

Options for Moving of One or More Functions of the DRC

Final Recommendations on DRC Site Location Options

Gustavus Disposal and Recycling Center Committee
September 12, 2007

Introduction

- ❖ **Our mandate:** The City Council of the City of Gustavus has directed the DRC Committee to complete a definitive exploration of new site options, for comparison to the existing site, for all or some of the existing DRC functions, and for the additional function of septage processing. Analysis shall address regulatory and environmental protection requirements, operating efficiency, and the long-term ability of the DRC to meet the needs, expectations, and values of the community. (Resolution 2007-04)
- ❖ **Our investigation:** Prior to this effort DRC Committee members had explored new site options for many years without coming to a definite conclusion. Resolution 2007-04 provided the opportunity to renew this search in earnest with City support. As of this time, we have devoted several hundred hours, collectively, to investigating places, reviewing regulations, and charting potential attributes, values and costs of numerous potential sites. Various factors have reduced the number of potential site options to those presented below. See Appendix B for a longer history of the investigation and Excel sheets showing sites investigated and eliminated, including reasons.
- ❖ **Results of Public Scoping:** Appendix C provides detailed notes from a public scoping meeting held on September 11, and the one written public comment received on the scoping document. These comments add details and perspectives on the options presented, but do not suggest major alteration of the alternatives selected by the committee. Appendix D presents a letter received from DOT/PF cautioning us against recommending an option that envisions transfer of landfill functions to the “Airport Triangle” near the airport. Close reading of the letter suggests that the author did not note that none of our options envision use of this site in ways likely to attract birds - the major DOT/PF concern. The committee remains confident that permission can be obtained for use of this site once the agency fully understands the options we present.
- ❖ **Guiding principles:**
 1. Adhere to the points outlined in the City of Gustavus Project Scoping Form, as developed by the Planning Committee. These include adherence to the Gustavus Community Strategic Plan, and adherence to community values in terms of socio-environmental impacts.

2. Any change must result in a net improvement of the DRC operation commensurate with costs (monetary and other) of the change. Please see essay, "Raising Value, Lowering Costs" on the DRC website: http://www.gustavus-ak.gov/committees/DRC/Planning_documents/raising_value_lowering_cost.htm
3. The number of sites used should be minimized to reduce costs of multiple site acquisition, permitting, fencing and other types of site preparation, equipment and infrastructure, operator time, customer time/convenience.
4. Any change must result in a reduction of actual or potential conflict with nearby residents and other users.
5. New site(s) will have a direct dedicated access road from a main road (such as Mountain View or Wilson) so as not to pass through or impact neighborhoods.

Notes:

1. Functions of DRC site include: landfill/burial; food waste composting; recyclables collection and processing; Community Chest; scrap steel processing and temporary storage; construction/demolition debris; hazardous waste storage and disposal.
2. The Community Chest may remain where it is or move to a new site. There is no room for consolidation on the existing landfill site.
3. The urgency of septage treatment may require this function to be considered separately from the DRC site move.
4. Consider the possibility of shipping garbage to a SE Regional Landfill with any of the scenarios below, should this become a possibility.
5. Consider new technology such as composting sewage, food waste, and garbage together, as is done in Haines, when balefill space runs out at existing site.
6. Consider composting an essential function in all options:
 - a. It significantly prolongs the life of our existing balefill. (July 07 weight data show that the community brought in 11,461 pounds of trash and 28,481 pounds of recyclables, including food waste.)
 - b. It reduces the release of methane gas to the atmosphere. Methane gas contributes to global warming. (Landfills that mix food waste with trash produce significant amounts of methane.)
 - c. It turns waste into a useful commodity for the community.
 - d. It greatly reduces problems with bears, allowing the community to co-exist with its wildlife.

Three scenarios for the relocation of one or more DRC functions

These scenarios are focused on the only three available sites that meet our location and attribute criteria (see Appendix B). All but the present site, and any operating plan selected, will require some form of FAA and/or DEC approval. Note that none of the options should be considered "no action". It is the committee's conclusion that all acceptable future DRC options entail considerable development and operating cost if they are to meet evolving community needs.

Option One

Maximize Use of Current Site with Addition of Dedicated Construction/Demolition Debris Site at Airport Triangle

- 1) Upgrade the present operation into a visually pleasing, state-of-the-art facility to accommodate efficient use of space and equipment within a noise- and odor-controlled structure. Tighter construction will control nuisance noise associated with glass crushing and metal processing. Large metal items such as washing machines and cars will be handled at Toshua Parker's yard.
- 2) Procure "Airport Triangle" north of airport off Wilson Rd. under Public/Charitable land selection process to use for construction/demolition debris.
- 3) Leave the Community Chest as-is.

