



A Study of Recycling Alternatives

Revised
August 3, 2011

August 3, 2011 Draft – Jim Culotta, Town Administrator
July 1, 2011 Draft - Bob Eichner, Dir. of Public Works

Introduction

In 2008 and periodically, in the twenty years prior, the Town of Cedarburg has conducted studies of future options for the collection and processing of both solid waste refuse and recyclables. The purpose of these studies has been to ensure that both services are being administered as efficiently and as cost-effectively as possible.

The 2008 study recommended that the Town continue to use Town forces to provide solid waste refuse collection services. The Town Board acted on that recommendation and, in 2011, in an effort to increase efficiency and reduce labor costs and worker injury claims, the Town purchased a 31 yard capacity, automated, side loading, refuse collection truck. This vehicle requires only one operator as opposed to traditional collection vehicles that requires a two man crew. Now, the new vehicle will be used on all normal refuse collection in the Town, maximizing the efficiency and minimizing the cost for this service.

The 2008 study also recommended that the Town provide curbside collection of recyclables. This option was shown to be the most cost-effective means of procuring recyclables. After several public discussions, the Town Board opted to continue with the status quo of staffing and maintaining the current self-service Recycling Center adjacent to Town Hall.

With the net labor savings for refuse collection projected to be about \$45,000 with the new collection vehicle, the Director of Public Works began a comprehensive study to determine if similar savings can be realized in the collection and processing of recyclables. This study was presented at the July 1st Town Board meeting.

A number of options were considered and will be discussed in this study. These options include the following:

- Status Quo (Operating the Recycling Center as Presently Run)
- Operate the Recycling Center with Reduced Hours
- Recycling Collected Curbside by the Town
- Recycling Collected Curbside Privately, under Contract with the Town of Cedarburg

Recycling collected curbside under individual agreements between the residents and a private collector was also considered. However, it was determined that this option is logistically difficult if not impossible to ensure compliance. While the Town mandates recycling as required by the State, this option could be considered an 'un-funded mandate' that many residents may take exception to. It is also difficult to predict the costs associated with this option because residents could choose their service from several private companies. Therefore this option will not be considered in this study.

The July 1st study has been revised by the Town Administrator and reissued for the August 3rd Town Board meeting. This revised study offers a fifth option where the Town collects recyclables curbside twice a month. Adjustments were made to other elements of the study to improve accuracy and a net cost scenario that assumes no sale of Town assets was added to options 3, 4, and 5.

Option 1 – Status Quo

The Town operates a self-service Recycling Center, open 11 hours each week, currently staffed by a crew of 5 part-time attendants. Town residents may bring their recyclables to the center and self-sort the recyclables with the assistance of the staff. The sorted recyclables are then shipped in bulk bins or in bales created by the Recycling Center crew to various processors. This method minimizes disposal costs to the Town and the Town receives revenue for most of the recycles collected. This revenue helps offset the operating expenses.

Because revenues for recyclables can fluctuate significantly from year to year, this study used a three year average for costs and revenues. Revenue also includes an average annual State recycling grant of \$5000. The table below indicates the overall cost to this program. The first cost is under current staffing of 5 part-time attendants. The second set of costs is for full staffing of 6 attendants, for which the Town budgets each year.

Ave. Tons	Ave Expenses	Ave Revenues	Ave Net Cost	Remarks
550	\$87,220	\$50,775	\$36,425	5 Attendants
550	\$93,350	\$50,775	\$42,575	6 Attendants

Consideration should be given to the following opportunity costs:

- **Impact on the Public Works Department**

The Status Quo does not currently have a significant impact the Public Works Department. The Recycling Center is staffed by a separate part-time crew. On very rare occasions, a member of the Public Works crew may be asked to work at the center, but for the most part the Status Quo allows the department to use the bulk of its time on refuse collection, road maintenance and drainage maintenance, snow and ice removal, and park and facility management.

- **Under-utilization of Recycling Center Property**

This item was initially addressed in the 2008 study. Planners and real estate professionals believe that the best use and highest benefit of the Recycling Center property is for commercial use. The center parcel of 2.35 acres, fronts on Washington Avenue, less than 500 feet south of the Five Corners intersection through which 13,600 vehicles a day pass. The Five Corners Master Plan calls for commercial redevelopment of this parcel. Selling this parcel for redevelopment could bring in as much as \$200,000 to the Town and return at least \$3,100, annually in property taxes reducing the burden on all Town property owners. New services and job opportunities would also be made available with redevelopment.

