



PUBLIC WORKS DEPARTMENT

Broadwater County Solid Waste Management Cost Control Measures for Solid Waste Operations

Problem Statement: Beginning in 2016, Broadwater County's Solid Waste Department began to experience a financial deficit that, at the end of Fiscal Year (FY) 2018, resulted in the accrual of a negative balance of approximately \$170,000. The Department continues to operate under the deficit condition.

Objective: Control solid waste management costs in Broadwater County.

Background: Broadwater County operates five (5) rural canister sites and a combined Class II Transfer Station/Class III Landfill and Burn Site. Canister sites are located at Dry Gulch, Toston, Radersburg, Winston, and on Cedar Street in Townsend. The canister sites were originally established for the convenient disposal of household garbage for county residents. The canister sites are currently unattended and access is uncontrolled, resulting in the sites being open 24/7/365. Solid Waste Department staff haul full canisters from each site to the Transfer Station, where they are emptied onto the floor; wastes are inspected and segregated, and then loaded into the transfer trailer. The transfer trailer is hauled to the Lewis & Clark County landfill for final disposal.

Several factors contribute to the budget deficit:

- Contractors dump construction wastes at the canister sites rather than the Transfer Station to avoid a disposal charge;
- Equipment purchases made that are not integral to the overall solid waste operation;
- The lag time between new home construction and when the solid waste assessment is levied;
- Out-of-district public dumping wastes in district-owned and operated canisters; and,
- Members of the public dumping wastes other than household wastes in rural canisters.

In addition to depositing household wastes in canisters for which these sites were designed, members of the public also dispose of various farm and ranch wastes, construction and demolition (C&D) wastes, tires, and metal. Because access is not controlled (i.e. no site attendants or set hours), and additional containers for waste separation are not available at every canister site, the system has been abused by people disposing of items that could be segregated and/or fees collected. For example, clean wood waste could be managed by open burning and metal can be recycled instead of being hauled to the Lewis & Clark County Landfill for disposal. In addition, fees are required for construction wastes, but fees are avoided and cannot be collected when it's dumped in the canisters at the unattended sites. As a result, solid waste staff spend

additional time removing recyclable or burnable items from the canister site wastes so that it is not sent to the landfill for disposal.

The Broadwater County Public Works Department has determined that in order to control costs associated with the management of wastes in the District, site access and use must be controlled and wastes separated at each site to facilitate diversion. During October 2018, Broadwater County held public meetings in Toston, Winston, and Townsend. The purpose of each meeting was to facilitate a discussion between the County and the community on the rural canister sites and to gather public input on solutions that the County and the Solid Waste Board should consider prior to implementing any changes to current operations. To that end, this document identifies the issues/items considered in development of the various options for solid waste management in the county. The various options considered, along with their projected cost of implementation, are provided as Attachment A.

Public Comments Considered:

The following comments, received during the public meetings, were considered in developing the options for site management:

- Don't make any changes;
- Install electronic gates with key cards for all fee payers;
- Install gates and locks and keys distributed to all fee payers;
- Install surveillance cameras to monitor site activities;
- Install man-gate for users to walk-in after hours;
- Purchase additional canisters so that wastes can be separated at each canister site;
- License a burn site to burn clean wood waste at Toston or Radersburg instead of hauling burnable wood to the Transfer Station;
- Increase fees to cover costs and leave things as they are.

Issues Considered:

The Public Works Department considered the issues noted above. Additional issues identified as problematic were also considered in developing the overall strategy for controlling costs to users and the County Solid Waste Department. Because solid waste operations are funded only by the user assessment, the department must operate within the constraints of the funds received. Therefore, additional options were considered to control department costs and minimize the overall impact to the solid waste district fee payers.

Overall site changes – As noted above, one comment considered was that the County make no changes to how the current system operates.

Several community members also disagreed with the need to establish set days and hours of operation and believe that the County should provide access for people whose schedule does not coincide with open hours. However, a key component of cost control in any business is to establish times when they are open for business. Counties such as Lewis and Clark have set hours at both the Helena Transfer Station and the Landfill, and it is not an uncommon practice.

Presently, staff average four round trips each week for Toston, Radersburg, and Dry Gulch and seven round trips each week for Cedar Street and Winston. These are round trips from the canister site to the Broadwater County Transfer Station.

