

To: Auburn City Councilors

From: Mayor's Committee on Solid Waste Management

Subject: Solid Waste and Recycling Recommendation for Upcoming Fiscal Year(s)

Date: January 15, 2014

The members of the Mayor's Committee on Solid Waste Management are pleased to present a recommendation to the City Council for the upcoming fiscal year(s) based on our analysis of the solid waste and recycling (SW&R) management options for Auburn. We have been meeting weekly or semi-weekly since October to assess the current and future management of SW&R for our city with a particular eye towards the most economically feasible and citizen based solution to our SW&R collection. Our research has consisted of extensive information gathering from MMWAC, Auburn Public Works, other Maine cities' public works, and SW&R articles. We have also received and reviewed 2 full SW&R private contractor proposals (Pine Tree Waste and Waste Zero) and 1 letter of interest (Almighty Waste). This report will provide you first with the recommendation, followed by the process by which we came to this decision.

Recommendation

The committee's recommendation to the City Council is to negotiate a combined SW&R contract with Pine Tree Waste that will be for an automated, weekly pick-up system of curbside solid waste and single stream recycling. (An automated system uses specialized trucks to mechanically pick-up a particular type of bin.) The collection contract should include the current residences and ten Auburn school facilities. Adding the schools to the current city SW&R collection system will eliminate current costs to the schools, and will only minimally increase costs to the Pine Tree Waste proposal since the school facilities are located on current collection routes and their tonnage is small in comparison to the residences as a whole. Each residential unit will be supplied one recycling bin and one solid waste bin, each large enough to meet an average household's weekly SW&R needs. The SW&R management system we are recommending to you has several advantages: (1) Other towns using this automated, curbside SW&R system have increased their recycling rate to 25-35% within a matter of months to a couple of years. [Putting it into perspective, Auburn's current recycling rate is only 8.5%] (2) With the increase in recycling, the SW tonnage decreases leading to a reduction in disposal costs for the city. (3) The automated system eliminates the need for a person to handle the recycling and solid waste bins reducing the chances for work-related injuries. (4) Contracting with a private contractor for SW&R collection is less expensive than continuing with the current city recycling collection program coupled with a private SW contractor.

The key ingredients to any successful SW&R management system are an easy, efficient system for the citizens and effective, continuous public education. The committee believes the recommended SW&R system is user friendly by utilizing single stream recycling and providing each residential unit with

uniform recycling and trash bins. Single stream recycling allows more types of materials to be collected and all of them to be thrown into one recycling bin. There is no longer a need to sort the recycled materials. In addition, supplying each residence with one solid waste bin eliminates the problems presently associated with leaking and torn garbage bags on the sidewalks/streets. If an additional recycling or solid waste bin is requested, we recommend that: (1) the city supply the extra recycling bin at cost with no additional fee charged for utilizing it, and (2) the city supply the additional solid waste bin at cost and charge a set monthly fee to cover the extra solid waste disposal costs. This monthly fee could be collected at the same time as the property tax. This fee would incentivize recycling materials in lieu of throwing them away resulting in lower SW disposal costs. As is presently the case, all citizens will continue to have the option of taking any trash to MMWAC for free. The second ingredient for a successful SW&R management system is public education. The committee recognizes that a very robust educational campaign is necessary to increase citizen understanding and participation in recycling, as well as any new SW&R system. The committee members are prepared to work with the City and the SW&R contractor on developing educational materials and presentations for public distribution. The long term success of any SW&R system will rely on City personnel maintaining an effective educational program throughout the years. Engaging our schools in the new SW&R system will also have the advantage of the children learning about the importance of proper trash and recycling separation and bringing that message home to their families.

Process and Analysis

In determining the best SW&R management practice for Auburn, we developed 4 different scenarios for an economic analysis. All of the scenarios assume single stream, curbside collection of recyclables and a 2.5% annual increase in cost. (The 2.5% increase was the percentage proposed by Pine Tree Waste and is used for illustrative purposes.)

Scenario 1: BAU bi-weekly [Business As Usual with bi-weekly recycling collection]

For this SW&R option, the city retains the curbside bi-weekly recycling collection while a private contractor collects the solid waste. The Public Works Director Denis D'Auteuil, a member of our committee, indicated that for this option to be operationally feasible there would have to be investment in at least one new recycling truck and potentially additional labor costs. The recycling rate is assumed to remain at the current level of 8.5%.

Scenario 2: BAU weekly [Business As Usual with weekly recycling collection]

This SW&R option is identical to the BAU bi-weekly scenario except for increasing the frequency of recycling collection to weekly. This increase in frequency would necessitate the purchase of an additional recycling truck and hiring more personnel over and beyond that required for a bi-weekly collection. The recycling rate is assumed to double to 16%.