Values

- Central location convenient for customer delivery of waste, pick-up of compost.
- Ideal location for shipment of recyclables.
- Balefill good for twenty plus years, assuming lateral expansion within the property.
- Low water table (good, deep sand drainage) with no existing problems with groundwater quality per test results.
- No downstream neighbors.
- Current site is grandfathered in with FAA. No new landfill permits are necessary. Permit for the separate construction/demolition debris site at the airport triangle is not as expensive/complex as that for a full service landfill.

Costs

- Construction costs of new, noise- and odor-controlled building that will be functional, eliminate problems with neighbors, and carry the landfill through twenty more years of service as a full service landfill, and many additional years as a transfer station, if necessary.
- Costs of permitting and site preparation (fencing, at the least) for construction/demolition debris (C/D) site at Airport Triangle.
- Construction of dedicated service road off Wilson Road to C/D site.
- Additional operator and equipment time one-half to one day per week to handle construction/demolition debris (time based on demand).

Concerns

- Limited space for composting operation. May not be able to add fish to enrich compost due to potential odor problem for neighbors. We would need to figure out how to control any additional odors if they were generated.

- Cooking grease trap waste processing is another problematic function at this site, again due to odor.
- Does not have the extensive buffer we would like to have at an “ideal” site.
- May never fully meet the concerns raised by some neighbors.

Option Two

Option One, Plus Move Composting Operation

Follow Plan for Option One, and, in addition, move the composting operation to another site. The suggested site is a five-acre (min.) piece of the Marchbanks agricultural unit.

Values

- Moves composting to a site dedicated to agricultural practices that is outside the 10,000 foot airport perimeter (and thus not requiring an FAA waiver).
- Removes a principle source of neighborhood conflict.
- Permits the DRC to compost food waste in a larger area, with more rational use of space and an adequate buffer zone.
- Permits DRC to create more nutritious compost by adding fish scraps from local packers/processors.
- Grease trap waste could also be processed at the composting site.

Costs

- New site purchase/lease.
- Road construction and improvements.
- Installation of power and water system.
- Site preparation, including electric fence.
- Construction of new building, mixing station.
- Additional bobcat and/or truck or trailer for transport.
- Additional operator time.
- Truck for moving food waste.
- Time/gas for moving food waste from current site to dedicated compost site.
- Customer time in going to dedicated site to buy compost. They could only do so when the compost site had an operator present to sell the product, or if the operator returned the product to the main DRC site.

Concerns

- Composting has minimal monetary value, but great environmental value. A more remote location could make the operation even more cost-inefficient. This could be off-set by production of richer compost.
- Possible impact on neighborhoods if access is via neighborhood road. Access to all DRC functions should be off a main road.

Option Three

Move All Operations to the “Airport Triangle” North of the Duck Pond, Using the Existing Site Only as a Balefill and Possible Transfer Station for Shipment

Move all on-going functions, except baling/landfilling, to the Airport Triangle, in such a manner that these operations will meet FAA and DEC approval. Construct dedicated access road off Wilson Road. Baling/landfilling would continue to take place at existing site, until replaced by a SE Regional Landfill. Trash would be baled at the new site where customers deliver it, and then the bales would be hauled to the old harbor site for landfilling or shipment to the regional landfill. Finally, a new technology could be applied such as composting garbage with sewage in the manner of the Haines operation, with the difference that we would separate recyclables. Note: Open balefill/landfill would not be permitted near the airport.

Values

- Airport Triangle land is available at no cost through selection under Public/Charitable Use category.
- Opportunity to consolidate most functions in a relatively convenient location for customer and for shipment from boat harbor.
- Minimum impact on residential areas.
- Opportunity for planning of ideal layout, including office space and bathroom with running water.
- Size of property (approx. 60 acres) will allow for adequate buffer zone and room for expansion of operation commensurate to population increase.
- Space available for possible in-vessel composting of garbage plus sewage in manner of Haines, should this be our best option in the future.
- Could move Community Chest to this location.

Costs

- Permitting of new site for all functions except balefill (still cheaper than full-fledged landfill with baling/landfilling function.)
- Installation of power.
- Construction of dedicated access road off Wilson Road.
- Site preparation, including fencing, for all functions except balefill/landfill.

