February 13th General Meeting. The next quarterly report for the DRC is scheduled for the August 14th, General Meeting.

General Operations and Management

Labor

This is my last report to the Council as the DRC Manager/ Operator (yay!). I have given my resignation date as the end of current fiscal year which is June 30th. Interestingly, I started working as the Landfill Attendant in the beginning of July 1994, just about 29 years ago.

A little Bit of History: Way back in 1994 there was no City of Gustavus and services like the landfill or the library were managed by committees within the Gustavus Community Association (GCA. Formed around 1980. It had no formal powers like a municipality but it was able to accept grant money, open checking accounts and employ people). In May of 1994 the Landfill Committee advertised for the Landfill Attendant position. Ten hours a week at \$12.00 an hour. I was one of about five people who applied. I was not selected. Deb Froberg was the first landfill attendant. She filled the position for a couple months and then got a job with the Park so the Committee offered me the job starting in July and I accepted.

At that time I never thought of the Gustavus Landfill or solid waste as my career but around the summer of 2000 I jokingly declared that the Gustavus Landfill was my career, and really by that time it was my career.

Improvements at the landfill were gradual. Aluminum can recycling and glass bottle crushing had already been established before I started. We stopped open burning and started baling waste in May of 1995 (yes, all the waste of the community was burned in an open pit prior to that). Food waste composting was added in 1996. Periodic lead-acid battery collection, steel can recycling and plastic recycling were added.

In December of 1998 the Landfill got our first skid-steer loader which allowed me to do a lot more of the work needed to run the operation. In 2001 another big leap occurred when the Gustavus Landfill took over Glacier Bay Lodge's waste stream from the Park. This was controversial at the time (surprise, surprise) but with that change we received the Park's large baler which made it much easier for our operation to recycle the community's materials as well as the Lodge's and the Park's material. Plus, the revenue from the Lodge helped fund the rest of our operation.

Incorporation of the City of Gustavus in 2004 was a major boost for the operation in that DNR happily gave the new City full ownership of the 12-acre landfill parcel which made site control much easier (meaning we didn't need to lease the property and owning a facility is helpful with grants). We changed the name from Gustavus Landfill to the Gustavus Disposal & Recycling Center. Incorporation substantially added to the capability of the DRC primarily through funding as more money was available for training, employee benefits, new equipment and infrastructure improvements. Incorporation forced greater accountability for our operation with the requirement of creating and maintaining an annual budget, more detailed project planning and a more formal process for hiring and managing employees.

While there were certainly days in my career that I could have done without the responsibility and repercussions of managing the DRC, overall I am thankful for the opportunity the job has presented me with and I am very grateful for the support and appreciation I have received from the community over the past 29 years. But I am getting old and worn, and operating a landfill and recycling facility for a growing community is something better handled by the young.

We should all feel very fortunate that Ian Barrier likes working at the DRC, is good at his job and is willing to become the manager of the facility when I retire. I hope and expect that the community will support him as he does his best to manage our waste.

Because there are a couple major improvement projects in the works for the DRC, like the ones listed later in this report, I have offered the City my consulting services as a temporary employee of the City should my help be needed in getting any of these projects going or if Ian needs more help than a simple phone call.

In case you are curious, after retirement from the City, I will be continuing consulting work for the Zender Environmental Health and Research Group whom I have been working part-time with since May of 2019. With the Zender Group I mostly teach landfill operations either virtually over the Internet or in person in a classroom setting. The job is interesting as it involves statewide travel and I have been able to see small communities in Southeast and other areas in Alaska that I would not have had an opportunity to see otherwise. Plus, people listen to me and seem to think that I know something about food waste composting, using balers and what is involved in managing small landfill and recycling operations.

Now, back to the on-going DRC labor scene. The DRC labor Pool is looking for applicants for the summer season. Sven Hoosen was able to work with us through most of April but had to leave for other work commitments which leaves us with Paul Dzubay, who is a great worker but he has other work obligations as well. We need one or two individuals who will be able to work with Ian in the coming summer. Our operation really needs two people when it gets busy – one to make sure the customers are flowing and another to make sure the waste they have left with us is out of the way and going to the right place.

FY2021 and FY2022 Annual Reports

When we changed our point-of-sale (POS) system in July of 2020 I no longer knew where to look for the raw data in the POS's database. While I am still waiting for assistance from TrashFlow for getting information on how to extract max/min/avg information from our days of operation, I am releasing drafts (version 0.9) of these two reports on the DRC's web site:

https://www.gustavus-ak.gov/sites/default/files/fileattachments/disposal/_recycling_center/page/20071/drc_fy21_annual_report_0_9.pdf

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The Mound

The topmost layer of our waste mound was started in December of 2021. In December of 2022 I measured the volume of this new layer so that I could determine how much waste has been placed on the mound in one year. This measurement is our rate of airspace consumption (my measurements do not include waste that is added to our Construction/ Demolition waste area). I came up with 7,908 square feet or 293 cubic yards. In 2015 the annual growth of the mound was calculated at 250 cubic yards a year and in my May report last year I reported 6,895 square feet or 255 cubic yards (and that was a year effected by the pandemic). We can see our rate of use is increasing. While the exact capacity of the existing mound is not exactly set or precisely known, each layer of the mound is smaller than the previous layer so what area is available is consumed in an exponential fashion.