Keeping the sites open 24-hours per day does not accomplish the requirement to control costs for solid waste management in the county. Because the department has been operating in a deficit situation since 2016, costs must be controlled and the department must operate within the confines of the funds provided by the solid waste assessment. Therefore, no further consideration was given to this comment.

Access control – As noted above, without access control, entry into and use of the sites would continue unabated. The county would continue to incur costs associated with disposal by non-paying users. To control such access, the county considered the installation of gates and locks at each site.

The table of costs provided in Attachment A contains a line item for gates and locks. The options with gates also contain a line item for keys to distribute to paying users of the Winston site. However, since the Winston canister site is the last option for people traveling north out of the County, it is not unusual for residents living outside the Winston locale to use the site. Although the idea makes sense on the surface, implementation would be difficult without on-site oversight. In addition, electronic rolling gates and key cards were evaluated and a separate line item cost is included for this option at each site where gates and locks are proposed. However, this option has been ruled out as infeasible due to the cost.

A separate line item for vehicle hang tags identifying paying users is also included for options that include a site attendant. Hang tags would be numbered and assigned. Site users that do not have a hang tag would be required to pay for waste disposal at the canister sites.

So that users have 24-hour site access, a man-gate allowing only foot traffic would be installed. Containers would be located just inside the man-gate at each site so that users can deposit normal household garbage in these containers when the sites are closed to vehicle traffic. These containers would be monitored to ensure that all wastes are confined to the containers and sufficient room is available for additional household waste.

Waste segregation – With the exception of the Cedar Street site, all rural canister sites have two 40-yard roll-off boxes for the collection of household garbage only. Unfortunately, the canisters contain wastes other than normal household garbage, and thus require additional efforts by solid waste staff to safely remove waste materials that are not intended for landfill disposal because they are currently managed at the Transfer Station (i.e., clean wood, tires, metal, and grass clippings). This has contributed to the current budget deficit because the wastes that cannot be safely removed from the canisters at the Transfer Station are sent to the landfill for disposal.

All sites, except Dry Gulch, also have a canister for cardboard collection. Ideally, the rural canister sites would have separate canisters to segregate clean wood waste, grass clippings, metal, and tires. These wastes must be kept out of the household garbage canisters because they can be managed at the Transfer Station and, if separated at the collection points, would not have to be transported to the Lewis & Clark County Landfill for disposal, thus saving the cost of disposal fees. However, because the County does not have enough containers for waste segregation, this would require the expenditure of additional capital funds to purchase more canisters. Attachment A provides the line item costs for additional canisters and the potential cost savings of diverting wastes from disposal at the Lewis and Clark County Landfill.

The Public Works Department plans to establish a DEQ-licensed burn site at the Toston Canister site where clean wood wastes could be stockpiled and burned during designated open burn seasons. All clean wood waste generated in the Radersburg and Toston area would be collected in Toston, rather than being deposited in the canisters and transported to the Transfer Station, as is currently the case.

Site attendants – In general, rural sites that have a site attendant during open hours do not encounter the issues that unattended sites struggle with, (i.e. disposal of prohibited wastes, disposal of wastes requiring

a fee, disposal by non-paying [incl. out of district] users, scavenging, etc...). Options presented in Attachment A include the use of site attendants during open hours.

Site attendants would direct users to the proper waste canisters and collect fees for wastes that are disposed of in the canisters that is not normal household garbage. Wastes separated from the normal household garbage at these collection points can then be properly managed at the Transfer Station. This will increase the overall efficiency of the solid waste operation and help control and manage overall costs. Additionally, site attendants would also ensure a fee was collected for C&D wastes that are currently dumped without a fee at the rural locations.

Canisters for waste segregation – The Public Works Department considered the placement of additional canisters at each rural site to separate household waste from other wastes that are managed at the Transfer Station. Because the county does not have enough containers for this, the table of costs in Attachment A includes the costs for new canisters so that wastes could be separated.

Site monitoring – surveillance cameras – During the public meetings, several community members suggested the use of surveillance cameras to monitor site activities. If cameras are installed, solar-powered wireless cameras are preferred because electricity is not available at the rural sites located outside Townsend. In addition, trail cams are impractical for a number of reasons; data has to be regularly downloaded from the data card in the camera, trail cams are sensitive to cold temperatures and therefore not reliable during the winter, trail cam batteries need regular replacement, and trail cams are expensive and could be easily stolen because placement requires easy access.

Site days/hours of operations – A key component of cost control is limiting the hours of operation.

