

Gustavus Disposal & Recycling Center (DRC) Quarterly Staff Report
Paul Berry, DRC Manager/ Operator
Tuesday, November 12th, 2019

My last quarterly report was at the August 12th General Meeting. My next quarterly report is scheduled for the February 10th, 2020 General Meeting.

General Operations and Management

Labor

For the DRC temporary labor pool (Pool): In mid-August Jeff Irwin wrapped up his work at the DRC and started his winter work at the School. Likewise, Paul Dzubay has reduced his days at the DRC and is now working five days a week at the School. David Cannamore has returned to the tipping floor and is the primary Assistant Operator for this winter. In addition to my usual managerial work I will be retuning to being an operator at least one day a week and filling in helping provide the 2nd person on some Saturdays this winter. As mentioned in my previous report I am proposing the creation of the DRC Operator Position. This would be a regular position, full-time in the five month busy season (May - September), and part time for the rest of the year. Again, this is regular status as opposed to the temporary position status that the Pool staff all currently utilize. Creation of the DRC Operator position is beneficial to the City in two important ways: training and being able to replace the Manager/ Operator, either temporarily or as a candidate for permanent replacement.

Training is very important for an operator to develop an understanding of the context of their job - why we do things the way we do. As of yet no workers have come to the DRC with any prior experience of working at a landfill or recycling operation. Classroom training in landfill operation, exposure to a peer group of landfill workers and the facility tour usually offered with formal training are very important in giving an Operator greater perspective in how landfill facilities are managed. Training is also very important when it comes to safety: how to safely operate around machinery and how to safely operate around the chemicals commonly associated with landfill and recycling operations.

Because temporary employees are by definition temporary there is less motivation on the part of the City to provide them with adequate training and advancement opportunities. While the DRC provides instruction on how to operate the machinery at the DRC this hands-on training does not cover the full scope of landfill operation and provides no certification commonly associated with formal trainings such as RALO (Rural Alaska Landfill Operator) or HAZWOPER (Hazardous Waste Operations and Emergency Response). Regular employment also offers a much better career incentive for an employee than does a temporary employment status. Pool employees are required to go through the hiring process on an annual basis where a regular employee remains hired until resignation or termination. The Pool would still exist at the DRC, it would just be smaller.

I am trying to provide a way to have one DRC staff person besides myself to be thoroughly versed in the operation of the DRC. If the Council does not support this proposal then I may need to look at providing such training to all Pool members. How else am I to know who is the most interested in the work and the capable of managing it in my absence? My hope is that the DRC Operator position would be created and adopted by the Council prior to the start of FY2021 and that the new position would be incorporated into the FY2021 budget.

The compost scene

There is about 10% more food waste composted this summer over last summer and I attribute this to not having the diversion of the hog farm.

As I have learned more about commercial composting operations I have determined that it would be good to change the timing of the DRC compost sales. Rather than just simply selling what is there each spring I want to sell it in batches. Batches would be fully cured and would have gone through weed trials. In weed trials you collect compost from various points in the pile, bring them inside, make sure the sample is moist and wait and see what sprouts up. This way we know what we are distributing and if there are complaints or concerns about the weeds in the City's compost I will have first-hand results of my own that I can look at. I would also like to start testing for metals and pathogens. I plan on using Washington State's WAC 173-350-220 composting regulations as my guide for what is being tested for (metals, fecal coliforms and salmonella). I want our composting facility to be safe - both in its way of operating but also with its product.

Updating the Scale House/ Point of Sale software

Since August 18th, 2009 the DRC has enjoyed having a Point of Sale system that operates in real time to record the weights of a customer's waste delivery, determine the customer's charges and maintain their individual account balances. Before that time the Operator would look up a customer's balance on one sheet of paper. Their charges were calculated and payments recorded on another sheet of paper and then periodically I would enter all this information into the DRC database (at home) and print a new balance sheet. I don't remember much of this system except that I didn't really like it. I wanted scale house software for the DRC. Scale house software is not cheap and typically costs thousands of dollars. I am an amateur software programmer so I saw an opportunity. When I did this project I enjoyed the challenge of developing an entire software suite for the DRC. Software to not only provide a Point of Sale system but also an equipment maintenance database for our Bobcat, a database of all our exportable recyclables and other features. I developed all of this using quality, free, open-source software. I did all the development work on my own time over the course of several years. It was a hobby.