The overall area or footprint of the mound will need to expand within the next couple years. For a diagram of the specific idea I am writing about please refer to area B in Vista GeoEnvironmental's 2021 Landfill Development Plan. This plan is available on-line on the

DRC's webpage. This expansion project is part of the City's 2023-2027 Capital Improvement Plan, under Mid-Range Projects. It is titled the Disposal & Recycling Center Landfill Mound Expansion Project.

To be developed in a timely fashion, funding and effort for the expansion project should begin in the summer of 2024.

Compost Sales

The DRC's annual compost sale seems to have become an important part of the unfolding of spring in our community. It is nice to think that a resource which starts as a smelly, fly attracting pile of food waste, that when composted over six to nine months, can become a desirable product for growing plants. Maybe there is metaphor here we can take to heart when we look at the greater picture of our world.

Like the previous three years, a sample of our compost was sent to Soiltest Farm Consultants Inc. in Washington State for analysis. Our sample consists of a full one-gallon zip lock bag of material collected from five different locations within the pile. The testing reports: pH, electrical conductivity, % organic material, % ash, total agronomic minerals, total nitrogen, bioassay germination, CO2 evolution, sieve analysis, inerts, and testing for Salmonella. The report also contains a good interpretation guide of what all this means on the final page. The report is available at:

https://www.gustavus-ak.gov/sites/default/files/fileattachments/disposal_recycling_center/page/20691/c23-476_city_of_gustavus_c2_compost_sample_results.pdf

April 26th was the 2023 compost sales event. A line of cars started forming about an hour and a half before we opened at 1PM and the line didn't stop until about a half hour before closing at 5PM. 59 vehicles were served. People reported waits of over two hours but I am pleased to report that everyone who waited was served. As in the past, several people were purchasing for another household as well as themselves. Roughly 20 cubic yards of material was sold, resulting in over \$3,900 in income in support of our operation. Again, I am very glad that something which comes from our waste stream, when properly composted, becomes a highly regarded resource for the community.

Electronics Product Stewardship in Alaska

I wanted to follow up on the Extended Producer Responsibility (EPR) legislation that I mentioned in my last report. This is for the collection of waste electronics or e-waste in Alaska. From what I understand, we may not see anything coming out of the legislature on this, this year. Hopefully next year. The idea has a lot of support but the legislation has not yet been drafted and sponsored.

Community Chest

The Chest has been very active in the past three months with the resumption of Wednesday sales and setting up the tent in the yard for additional sorting and sales area. Some of the shelving in the yard has rotted and is in the process of being rebuilt by DRC staff and Chest volunteers. We are also looking at replacing the doors of "301" the smaller unheated building.

Since my last report our sales desk volunteers have been: Becky King, Meggie O'Brien, Vicki Bender, Connie Darnell, Judy Hardy and Annie Mackovjak.

Sorting, purging, stocking and other site work has been performed by some of the sales crew and Trisha, Caroline, Carolyn, Norah, Ellie, Mary, Kim and Kamille.

Many thanks to all the individuals who keep the Chest alive and thriving – we are all the beneficiaries of their efforts.

Capital Project Summaries

Ground Water Monitoring Well Replacement Project

This project has been placed in the mid-range project category in the City's 2023-2027 Capital Improvement Plan. I have contacted VistaGeoenvironmental, the engineering firm that has supported our operation in the past, for help with determining well design and the exact placement.

The next step with this project is to complete the scoping process.

The Big Three Capital Projects

As mentioned in recent reports there are three ongoing main projects at the DRC

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

In this report I will only list the summary heading for each project unless there has been new information since my last report. To get a more complete picture the reader should review the more recent reports located on City's DRC website: <https://www.gustavus-ak.gov/drc>

Title: New Composting Facility/ Quonset replacement
<p>Summary: the goals of this project are:</p> <ol style="list-style-type: none">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 structure2. 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.3. Purchase of a Bandit 250XP wood chipper and a Ford F-350 truck to move the chipper, wood chips and other work related duties.
<p>Status: A grant application for EPA's SWIFR program was submitted on February 14th. I have not heard any status reports as of yet.</p>
<p>Scoping Document: Revised and adopted December 12, 2022</p>
<p>Anticipated cost: \$589,093 including a \$25,000 City match</p>

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. The city is currently exploring funding possibilities.

Scoping document Revised and adopted December 12, 2022

Anticipated cost: For the 60' x 100' size is \$4,055,360. This price includes the purchase of a horizontal baler

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: This project, along with the new building project, were submitted to Senator Murkowski’s office as a Congressionally Directed Spending (CDR) project. To quote a recent e-mail “Senator Murkowski has put forward your request to the Appropriations Committee for consideration. Although encouraging, this is just one step in a long process, and we do not anticipate the Committee will be able to fully fund all of the Senator’s requests.”

Scoping document: Adopted December 12, 2022

Anticipated cost: \$222,800

The end, thank you.

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

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