- **Social and Educational Benefits of the Recycling Center**

In the 2008 study, the 'socializing' factor of the Recycling Center was raised. A number of residents expressed concern about losing the center as a means of connecting with other residents and staff on a semi-regular basis. There is an educational aspect to the center as well. The hands on sorting of recyclables can be used to show residents, and especially children, the importance of recycling, the types of recyclables, and the methods used in recycling.

Option 2 Operate Recycling Center on Reduced Hours

Under State law, municipalities are only required to make collection centers available to residents for 10 hours per month. The Town Recycling Center is currently open for collection a total of 44 hours per month. Because the center is highly used by Town residents, it would be impractical to reduce hours of operation to the minimum. One option is to reduce the open hours to 24 hours per month, with the center being open for six hours on Saturdays. This provides the following net costs:

Ave. Tons	Ave Expenses	Ave Revenues	Ave Net Cost	Remarks
550	\$75,295	\$50,775	\$24,520	5 Attendants
550	\$78,370	\$50,775	\$27,595	6 Attendants

Reduced hours would in all likelihood mean increased traffic on recycling days, as residents have less opportunity to drop off their recyclables. This would probably require full staffing of 6 attendants on recycling day. There is also the possibility of a reduction in the tonnage of recyclables received, again because of less opportunity to drop them off. There will be some additional savings in operating and processing expenses with the reduced tonnage. However there could also be reduced revenue. Assuming a 50 ton reduction in recyclables received:

Ave. Tons	Ave. Expenses	Ave. Revenues	Ave. Net Cost	Remarks
500	\$75,350	\$46,625	\$28,725	5 Attendants
500	\$77,425	\$46,625	\$30,800	6 Attendants

The net cost increases approximately \$4000 for each additional 50 ton reduction in recyclables received.

The opportunity costs discussed in Option 1 should also be considered for this option.

Option 3 – Town Curbside Collection 1x Month

The purchase of the new refuse truck in 2011 provides for the best opportunity for the Town to collect recyclables curbside. Beginning in mid-July, 2011, the Town consolidated refuse collection to three routes, one each on Monday, Tuesday and Wednesday. Eliminating the second route on Tuesday using the older, rear loading, refuse truck and the crew of two, provides the maximum efficiency and cost-effectiveness in refuse collection. These new refuse collection routes could also be used for collection of single stream recyclables on Thursday. The recyclables would be transported from the curb to a private processing facility.

Under Option 3, collection of recyclables would occur **once per month**. The Monday refuse route would be collected on the first Thursday of the month, the Tuesday refuse route on the second Thursday, and Wednesday's refuse route collected the third week. A monthly collection is recommended, because the size of each of the **current routes**, (approximately 730 stops) prohibits collection of more than one route in a standard day. Having the fourth Thursday free allows for a shifting of collection routes should a holiday or weather emergency fall on one of the previous Thursdays. Maintenance on the vehicle can also be done.

Staff received a proposal from Veolia Environmental Services, Inc for the receiving and processing of single stream recyclables. Veolia would not charge for drop off of the recyclables and would share 50% of the revenue from the sale of the recyclables with the Town, less a 4% surcharge and environmental fee. The Town would also continue to receive the average State recycling grant, or a portion of the grant, unless revenues become greater than expenses. Approximately \$300,000 of revenue could be generated in the first year of the program due to the sale of recycling equipment no longer needed, the sale of the Recycling Center building and the sale of the Recycling Center property. This revenue will be off set by some first year expenses, however. A portion of the Recycling Center building is currently used for vehicle, material and Town records storage. Sale of the building would require replacement with a smaller building, at an estimated cost of \$50,000, for continued storage of these items. In years 1 and 2, expenses are temporarily elevated due to repayment of the financing of the new truck. In year 3, the truck will have been paid off and the operating expenses will be greatly reduced.