However, because the DRC's software is custom and unique in its approach, it takes someone with a high level of computer software and hardware interest and expertise to maintain the system. This transition of custom software supported by me to commercial software supported by businesses is part of my incremental retirement process and is already funded as part of the DRC's FY20 operating budget. This project has a two fold purpose: 1) so that any DRC Operator can call a support technician to work through a given issue they might be having with the Point of Sale system; and 2) that the City Treasurer could take over billing for the DRC. Over the course of a year the DRC sends out over 130 billing statements to our business customers.

I identified four good quality scale house software packages: Paradigm Software, Creative Info Systems, Trash Flow & Waste Works. With prices ranging from over \$19,000 to slightly over \$5,000. Each of these products has an annual support fee ranging from over \$3,000 to slightly over \$600 per year. The annual support cost will be a new expense for the DRC as our current annual support costs have simply been a part of the DRC's payroll expenses.

One thing I have learned in my scale house software search is that all of the software that I have come across is oriented around vehicles. Customers are initially identified more by a license plate or truck id than by a last name. Our system of having walk-in customers place their waste on a scale and taking multiple weights for recyclables and non-recyclables is unique (surprise, surprise).

I have identified Trash Flow www.trashflow.com/index.php as the best replacement of our current software.

The other portions of the DRC software suite such as the equipment maintenance, recyclable material inventories etc. could be exported to simple spreadsheets if need be and I am not concerned with finding commercial replacements for these features.

I am assembling all the pieces and starting the process now so that the new system can be

on-line by the time the Lodges open up and our waste stream goes from its winter trickle to its summer roar.

Zender Group work

Since my last report I have had the good fortune to conduct a site visit to Yakutat to assist the Yakutat Tlinket Tribe with a community-scale food waste composting project that they are hoping to construct at the Yakutat landfill. This project is still in its early planning and permitting stages. Through my Zender work I am also learning about a multi-community recycling facility being constructed in Klawock (Prince of Wales Island) that will serve Klawock, Craig, Kasaan & Hydaberg. As time goes on I hope to have a chance to visit Klawock to further my support and participation in this project. What I find most interesting about the project is that it has a central building with a horizontal baler – how are they approaching building layout? Is there something I could learn for our facility? In addition to having more traditional recycling aspects like baling and glass crushing they are also pursuing some cutting edge technology such as utilizing pyrolysis technology for turning non-recyclable plastics into oil.

Next week (11/19 – 11/21), I will be attending the annual Alaska Tribal Conference on Environmental management (ATCEM) in Anchorage and giving a presentation about community-scale composting based on my work here in Gustavus. This conference is an excellent networking opportunity and all travel, payroll and per-diem is covered by the Zender Group and I will be on leave from the CoG.

Groundwater testing

On Monday, October 28th, I sampled the ground water in two of the four ground water monitor wells that are within the DRC site. The sampling is part of our operating permit with ADEC and I sample the wells on a three year rotation. The results will not be back for another week or two but one note of concern is that monitor well one, our well closest to the Small Boat Harbor which was installed by Village Safe Water way back in 1991, has gone dry. Dry even during high-high tide, during a month of high precipitation. I will be working with ADEC to determine if this well needs to be replaced or if we can instead use the other down-gradient well when we sample. If a replacement well is required this will be a capital project. I would like to thank Kathy Streveler, who does ground water sampling as part of her work with Ahtna Environmental Inc., for auditing my work last month.

Community Chest

With Betsy Lesh's steady leadership, the support of a dedicated team of volunteers, and thousands of pounds of donated item items, we are all able to enjoy excellent value and selection in our community thrift store. Unfortunately this year we have lost some of our long-time front desk people: Liz Vanderzanden and Mary Williams. Earlier in this reporting period Betsy had resorted to half days or being totally closed for a day if there was not a person available to run the counter that day but fortunately some new individuals have come forward who are willing to run the front desk. I would also like to thank Mary Coster and Sandy Best for staffing the Chest on Monday's this past summer.

Since my last report our front desk volunteers have been: Catherine Anderson, Vicki Bender, Sandy Best, Judy Brakel, Mary Coster, Maribeth Jarvis, Becky King, Betsy, Annie Mackovjak and Jo Nerger.

On Wednesdays, and on other days as well, there is sorting, purging and stocking. Since my August report our volunteers have been: Betsy, Ben Sadler, Carolyn Warren, Becky, Cathy Martineau, Laura Ross, Kim Ney, Denise Pratscher, Annie, Joyce Lupro, Joyce Gallagher, Vikki Garrett, Katy Dighton, Deb Johnson, Joni & Bailey Seay, Heleen Buttram, Taylor ?, Cheryl Smith & Chris Spute.