Scenario 3 Stop Gap [2-year recycling contract then combined automated SW&R collection]

This Stop Gap scenario was developed to address the need for a separate recycling contract over the next 2 years while the current solid waste contract with Pine Tree Waste is operational. Costing for this SW&R option assumes a private contract for weekly recycling collection of \$225,000/year, comparable to Lewiston, and an increase in the recycling rate to 16%. The 2-year private recycling contract would be for weekly curbside collection with bins and handling comparable to our current program. After the second year, a combined SW&R automated collection contract would be negotiated (competitively bid) for the remaining 8 years. We assumed a 10% reduction in costs below the currently proposed 10-year plan from Pine Tree Waste for these 8 years. This assumption is based upon the ability to openly bid the waste collection combined with the recycling collection once the current waste collection contract has expired. In this scenario, the recycling rate after year 2 would increase to 25% with the combined automated SW&R collection and then increase 5% each subsequent year until a recycling rate of 35% is attained.

Scenario 4: SW&R auto [10 year combined SW&R collection]

This SW&R auto option reflects the current proposal from Pine Tree Waste for a 10-year combined SW&R automated collection program. Pine Tree's costs include purchasing 3 new automated, dual compartment, trash and recycling trucks, providing 2 uniquely tagged bins to each residence, automated weekly collection, and tonnage data by residence. The recycling rate over 10 years is identical to Scenario 3.

Additional SW&R collection options were discussed, in particular Pay As You Throw (PAYT) and Drop Off Recycling in Dumpsters. Pay As You Throw is a term used to describe a system that charges for the bags used to dispose of waste. Towns that utilize PAYT systems report some of the highest recycling rates. One contractor, Waste Zero, provided a proposal for the PAYT scenario. After careful discussion of the PAYT proposal, it was eliminated from further consideration because of perceived citizen objection to paying a fee for their SW collection. The Drop Off Recycling in Dumpsters scenario was also removed from consideration. This approach relies on placing special dumpsters in public locations and allows citizens to transport their own recycling materials to the dumpster. The municipal cost is only periodic collection of material at the dumpster. This option was eliminated after we determined that towns who had tried this alternative had experienced multiple problems including dumping, vandalism, and unsanitary conditions. In addition, the recycling rate for this option was very low.

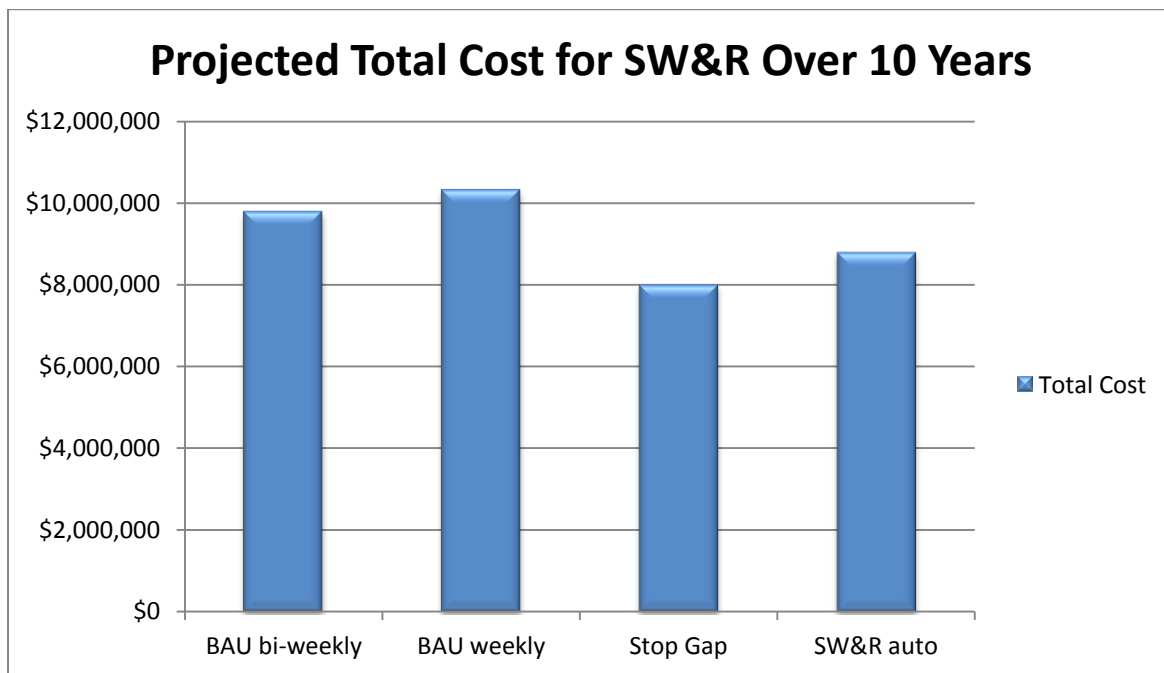
Improving Auburn's 8.5% recycling rate will serve to reduce the budgetary impact that will result from the increased MMWAC tipping fees for SW in the coming years. Although MMWAC was not able to provide us a specific tipping fee/ton for the next fiscal year, the MMWAC Director and Councilor LeRoy Walker indicated that an increase from \$29/ton will occur, and our committee believes the tipping fee will likely reach the market rate within 3 years to \$55/ton. Therefore to lessen this SW disposal cost increase, Auburn should strive to reduce its SW tonnage through recycling and consumer education. The cost saving achieved through recycling is actually cost avoidance. As citizens recycle more materials, with a disposal recycling fee of \$0 per ton, there is a corresponding reduction in SW tonnage and avoidance of its associated disposal costs. As is common in other Maine cities, a recycling rate of 25%

to 45% is attainable within a short period of time with an improved recycling management system and continuous public education.