The net annual cost of providing this service, assuming the realization of estimated revenue from the sale of Town assets (Recycling Center property, baler, and building), is estimated at:

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Cost (Revenue)	(\$223,976)	\$23,214	(\$1,451)	(\$986)	(\$511)

However, if estimated revenue from the sale of Town assets is **not included**, the net annual cost will be:

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Cost (Revenue)	\$28,024	\$23,214	(\$1,451)	(\$986)	(\$511)

Only Year 1 is affected by not including revenue from the sale of assets.

Consideration should also be given to the following opportunity costs:

- **Impact on the Public Works Department**

This option does have a fiscal impact the Public Works Department. The refuse trucks are operated by members of the Public Works crew. Using this option requires approximately 24 man hours each month which reduces the manpower available for other public works projects. There would be a net gain of 40 man hours for other public works projects if this option is selected in conjunction with the refuse collection. The labor costs for Town collection could be offset by a reduction or elimination of Recycling Center staff providing as much as \$38,600 in savings.

- **Collection of Miscellaneous Recyclables**

Curbside collection would not include tennis shoes, tires, appliances containing Freon, miscellaneous metal and bulk recyclables, lead batteries, waste oil, yard waste, wood chips, electronics, and Styrofoam. The Town currently collects all these items at the Recycling Center. New to the August 3rd study draft is funding for one gate attendant to allow for the continued collection of these items on Saturdays. All of the items except the batteries, electronics and the Styrofoam can be collected and stored outside. The batteries, miscellaneous metal and waste oil also provide some revenue for the Town. The \$10,550 average annual revenue from these items could further reduce the net costs of this Option.

- **Mechanical Problems with the Collection Vehicle**

In the event of a mechanical problem that would remove the collection vehicle from service for part of, all of, or more than 1 day, the older rear loading refuse truck can be used to collect the recyclables. The carts can be lifted and emptied by either vehicle. Using the older vehicle will require either overtime or an additional day for completion of the recycling collection. It may be possible to obtain a second rear loading **vehicle** from the City of West Bend under Mutual Aid. If the primary vehicle is out of service for an extended period of time, the refuse truck manufacturer and their local representative may be able to arrange a temporary replacement truck. It should be noted that the Village of Bayside uses an automated side loading refuse truck 3 days per week, collecting refuse on two days and recycling one day. They have not experienced any major mechanical problems with their truck in nearly two years of operation.

Option 4 – Curbside Collection by Private Contractor

The fourth option considered in this study is curbside collection of recyclables by a private contractor under a contract with the Town of Cedarburg. Bids were solicited to provide this service, but only Veolia Environmental Services, Inc responded with a proposal. VES is proposing to provide bi-weekly single stream curbside collection of recyclables at an estimated cost of \$92,400 for the first year with an annual adjustment tied to the Consumer Price Index for each of the successive four years. The Town would not receive any revenue for the recyclables except for the State Recycling Grant. However, the Town would continue to receive revenue from non-tipped recyclables (bulk metal, oil, etc.), estimated at \$10,550.

The net annual cost of private collection, assuming the realization of estimated revenue from the sale of Town assets (Recycling Center property, baler, and building), is estimated at:

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Cost (Revenue)	(\$168,150)	\$85,050	\$87,950	\$90,910	\$93,953

However, if estimated revenue from the sale of Town assets is **not included**, the net annual cost will be:

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Cost (Revenue)	\$81,850	\$85,050	\$87,950	\$90,910	\$93,953

Only Year 1 is affected by not including revenue from the sale of assets.

The following opportunity costs should be considered for this option.

- Impact on the Public Works Department**
 This option will have a fiscal impact on the department. Using private collection could result in the reduction or elimination of the Recycling Center staff, providing a recycling labor savings of about \$36,200. The Public Works crew would have the 24 man hours that would be required with Town curbside collection, available for other public works projects.
- Collection of Miscellaneous Recyclables**
 As in Option 3, curbside collection would not include, tennis shoes, tires, appliances containing Freon, miscellaneous metal and bulk recyclables, lead batteries, waste oil, yard waste, wood chips, electronics, and Styrofoam. The Town currently collects all these items at the Recycling Center. As stated at the beginning of this section, revenue of \$10,550 from the waste oil, batteries, and metal could be used to offset some of the contract costs.
- Administration and Oversight of Collection of Recyclables**
 Under this contract, the Town would be removed from direct oversight of the curbside collection. Veolia would be responsible for receiving and addressing all customer complaints and questions. Veolia will be responsible for providing the Town with quarterly reports indicating the amount of recyclables collected. The Town will still be responsible for submitting the annual report to the State as a responsible unit.