Each rural canister site would have established days and hours for vehicular traffic. A container would be placed near the facility entrance so that users would be able to dispose of their household garbage at any time of the day. Establishing hours to control vehicle traffic and large loads of other waste materials would result in a decrease of the overall cost of operation because the hook truck would not need to be moving containers to/from these locations as often as they currently are.

The days for vehicle traffic at Toston, Radersburg, Dry Gulch, and Winston would be limited to Saturday and Sunday from 9 am – 3 pm. The Cedar Street canister site would be open from 8 am – 7 pm Tuesday through Saturday, and open on Sundays from 9 am – 3 pm.

An option that was considered and is presented in Appendix A is the closure of all sites except the Cedar Street location. In that event, the hours for the Cedar Street site could be extended to accommodate additional traffic flows and the convenient disposal by early morning or late evening site users.

Fee assessment – The Solid Waste Department revenues are enterprise funds. The money in the enterprise fund can only be spent to support the solid waste services the county provides. The funding comes from the homeowner assessments.

The current solid waste assessment for homeowners in the District is \$128/year. This results in the collection of approximately \$373,000 in revenue for the solid waste budget. Since 2016, budget obligations for solid waste have totaled over \$500,000 per year. This includes costs for disposal, fuel, equipment, and equipment repairs. The assessment has not been increased since 2001.

Based on increased costs for operations since 2001, nationally recognized inflation calculators were used to determine the cost of services in 2018 compared to 2001. Based on the inflation calculators, the purchasing power of \$128 in 2001, would cost between \$181 and \$184 in today's dollar. Therefore,

factoring inflation since 2001 (see Appendix B), the assessment should be increased to \$185.00/year. By doing so, this would account for increased costs for operation since 2001 and result in revenues of approximately \$539,090 per year. At this rate, the solid waste deficit could be eliminated by 2021.

ATTACHMENT A
LINE ITEM COSTS
AND
CANISTER SITE MANAGEMENT OPTIONS

LINE ITEM COSTS OF SUGGESTIONS FROM PUBLIC COMMENTS*

ITEM	COST
Electronic gates and cards (5)	\$87,500.00
Gates, locks, and keys	\$8,490.00
Surveillance cameras	\$30,050.00
Man-gate for after-hours access	\$2,500.00
23, 20-yard canisters for waste separation	\$82,800.00
Burn site license	\$2,400.00

***Costs for materials only – does not include installation costs**

CANISTER SITE MANAGEMENT OPTIONS

The following outlines the options considered for management of the rural canister sites and provides the costs for implementation of each option.

1. Make no changes and leave sites as they currently are.
2. Close Toston, Radersburg, Dry Gulch, and Winston sites. Route all traffic to Cedar Street site. The tasks necessary to implement this are:
 - a. Expand the Cedar Street site footprint
 - b. Print and distribute hang tags for verified fee payers
 - c. Install a gate lock
 - d. Place additional canisters for the separation of wastes the Transfer Station currently manages
 - e. Hire one full-time and at least two part-time site attendants
 - f. Construct an attendant's building
 - g. Install wi-fi enabled surveillance cameras
 - h. Develop an alternate route to the site to alleviate public traffic concerns
 - i. Install a portable scale
3. Open all sites during daylight hours, but without a site attendant. The tasks necessary to implement this are:
 - a. Install gates and locks
 - b. Install wi-fi enabled surveillance cameras
 - c. Place additional canisters for waste separation
 - d. Place a can at the gate for the after-hours disposal of household garbage
 - e. Rely on the honor system for site users
4. Open all sites, but limit days/hours and have sites monitored by attendant. The tasks necessary to implement this are:
 - a. Install gates and locks
 - b. Install wi-fi enabled surveillance cameras
 - c. Place additional canisters for waste separation
 - d. Place a can at the gate for the after-hours disposal of household garbage
 - e. Hire one full-time and at least five part-time site attendants
 - f. Construct an attendant's building
 - g. Print and distribute hang tags for verified fee payers

Appendix D provides the tasks and costs associated with implementation of the preferred option.

IMPLEMENTATION COSTS – The following provides the costs to implement the various options considered:

OPTION #1

Costs would continue to increase as dumping at rural canister sites would continue unabated.

OPTION #2 – Close everything except Cedar Street, hire site attendant, limit days and hours of operation.