It looks like the "accepting donations only when the Chest is open" policy has become

permanent as it has made it much easier to screen and control donations.

Solid Waste Management and Facility Planing Process (“SWMP”)

I love President Eisenhower’s quote: “Plans are useless, but planning is indispensable.” In my eyes the SWMP has two main focuses: 1) replacing our current, undersized building and undersized baler with a larger building which will house a larger baler; and 2) developing a plan for what to do with our non-recyclable waste when the mound reaches capacity in about five years. There are a number of other important aspects of the plan but these two issues are what drives it for me.

One of the challenges of our facility is its seasonal nature. A lot more waste is delivered and has to be processed during the summer than in the winter. As I am so fond of saying: one week in July is the equivalent of the entire month of February and sure enough when I added up the numbers for this it is true. During the week of the 4th this year, the DRC received 12,788 pounds of waste and for the entire month of February of this year the DRC received 11,001 pounds of waste. For the week of the 4th this year the DRC was open two days and for February the DRC was open for 12 days. A facility has to be designed for peak flows rather than average flows so that it can keep up during the peak times. I stress this now because in the off-season we can think “what’s the big deal, the DRC seems okay.” but no, the facility is maxed-out in the summer and has to be rebuilt so that it can effectively handle a greater amount of waste than what the facility was originally designed for.

Another important component of the SWMP is a proposed change in the way we handle the waste. I am proposing that the DRC transition from having the operators hand feed materials into the balers to instead use a small loader and a baler that has an in-feed hopper. This is much more time efficient for the operator and allows them to get a little further away from what at times can be a very messy baling operation. Likewise in the SWMP I am proposing that the City invest in a larger, more powerful waste handling equipment like a horizontal baler so that we can produce larger, denser bales that will improve shipping efficiency and air space conservation in the mound.

Capital Project Summaries

New Composting Facility/ Quonset replacement

Project description:

[For the benefit of our new Council members I am copying the project description from my last report] The objective of this project is to build a custom designed composting facility that is a 40’ wide x 8’ to 10’ deep, ~12’ high. It is a shed roofed building constructed with a concrete lower portion and a wood framed upper portion. Each of the five 8’ x 8’ concrete bays that make up this building will have 4” PVC pipes embedded in the concrete that will feed air to two plenums in the floor. This will provide positive aeration to the bin. Air is supplied by central electric blower controlled by a timer and a temperature probe. Active air flow is not always necessary for our composting operation, however when we are processing a lot of material or material such as fish waste, positive aeration is essential to avoid serious odor events and aeration speeds up the composting process which important when you are trying to process a lot of material within a fixed size facility. Each bin will have a set of double doors to provide access to the bin and provide for bird control when all the doors are closed. Besides replacing the failing Quonset structure one of the goals of this project is to develop a more efficient work flow for the Operator than the system we currently have so that no matter which operator does the routine, we are getting consistent results.

The new composting facility is to go where the Quonset currently is so prior to the construction of the Compost facility the Quonset building will need to be carefully disassembled with the intent of re-using the metal framing material for another project.

Project status:

As mentioned the previous report, construction of the composting facility has been delayed due to the fact that the plans did not have an Alaska based engineer's stamp on them. The City has entered into a purchase order agreement with Timberline Engineering (of Juneau) and Terra Construction and Design (of Gustavus, Matt Davis) to create one set of bid ready plans for the new composting facility. I have been working with Matt in his production of a set of bid-ready construction drawings for the new composting facility. Currently, the timeline for completion of this agreement and the creation of the RFQ for construction would be December or later with construction of the facility in the spring of next year.

In-flow Storage and Household Waste Facility Storage Area Project

As described during last month's work session prior to the General Meeting, this is the area between the Small Boat Harbor Road and the Landfill fence that will be turned into a storage area for recyclables prior to their being baled or otherwise processed. The RFQ for this project was posted during last month General Meeting and the bids came in on Wednesday October 30th. Tom, Phoebe and I have gone over the two bids and produced the recommendation that is on tonight's agenda.

Household Hazardous Waste Facility

This project is the purchase of a 20' long x 8' wide & 8' high container designed for household hazardous waste storage. The unit includes spill containment, ventilation, shelving, and signage. The proposed container will be fully-constructed at a facility in the lower 48 and is ready to use upon arrival in Gustavus. At this time I am going over the specifications and have been working on developing a list of at least three vendors that I will solicit quotes from. Shipping costs have changed since I last went over the costs for this project and I will need to insure that we can get the new facility here and set up within the project's budget.

The end, thank you.

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