Option 5 – Town Curbside Collection 2x Month

The fifth option was not included in the original study dated July 1, 2011. This option calls for the curbside collection of recyclables by the Town twice per month. This option is similar to Option 3 but is done bi-weekly. The current routes would need to change to allow for the collection of refuse and recycling on the same day and collection would occur five days a week.

The net annual cost to the Town of providing this service, **including** revenue from the sale of Town assets (Recycling Center property, baler, and building), is estimated at:

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Cost (Revenue)	(\$231,718)	\$180,625	\$73,251	\$74,571	\$75,912

However, if estimated revenue from the sale of Town assets is **not included**, the net annual cost will be:

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Cost (Revenue)	\$185,282	\$180,625	\$73,251	\$74,571	\$75,912

The annual net cost of Option 5 is the same in years 2 through 5 regardless of whether Town assets are sold. When compared to the other options, Option 5 is almost as expensive as private collection (Option 4) and nearly double the cost of the status quo (Option 1).

Aside from the net cost, the most significant drawback to this option is the escalation of wear and tear on the new automated truck. Although the proposed collection schedule would allow adequate time for maintenance, Director Eichner estimates this schedule could reduce the useful life of the truck from 12 years to 8 years.

Summary Comparison of Options

The following is a summary of the pros and cons identified in each option:

Option 1 Status Quo	Option 2 Reduced Recycling Center Hours	Option 3 Town Curbside Collection 1x Month	Option 4 Curbside Collection by Private Contractor	Option 5 Town Curbside Collection 2x Month
<p>Advantages:</p> <ul style="list-style-type: none"> - Current practice historically rated good to very good on annual town surveys. - Some residents enjoy the social and educational aspect of the Recycling Center. - Maximizes hours available to the Public Works crew for other projects 	<p>Advantages:</p> <ul style="list-style-type: none"> - Labor cost savings through less hours worked by the Recycling Center crew. - Reduce energy usage and costs with fewer operating hours. - Maintain social and educational aspect. -Maximizes Public Works hours - Slightly reduced Workers Comp. risk 	<p>Advantages:</p> <ul style="list-style-type: none"> - Enables economic development and full utilization of Recycling Center property. - Minimal net cost after year 2. - Potential additional recycling income by including over 400 residents currently using private service. - Reduced risk Workers Comp. 	<p>Advantages:</p> <ul style="list-style-type: none"> - Enables economic development and full utilization of Recycling Center property. - Maximizes hours available to Public Works crew for other projects. - Oversight and administration of program by others - Reduced risk Workers Comp. 	<p>Advantages:</p> <ul style="list-style-type: none"> - Enables economic development and full utilization of Recycling Center property. - Offers the same level of service as private collector - Potential additional recycling income by including over 400 residents currently using private service. - Reduced risk Workers Comp.
<p>Disadvantages:</p> <ul style="list-style-type: none"> - Recycling Center property is underutilized and inhibits economic development. - Over \$20,000 in gas is spent annually by residents driving to the Recycling Center, generating enough CO₂ to equal cutting down 2,167 trees.¹ - Town foregoes additional recycling revenue by not including over 400 residents who contract for private recycling. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> - Same disadvantages as Option 1. - Decreased hours may bring more traffic during open hours increasing the burden on the Recycling Center crew. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> -Collection limited to once per month. - Loss of social and educational aspect of the Recycling Center including personal interaction with the Recycling Center crew. - Loss of 24 hours by the Public Works crew for other public works projects. - Increased hours and miles on collection vehicle. - Most or all of Recycling Center crew are let go. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> - Loss of social and educational aspect of the Recycling Center including personal interaction with the Recycling Center crew. - Most of recycling revenue is eliminated. - Most or all of Recycling Center crew are let go. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> - Loss of social and educational aspect of the Recycling Center including personal interaction with the Recycling Center crew. - Loss of 48 hours by the Public Works crew for other public works projects. - Significantly increases hours and miles on collection vehicle. - Most or all of Recycling Center crew are let go