- Construction of enclosed facility for all functions except construction/demolition debris (processing of glass, scrap metal and recyclables, composting operation). **Note:** Similar in function to the facility envisioned Option One, but built from scratch.
- More equipment, more operator time, more power consumption due to two locations.
- More customer time/gas due to two locations, unless trash is baled at Airport Triangle and taken to current site for burial.

SEPTAGE TREATMENT/DISPOSAL

The problem of septage treatment is considered so urgent that it is treated separately from other DRC issues so that its solution may be expedited. Further work is needed on this topic to find a disposal method and location that will satisfy FAA and DEC constraints as well as community concerns. Viable site options seem to come down to the Airport Triangle and Gravel Pits areas (the latter unlikely because of water table concerns). Lagoons should not be located near residential areas due to odors. No down-wind/downstream residential area should suffer the consequences of site location. It may become necessary to ship septage out for proper treatment and disposal.

John Barry, the volunteer engineer working on this issue with the DRC Committee, has offered the following information:

- **SEPTAGE LAGOONS:** ADEC states that a sewage lagoon should be located no closer than 1/4 mile to private dwellings due to odor.
- **LAND SPREADING:** ADEC discourages this method.
 - 1) Land spreading for agriculture has requirements that involve growing an actual crop and applying septage as fertilizer at a specific point in the growing season. No one is currently growing sufficiently large-scale crops in Gustavus, (though the Lassiter's farm may do so in the future).
 - 2) Land spreading for disposal has specific requirements that in combination will be difficult or impossible to comply with such as: separation from groundwater; a large tract of open land; dry weather; odor; and septage must be covered after application, such as plowing in to the soil.
 - 3) 1 & 2 above will require a storage facility for septage because windows of opportunity for application will be very limited.

APPENDIX A Selected References

Texts

Salvato, Joseph A., et. al., eds. 2003. *Environmental Engineering* (Fifth Edition). Hoboken, N.J.: John Wiley & Sons.

Websites

DEC Regulations

Class III manual

<http://www.dec.state.ak.us/eh/sw/Factsheets/Class3Manual.pdf>

18 AAC 60 Solid Waste Management Regulations

<http://www.dec.state.ak.us/regulations/pdfs/60mas.pdf>

Note from Ed Elmswiler, DEC (May 28, 2007): (You may wish to look at) our new Procedure Manual for Municipal Class III solid waste landfills. There are best management practices in the manual. However, you should still use our regulations for Class III landfills. Although you are not obligated to build or operate to a higher standard, this is something worth exploring as it will limit your long-term liability and other issues.

FAA Circulars

150/5200-34 CONSTRUCTION OR ESTABLISHMENT OF LANDFILLS
NEAR PUBLIC AIRPORTS

http://www.faa.gov/airports_airtraffic/airports/resources/advisory_circulars/media/150-5200-34A/150_5200_34a.pdf

47KB

150/5200-33 HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR
AIRPORTS

http://www.faa.gov/airports_airtraffic/airports/resources/advisory_circulars/media/150-5200-33A/150_5200_33a.pdf 329.4KB

Reports

Carson Dorn, Inc. 2002. *Technical Report for Gustavus Septage Disposal Options*.
Prepared for Gustavus and Village Safe Water. Juneau, Ak.

APPENDIX B

History of our Investigation: Narrative and Excel Tables

The DRC committee resumed work on this issue in earnest during late winter of 2007, after being directed to do so by the City Council, meeting approximately twice monthly for that purpose. This was the sequence followed:

- 1) Compare aspects of the DRC function to the attributes a site would need have in order to be an acceptable host for those functions (Table I);
- 2) Construct a list of all sites that might conceivably meet the criteria of Table I, and give our preliminary assessment of each site. (Table II);
- 3) Reduce the list of potential sites by removing all that have some fatal flaw;
- 4) Focus on the remaining list of candidate sites, and answer outstanding questions regarding them;
- 5) That research eventually eliminated all but three sites (Tables III, IV): the present one; Marchbanks Ag allotment (for compost only), and the “Airport Triangle” of DNR land

north of the Duck Pond. None of these sites is without its problems, but can conceivably be employed for present purposes.

6) Assemble this all into a draft scoping document for initial presentation to the Planning Committee's consideration and then for presentation to the public.

7) Hold a public meeting (done on September 11) and collect written public comment on the scoping document.