COSTS TO IMPLEMENT OPTION #2		
<i>Item</i>	<i>Assumptions</i>	<i>Cost</i>
Expand the Cedar Street site footprint	All work done in-house Materials at cost Posts, fencing, and grading	\$2,500
Vehicle hang tags – numbered/assigned	Print and mail hang tags 2.75" x 4.75" @\$0.27 each + postage	\$2,310.00
Gate lock	Material at cost	\$40.00
Place additional canisters for waste separation	Canisters from rural sites that have been closed would be moved to Cedar Street	\$0
Hire one full-time and at least two part-time site attendants Site would be open Tuesday through Sunday Hours: Tues – Sat 8am – 7pm Sunday 9am – 3 pm	One full-time attendant at \$14.00/hour + benefits @ 40 hours/week Two-part-time attendants at \$12.00/hour no benefits each @ 15 hours/week	\$68,640
Construct an attendant's building, include heater	Construction in-house by county staff Materials at cost	\$1,945
Install wi-fi enabled surveillance camera	Materials at cost Monthly wi-fi charge	\$6,010
Develop an alternate route to the site to alleviate traffic concerns	County construction of alternative route Materials at cost	\$189.00/ft
Install a portable scale	Cost	\$50,000

COST SAVINGS FROM IMPLEMENTATION OF OPTION #2		
<i>Item</i>	<i>Assumptions</i>	<i>Cost Savings</i>
Sterling hook truck costs	Toston round trip @ 34 miles with 3 round trips/week; Radersburg round trip @ 46 miles with 3 round trips/week; Dry Gulch round trip @ 30 miles with 3 round trips/week; Winston round trip @ 28 miles with 7 round trips/week	\$725/week * 52 weeks/year * \$1.38/mile = \$37,745
Tipping fees	25% reduction in waste to landfill as a result of waste separation and capturing fees for C&D wastes	\$29,250

OPTION #3 – Open all sites during daylight hours, no site attendant, separate wastes

COST TO IMPLEMENT OPTION #3		
<i>Item</i>	<i>Assumptions</i>	<i>Cost</i>
Gates	Gate costs @ \$289.00/set (5 sets) In-house installation	\$5,250
Gate lock	6 locks	\$240
Place additional canisters at man-gate for after-hours dumping	5 hook roll-off canisters @~\$3,600 each (20-yard)	\$18,000
Place canisters for waste separation at each site	4 20-yard canisters for metal, 5 20-yard canisters for tires, 1 20-yard canister for cardboard, 4 20-yard canisters for clean wood waste, 4 20-yard canisters for grass clippings 20-yard cans @ ~\$3,600 ea	\$64,800
Install wi-fi enabled surveillance cameras	Materials at cost Monthly wi-fi charge	\$30,050

Option #4 – Limit hours and days, hire site attendants, separate wastes, burn site in Toston

COST TO IMPLEMENT OPTION #4		
<i>Item</i>	<i>Assumptions</i>	<i>Cost</i>
Gates	Gate costs @ \$289.00/set (need 5 sets) and in-house installation costs.	\$5,250
Electronic gates	4 solar powered gates with key cards	\$70,000
Gate lock	6 locks	\$240.00
Hire one full-time and at least five part-time site attendants	One full-time attendant at \$14.00/hour + benefits @ 40 hours/week Five-part-time attendants at \$12.00/hour no benefits each @ 12 hours/week	\$87,360
Construct attendant's building for each site, include heater, generator, and porta potty.	Construction of 5 buildings in-house by county staff Materials at cost	\$1,945 \$780/year each porta potty
Place additional canisters for after-hours dumping	5 hook roll-off canisters @ ~\$3,600 each (20-yard)	\$18,000
Place canisters for waste separation at each site	4 20-yard canisters for metal, 5 20-yard canisters for tires, 1 20-yard canister for cardboard, 4 20-yard canisters for clean wood waste, 4 20-yard canisters for grass clippings 20-yard cans @ ~\$3,600 ea	\$64,800
Install wi-fi enabled surveillance cameras at each location	Materials at cost Monthly wi-fi charge In-house installation	\$30,050

ATTACHMENT B
INFLATION CALCULATION

The Inflation Calculator determines the cumulative inflation (in percent) ranging from 2001- Present. This calculator uses the Consumer Price Index published by the U.S. Bureau of Labor Statistics which is the most closely watched indicator for inflation in the U.S. It can be considered the "government's key inflation barometer". Various calculators were used to determine the impact of inflation over time relative to the current solid waste assessment. Data was generated 1/17/2019.