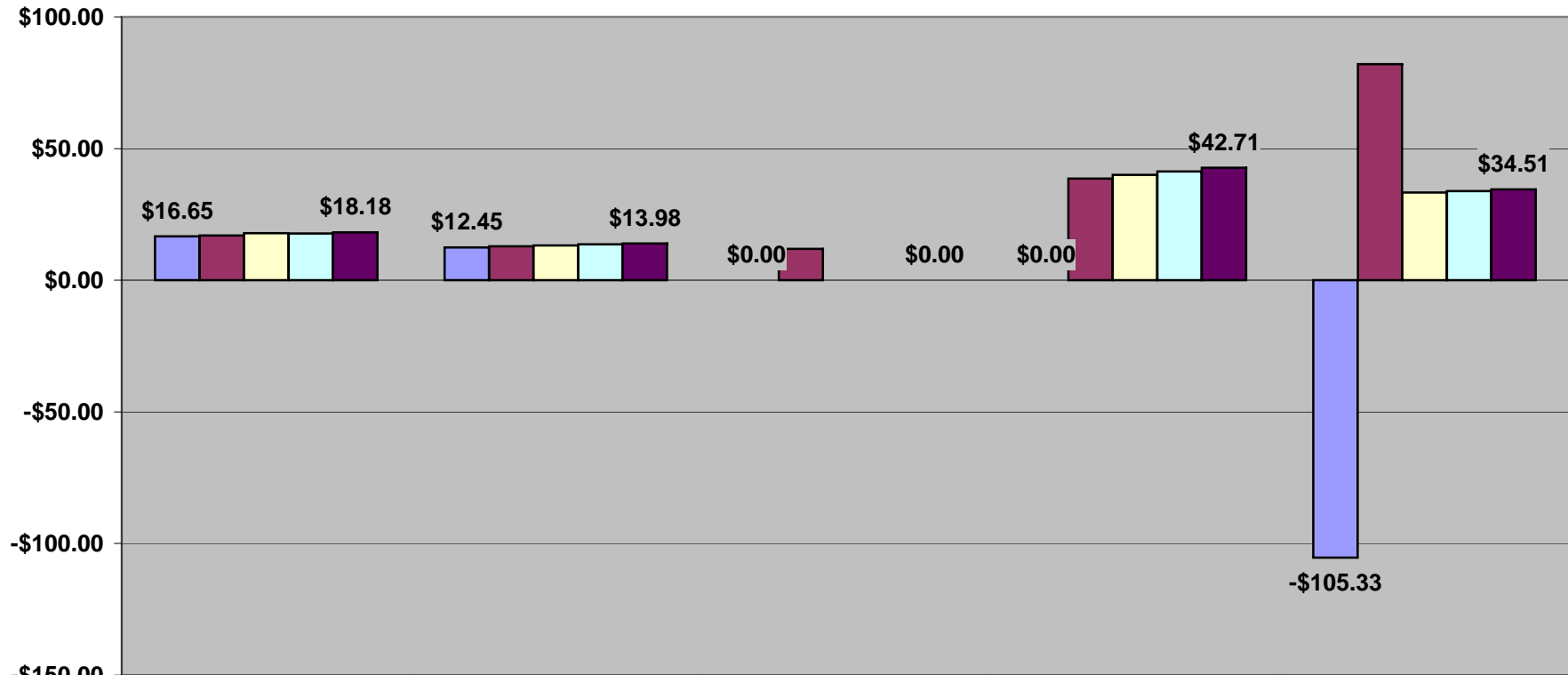
¹Source : <http://www.fueleconomy.gov/Feg/co2.shtml>. Assumes the average resident drives 4 miles round trip to drop off their recyclables, their vehicles get an average of 20 miles per gallon, gas costing \$4 per gallon, and 20 pounds of carbon dioxide per gallon of gas is created

Recommendation

Staff's recommendation is contingent upon the desired level of service. If curbside collection once a month is adequate to meet resident needs, then **Option 3** is the best choice. The required use of a 96 gallon cart is highly recommended. Option 3 also allows for the eventual redevelopment of the Recycling Center property.