8) Present the final recommendations to the City Council (September 13, 2007 meeting).

APPENDIX C

Public Comment on the Scoping Document

Public Meeting Regarding Potential Move of One or More Functions of the DRC September 11, 2007 7 PM City Hall

Committee Present: Greg Streveler, Kim Ney, Karen Taylor

Community Present: Charles DeBoer, Morgan DeBoer, Janene Driscoll, Chris Gabriele, Paul Berry, Mike Taylor

Greg Streveler:

- 1) Have we missed any prime options?
- 2) Have we argued our case well for the three options presented?

We've been working on this report at the request of the Council since January 2007. We have met on average twice a month.

The state will issue a questionnaire to Gustavus residents in a few months. This DRC issue can be included.

Greg read through the places considered and provided our reasons for elimination. For example, CIRI has been contacted three times in the past 15 years, but has said "no" each time. The process of elimination after contacting owners, or considering the water table, adjacent neighborhoods, various regulations, and so on left us with three options.

Morgan asked how the FAA felt about the Airport Triangle.

Greg read the September 10 letter from DOT expressing their objection.

Greg said the FAA, itself, requested that we present a concrete proposal once the City had determined its optimum location.

Janene: you would see the demolition/construction debris from the air.

Morgan: But, it would be off in a corner.

Morgan: Finding a location is a real problem. I certainly feel for you on this. We see where you are coming from, and you see where we are coming from.

Greg: What can we add?

Morgan: Couldn't the composting go to a Good River location? Those folks are all green.

Greg: We can do it at the Marchbanks ag unit.

Mike: There is also the possibility of the SE Regional Landfill.

Janene: We could also consider in-vessel composting at the current location, if potential odors are the issue. With in-vessel composting we can create a more nutritious product. It seems that the costs of moving would be prohibitive.

Chris G: We are just coming to terms with the real costs of running our operation. The community needs to be aware of these actual costs as well as the costs of moving any or all functions.

Morgan: I'm concerned about where the transfer station would be. I would like it to be west of the current location. I don't want to listen to back-up beepers from a barge loading at night. Our 94 agreement with DEC says that when the berm thing is done, it will be re-vegetated. I want storage on the west side of the buildings. The buildings and re-vegetated area would be a noise screen. I'd be up for burying bales on our property somewhere—I mean, looking at the future. There is good drainage on my property.

Greg: Is everyone comfortable with the game plan we present with the three options? I will present it to the City Council on Thursday, September 13. The City will give Nicole the green light for the questionnaire.

Morgan: I don't like this being put to a vote on what should be left at the current site. 75% of the community originally said they wanted the whole thing moved. This is like a planning tool. 75% of the people made moving the dump a priority, but now we might get stuck. I haven't talked to the Jones, but if our businesses are affected, and our property values fall, we'll have to take action. You're on the right track, but if our property is affected by price falls we'll have to take action.

The dump has been better, quieter this season—and our dump is way better than dumps in the Yukon. Your set-up is top-notch, but we have proof that the dump is not where it used to be, and now we are taking park garbage, and who knows, some time we may be taking garbage from some mining camp.

Karen: I don't know the exact percentage of those suggesting that the DRC move, but at that time people responding to the questionnaire had no information about potential locations or costs. Now they will have the opportunity to re-think the issue based on a list of potential locations and cost categories. As we get more information, we can make more informed decisions.

Greg: The Council plans to ask Nicole to present questions to the Community. You can talk to the Council.

Mike T.: It's important to have the option of leaving most things where they are. It would make sense to move construction/demolition debris to the Airport triangle because it is large volume and it is not the kind of material that is being delivered by residents once or twice a week to the DRC. It is only occasionally delivered and usually as part of a special project. The DRC is a City-run business and we have to consider what works for the business and the needs of the community as a whole. The DeBoers have their complaints about the DRC location, but they are not willing to pay for the move. But, that being said, it is important to continue to improve our operations and to work to minimize the environmental effects both for our neighbors and for the city as a whole. That's a "given," regardless of whether we move anything or not.

Greg: If you start with the status quo, then you have something with which to contrast your options.

Morgan: you probably wanted to keep the dump there all along. You really didn't want to move it.

Greg: It's not our choice. It is a Council and community choice.

Morgan: This is a green-influenced group, but we will try to give you the benefit of the doubt.

Kim: I live near the landfill. Personally, I wanted it to move. But, I can say that this was a fair, open process.