The screenshot shows a web browser window with the URL <https://www.usinflationcalculator.com/>. The page title is "US Inflation Calculator" with the subtitle "Easily calculate how the buying power of the US dollar has changed from 1913-present; get inflation rates and inflation news". The navigation bar includes links for "US INFLATION HOME", "INFLATION AND PRICES", "GAS & FOOD INFLATION", "INFLATION NEWS", "INFLATION FAQ'S", and "ABOUT".

On the left side, there is a vertical advertisement for "Need a Storage Container?" by BuyerZone, featuring an image of stacked shipping containers and the text "BuyerZone can help you get the best deal!".

The main content area features a section titled "The US Inflation Calculator measures the buying power of the dollar over time. Just enter any two dates from 1913 to 2018, an amount, and then click 'Calculate'. (2019-dated comparisons will be possible after the inflation data release on Feb. 13, 2019.)". Below this is a form titled "Inflation Calculator" which is circled in red. The form contains the following fields and results:

Field	Value	Label
If in	2001	(enter year)
I purchased an item for \$	128.00	
then in	2019	(enter year)
that same item would cost:	\$181.59	
Cumulative rate of inflation:	41.9%	

A blue "CALCULATE" button is located at the bottom of the form. Below the form, there is a small text block: "*Learn how this calculator works. This US Inflation Calculator uses the latest US government CPI data published on January 11 to calculate inflation and calculate the cumulative inflation rate through December 2018. The Consumer Price Index (CPI) and inflation for January 2019 is scheduled for release by the U.S. Labor Department's Bureau of Labor Statistics on February 13, 2019. (See a chart of recent inflation rates.)".

At the bottom of the page, there is a section titled "INFLATION" with a sub-header "U.S. Inflation Rises 1.9% in 2018".

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CPI Inflation Calculator

CPI Inflation Calculator

\$

in

has the same buying power as

in

Mobile Browser? [View full screen.](#)

About the CPI Inflation Calculator

The CPI inflation calculator uses the [Consumer Price Index](#) for All Urban Consumers (CPI-U) U.S. city average series for all items, not seasonally adjusted. [This data](#) represents changes in the prices of all goods and services purchased for consumption by urban households.

Value of 2001 US Dollars today

\$128 in 2001
↓
\$184.82 today

The inflation rate in the United States between 2001 and today has been 44.39%, which translates into a total increase of \$56.82. This means that **128 dollars in 2001 are equivalent to 184.82 dollars in 2018**. In other words, the purchasing power of \$128 in 2001 equals \$184.82 today. The average annual inflation rate has been 2.06%.

Calculator

Standard mode | [Advanced mode](#)

Amount (\$)

Start year

End year

[Calculate](#)

Inflation timeline in the United States (2001-2019)

The following chart illustrates the equivalence of \$128 throughout the years due to inflation and CPI changes. All values are equivalent in terms of purchasing power, which means that for each year the same goods or services could be bought with the indicated amount of money.

Purchasing power over time

Value of Dollar in time (by year)

Period	Value
2001	128
2002	129.99
2003	133.08
2004	135.58
2005	139.99
2006	144.77
2007	148.45

Calculator.net

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Inflation Calculator

Inflation Calculator with U.S. CPI Data

Calculates the equivalent value of the U.S. dollar in any year from 1914 to 2018. Calculations are based on the average annual CPI data in the U.S. from 1914 to 2017.

Result

\$128 in 2001 has the same purchasing power as **\$182.30** in 2018.
The total inflation rate from 2001 to 2018 is 42.41842%.
The average inflation rate from 2001 to 2018 is 2.10178%.

in = **\$182.30** in

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Mortgage Rates: 30 year fixed, all points, Credit score 740+, 20% down

ATTACHMENT C
OPTIONS – PROS AND CONS

Option #1:*Pros –*

- No development costs

Cons –

- Does not satisfy the objective.
- Does not control costs or site use.

Option #2:*Pros –*

- Annual costs controlled by redirecting all authorized users to Townsend site.
- Development costs lower compared to options 3 and 4
- Minimizes wear and tear on hook truck by reducing overall mileage.
- Diversion of wastes accomplished by additional containers and site attendant.
- County would have additional canisters available for contractors.
- Annual costs would be for hang tags, staffing, and site maintenance.

Cons –

- Little to no public support.
- Potential for impact to County health from illegal dumping.
- Alternate route for traffic could be high depending upon route selected.