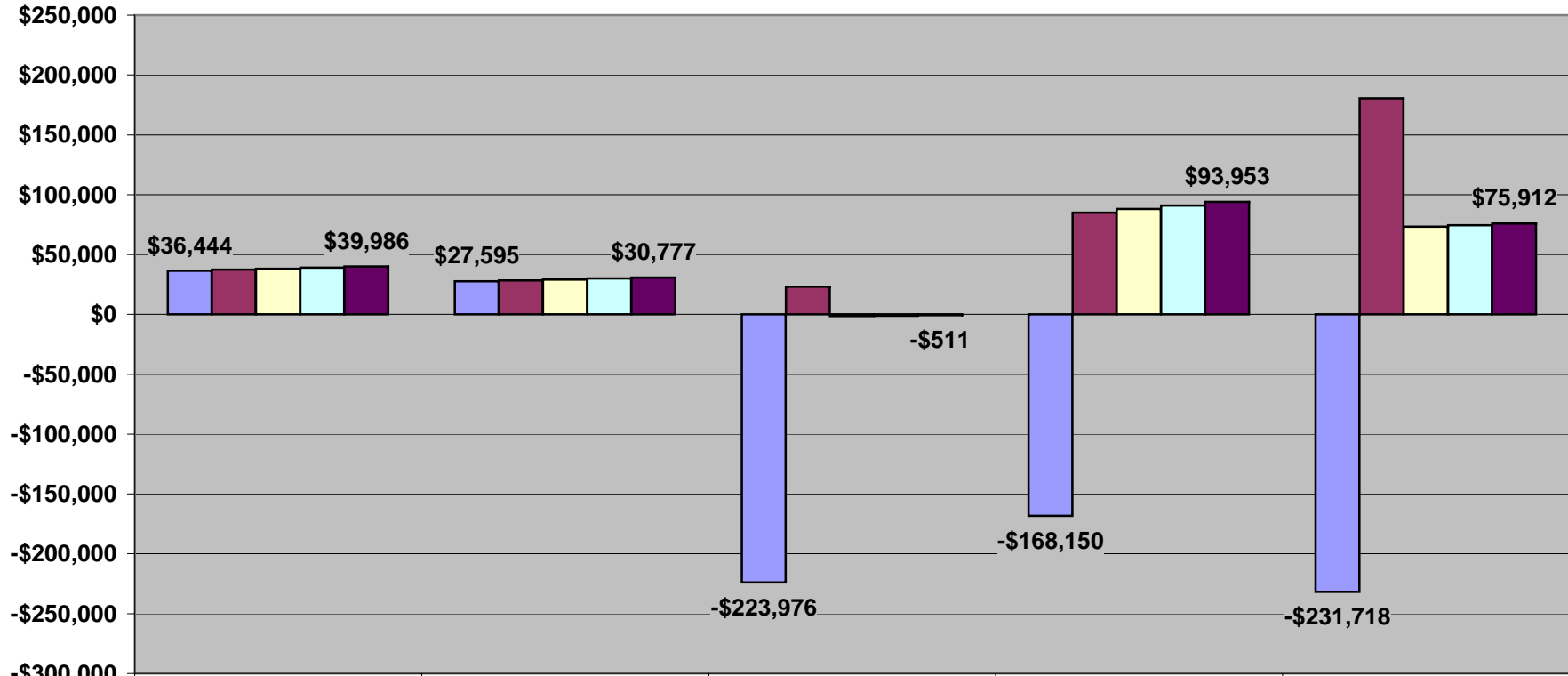
However, if once a month collection does not adequately meet resident needs, **Option 2** is the best choice. Reducing the Recycling Center hours of operation will save approximately \$10,000 annually over the status quo.