Greg: Before Nicole's questionnaire goes out, there will be background information handed out. You (Morgan) are welcome to look at it.

Janene: I would not wish to see another neighborhood, in which people did not buy or acquire land next to a landfill, be affected by moving one or more functions.

Mike: We have to consider the business case for the options—to move or not move part of all of the DRC. If we had a great location for everything—convenient to the residents, lots of space, good hydrology, etc., there would be some real advantages to relocating. We could do some great things, like organize the operations for more efficiency, and we would be all over it. Unfortunately we just don't have that kind of place available.

Regarding moving the composting we have to remember that composting is an economic loser. You can't make composting profitable, so it's a matter of reducing how much you lose on it. If we have to haul materials to a different site for composting, and back to some site to sell it, we are introducing a lot of cost for no value added. In the case of option of moving the compost operation to the Marchbanks' ag unit, a neighborhood road could be affected, but this could be mitigated by the operator only bringing in food waste

a few times per week and hauling some compost back to the primary site for sale. There wouldn't be anywhere near as much traffic for the compost only site as there would be if the entire facility was there.

Chris G: A questionnaire is not a vote. It simply gives you an idea of what people think. The problem we have today is that people are not asked what they think frequently enough.

Janene: I have some questions about large machines being handled by Toshua. Is his operation really environmentally sound?

Morgan: He's licensed.

Paul: No permitting is required. There are no regulations. When he exceeds 50 tons, he'll face another set of rules. It is not clear that he has or has to have a permit.

Janene: The handling of cars needs to be done well—are we endorsing Toshua's place? Does he follow our standards?

Mike: Recyclers won't accept the cars unless he follows accepted procedures (like draining fluids, removing batteries and tires). However, it seems to me that if Toshua chose not to handle this kind of thing anymore, the Airport Triangle would be a perfect holding spot for cars and large appliances. Of course we would make sure nothing was leaking into a pad. What we have to consider here is a large-area storage issue.

Morgan: This IS a model dump compared to the ones I saw in the Yukon.

Janene: It's very important for people to have a total cost estimate for each option before making a decision, and to give serious thought to potential sources (if any) for that amount of money.

Karen: Let's see which location people would prefer based on our current description with cost categories. Then we can make sure this will fly with the FAA. According to our reading of the regulations, our plan should comply with FAA rules. DOT did not read our proposal carefully; nor do they have the right to speak for the FAA. Once we have some input from the community and the FAA, the City can decide whether to proceed with a consulting company for cost estimates. Then, the public will have the opportunity to consider the issue once again. Before turning everything over to a consultant, the DRC will have the opportunity to introduce good ideas suggested by the public—such as in-vessel composting at the current location.

A recommendation:

If Morgan, or any one else, wishes to write a statement of their views to accompany the DRC Committee findings, they are most welcome to do so. However, these should be independent statements signed and dated by the individual author. In that way, the DRC Committee cannot possibly be accused later of not representing those views adequately.

The DRC Committee has been charged with producing a summary of the findings of its members. Any other view, in support or opposition, or simply suggesting alternatives we may have missed, should be submitted together with the DRC report, or as an addendum to our initial findings, so that the Planning Committee and City Council may benefit from these diverse viewpoints.

Comments by Colleen Stansbury via e-mail, 7/12/07

Greg, I would like to weigh in(last minute, of course), on the choices for the continuation/expansion of the DRC. I support option one because it continues use of present site which still seems to be the best site for this activity. there are some shortcomings which could be addressed if there was some assurance of permanence at this site. I was not aware of the scope of need for construction/demolition waste until very recently, but believe we should attempt to use the airport triangle for this purpose. I am opposed to the City leasing private land for long term use when there is land available for us to use at no cost and for which we would have title.

I applaud the DRC Committee and staff for a job very well done. You are a model for the rest of us.

Thank you,
Colleen Stansbury
P O Box 145

APPENDIX D
DOT/PF Comments on the Scoping Document

On September 10, Malcomb Menzies of the DOT/PF wrote to the Mayor voicing “concerns regarding waste treatment facilities proposed within six miles of the Gustavus Airport”. He cites concern that “any sort of waste treatment facility would be a bird attractant”, and also cautioned that “the construction of a waste treatment facility contrary to FAA and State DOT opposition would put Gustavus in a poor position should litigation result...”. The DRC committee’s view is that the designs suggested in our proposed alternatives do not carry the risk of attracting birds, and thus can probably win agency approval once appropriate dialog has occurred.