Option #3:*Pros –*

- Annual costs controlled by limiting access and establishing times open.
- Diversion of wastes accomplished with purchase of additional containers.
- Better public support than option #2.
- No additional staffing costs.

Cons –

- High initial investment for canisters and cameras.
- No guarantee that wastes will be diverted into proper containers.
- Sites remain uncontrolled.
- Does not reduce wear and tear on hook truck.
- Potential for more trips to/from the Transfer Station to empty waste diversion cans.
- Relies on the honor system for site users.
- Requires personnel to lock and unlock gates twice daily and check canisters for capacity.

Option #4:*Pros –*

- Annual costs controlled by limiting access and establishing times open.
- Diversion of wastes accomplished with purchase of additional containers.
- Better public support than options 2 and 3

Cons –

- Initial development costs high for canisters and cameras.
- Additional staffing costs; more personnel would be necessary.
- Does not reduce wear and tear on hook truck.
- Potential for more trips to/from the Transfer Station to empty waste diversion cans.

ATTACHMENT D
PREFERRED ALTERNATIVE

Preferred Alternative Modified Option #4

During the Solid Waste Advisory Board Meeting on January 22, 2019, Board members suggested that a modification of Option #4 was the preferred option for management of the canister sites. The modifications to Option #4 as presented are:

- Close the Radersburg canister site and consolidate all users to the Toston canister site;
- Establish days and hours of operation for Toston, Winston, and Dry Gulch as follows:
 - Open Saturday and Sunday
 - 9 a.m. to 3 p.m.
 - Install a man-gate for 24-hour access
- Establish days and hours of operation for Cedar Street as follows:
 - Open Tuesday through Saturday from 8 a.m. to 5 p.m.
 - Open Sunday from 9 a.m. to 3 p.m.
 - Install a man-gate for 24-hour access
- Purchase and distribute hang-tags to fee payers
- Staff sites when open
- Body-cams for site attendants
- Construct sheds for site attendants and purchase generators and heaters
- Install entry gates and man gates (4)
- Porta-potties at each site (4)
- Additional signs for each site (days/hours/phone numbers)

The costs associated with this modified option are:

COST TO IMPLEMENT OPTION #4		
<i>Item</i>	<i>Assumptions</i>	<i>Cost</i>
Entry Gates	Gate costs @ \$289.00/set (need 4 sets) and in-house installation costs.	\$4,200 (one-time cost)
Man gates	Gates costs @ \$500/each (need 4 gates) and in-house installation costs.	\$2,000 (one-time cost)
Gate lock	5 locks	\$200.00 (one-time cost)
Vehicle hang tags – numbered/assigned	Print and mail hang tags 2.75" x 4.75" @\$0.27 each + postage	\$2,310.00 (annually)
Hire one full-time and four part-time site attendants	One full-time attendant at \$14.00/hour + benefits @ 40 hours/week; Four-part-time attendants at \$12.00/hour no benefits each @ 12 hours/week	\$12,228 (5/1-6/30) \$79,872 (annually)
Construct attendant's building for each site, include heater, generator, and porta potty.	Construction of 4 buildings in-house by county staff Materials at cost	\$7,780 (one-time cost) \$480 (until 6/30/19) \$3,120 (annually)
Body-cams	5 body cameras for site attendants	\$650 (one-time cost)
Signs	Operating hours/phone numbers	\$355 (one-time cost)
	Total implementation costs:	\$30,203
	Total annual costs	\$85,302

ANNUAL COST SAVINGS OF MODIFIED OPTION #4		
<i>Item</i>	<i>Assumptions</i>	<i>Cost</i>
Sterling hook truck	Elimination of 3 trips/week, 46 miles/trip, cost to operate/maintain truck at \$1.38/mile for 52 weeks	\$9,902.88
Sterling hook truck operator	Elimination of 3 trips/week, 1 hour/trip at hourly rate + benefits	\$16,857.36
Check site for waste volume in cans and site clean-up	Elimination of 3 trips/week, 46 miles/trip, fuel at \$2.30/gallon, vehicle @ 15 mpg	\$1,076.40
Operator time to check site for waste volume and perform site clean-up	Elimination of 3 trips/week, 1 hour/trip at hourly rate + benefits	\$14,770.08
Tipping fees	25% reduction in waste to landfill as a result of waste separation and capturing fees for C&D wastes	\$29,250.00
	Total annual savings:	\$71,856.72