Net Annual Household Recycling Cost - Includes Sale of Assets



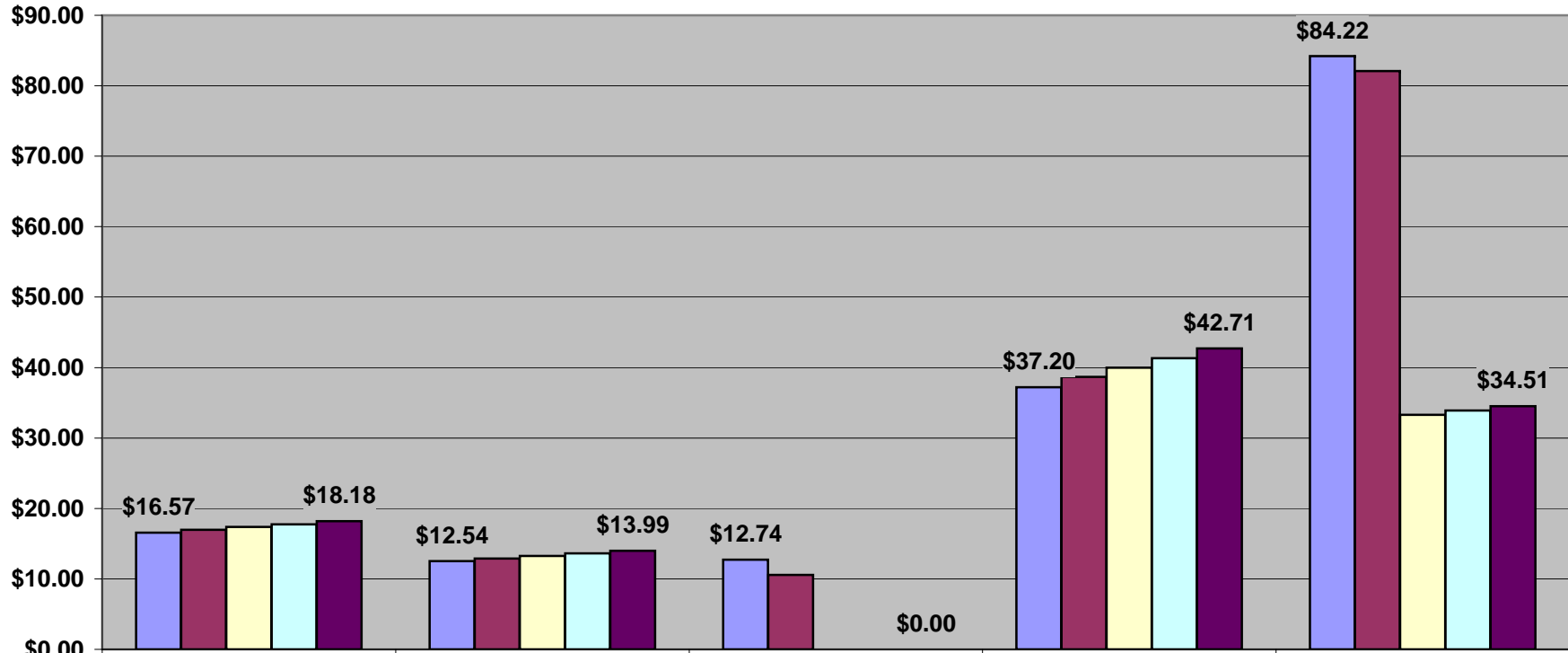
	Option 1 - Status Quo	Option 2 - RC Reduced Hours	Option 3 - Town Collection 1x Month	Option 4 - Private Collection	Option 5 - Town Collection 2x Month
■ Year 1	\$16.65	\$12.45	\$0.00	\$0.00	-\$105.33
■ Year 2	\$16.96	\$12.90	\$11.87	\$38.66	\$82.10
■ Year 3	\$17.86	\$13.26	\$0.00	\$39.98	\$33.30
■ Year 4	\$17.77	\$13.62	\$0.00	\$41.32	\$33.90
■ Year 5	\$18.18	\$13.98	\$0.00	\$42.71	\$34.51

Net Annual Recycling Cost - Includes Sale of Assets



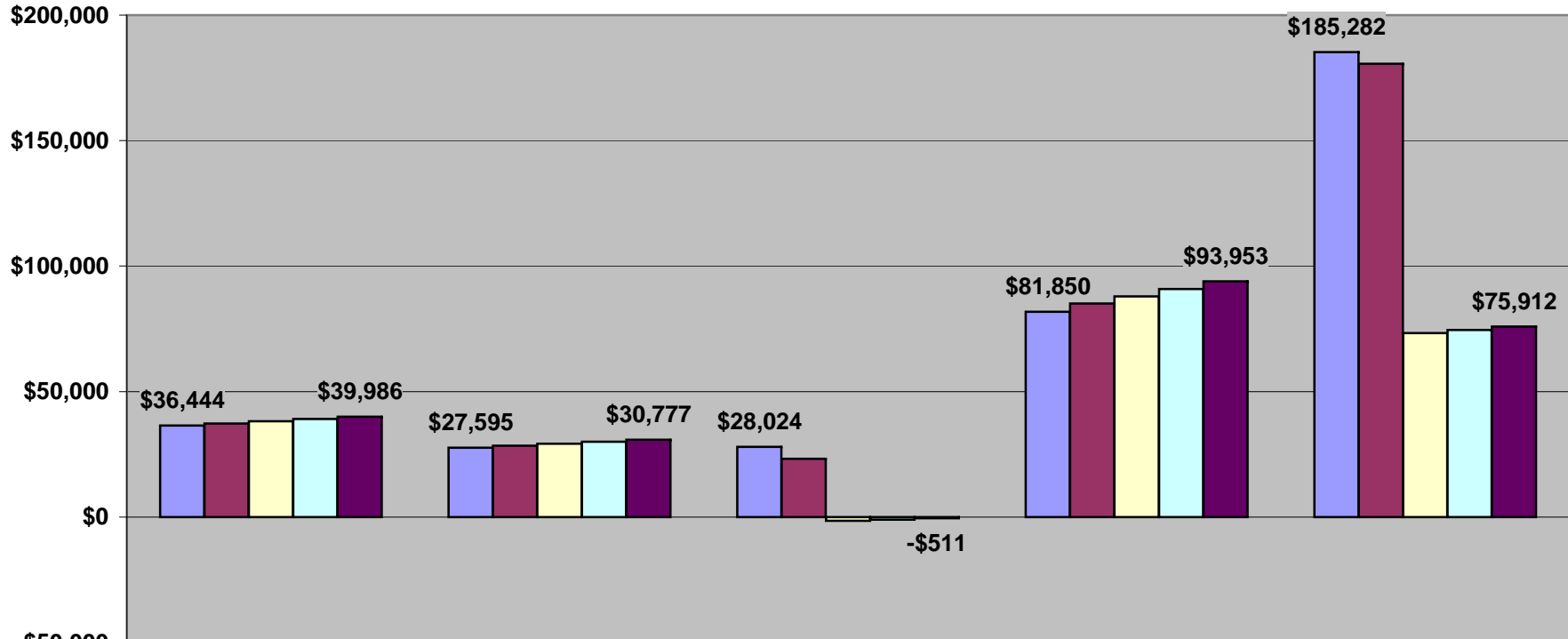
	Option 1 - Status Quo	Option 2 - RC Reduced Hours	Option 3 - Town Collection 1x Month	Option 4 - Private Collection	Option 5 - Town Collection 2x Month
Year 1	\$36,444	\$27,595	-\$223,976	-\$168,150	-\$231,718
Year 2	\$37,317	\$28,378	\$23,214	\$85,050	\$180,625
Year 3	\$38,198	\$29,170	-\$1,451	\$87,950	\$73,251
Year 4	\$39,087	\$29,970	-\$986	\$90,910	\$74,571
Year 5	\$39,986	\$30,777	-\$511	\$93,953	\$75,912

Net Annual Household Recycling Cost - No Sale of Assets



	Option 1 - Status Quo	Option 2 - RC Reduced Hours	Option 3 - Town Collects 1x Month	Option 4 - Private Collection	Option 5 - Town Collects 2x Month
Year 1	\$16.57	\$12.54	\$12.74	\$37.20	\$84.22
Year 2	\$16.96	\$12.90	\$10.55	\$38.66	\$82.10
Year 3	\$17.36	\$13.26	\$0.00	\$39.98	\$33.30
Year 4	\$17.77	\$13.62	\$0.00	\$41.32	\$33.90
Year 5	\$18.18	\$13.99	\$0.00	\$42.71	\$34.51

Net Annual Recycling Cost - No Sale of Assets



	Option 1 - Status Quo	Option 2 - RC Reduced Hours	Option 3 - Town Collects 1x Month	Option 4 - Private Collection	Option 5 - Town Collects 2x Month
■ Year 1	\$36,444	\$27,595	\$28,024	\$81,850	\$185,282
■ Year 2	\$37,317	\$28,378	\$23,214	\$85,050	\$180,625
■ Year 3	\$38,198	\$29,170	-\$1,451	\$87,950	\$73,251
■ Year 4	\$39,087	\$29,970	-\$986	\$90,910	\$74,571
■ Year 5	\$39,986	\$30,777	-\$511	\$93,953	\$75,912