We developed an Excel workbook with spreadsheets analyzing current and future costs over 10 years for each of the 4 scenarios. A ten year time frame was chosen for this analysis because: (1) we felt that taking a long range view of our SW&R management costs was prudent because of the increase in SW tipping fees at MMWAC and (2) Pine Tree Waste’s proposal was for 10 years. The assumptions we made in our cost analysis were based on:

- Experience from other cities in terms of recycling rates for various collection options
- The Pine Tree Waste proposal for annual cost increases (2.5%)
- Information received from MMWAC regarding disposal tipping fees
- Auburn Public Works

The results of the economic analysis of the 4 SW&R scenarios are presented in the following graph and table.



BAU bi-weekly	\$9,783,468
BAU weekly	\$10,318,097
Stop Gap	\$7,991,144
SW&R auto	\$8,787,921

As is evident, continuing with the current Business As Usual SW&R management system is the most expensive option and has been very difficult for the Public Works Department to maintain. The current recycling system has lost favor with the citizens of Auburn as is demonstrated by the very low recycling rate and high SW tonnage per person. This combination of factors leads to increasing SW&R expenses for taxpayers.

The benefit of moving to an automated, combined SW&R collection system can be seen in the 2 lowest cost scenarios. The reduction in expenses is directly tied to increased cost avoidance through higher recycling rates and reduced SW tonnage, as is evident in the following table.

Scenario	Collection	Disposal	Avoidance
BAU bi-weekly	\$6,129,729	\$4,001,715	-\$347,975
BAU weekly	\$7,360,308	\$3,653,740	-\$695,950
Stop Gap	\$6,306,167	\$3,017,334	-\$1,332,357
SW&R auto	\$7,102,944	\$3,017,334	-\$1,332,357

The committee has recommended the SW&R auto scenario over the Stop Gap scenario for several reasons. The cost difference between the Stop Gap and the SW&R auto scenario, \$ 796,777, is based on an assumption that a 10% reduction in costs from the current proposal from Pine Tree Waste can be attained for years 3-10 in the Stop Gap scenario. Whether this assumption is valid will not be tested for another 2 years. Rather than select the Stop Gap scenario based on this assumption, the committee recommends that the City negotiate with Pine Tree Waste to reduce its current proposal (SW&R auto) to meet or exceed the Stop Gap scenario. If successful this path would lead to reduced recycling collection costs over the next 2 years compared to the Stop Gap scenario and expedite the city's move to a combined automatic SW&R system with all its advantages. Additionally by converting the city's collections over to a two bin system, Auburn will be better positioned towards the future direction of the solid waste collection industry. Indications lead the committee to believe that this industry is gearing itself towards a wet waste, dry waste collection process and the two bin automated system better prepares Auburn for the transition.

Under the automated SW&R collection system proposal, the committee expects that the council might hear concerns that a single trash container is not adequate for certain homeowners. These concerns can be addressed in a few ways:

1. Citizens could be directed to MMWAC where they may drop any excess waste into a dumpster at no charge.
2. The City could provide a second waste bin for such residents at no charge.
3. The City could provide a second waste bin for such residents at cost.
4. The City could provide a second waste bin for such residents at cost, and also add a monthly cost to reflect the increased disposal costs associated with the extra solid waste.

5. The City could encourage greater recycling by offering to provide a second recycling bin for free to encourage these residents to reduce their waste through greater recycling.

After careful discussion of these options, the committee members agreed to recommend option 4 with the understanding that citizens will still be able to take any excess waste to MMWAC for no additional charge. We recommended this option because it reduces costs to the city and places the onus on the residents for controlling their amount of solid waste for curbside pickup.

Clearly any of these scenarios increases the annual cost for the city's SW&R budget. There is no way to retain the current SW&R system at the present cost in the coming year(s) because of the absence of any working recycling trucks and the increase in tipping fees at MMWAC. A cost increase for SW&R is therefore inevitable for Auburn unless the city decides to eliminate all recycling (with its cost avoidance savings) and charge for solid waste disposal fees (based on increased MMWAC tipping fees). If this were the decision by the City Council, then this committee would recommend reconsidering the Pay As You Throw (PAYT) proposal from Waste Zero. The PAYT approach would charge each consumer a cost that is in line with the amount of waste they produce. PAYT has resulted in the reduction of disposal fees of up to 50%. However, PAYT is commonly coupled with a recycling collection system as a way for the citizens to reduce their SW costs. Regardless of the SW&R management system selected, other than PAYT, we recommend that the council consider allocating some of the money that will become available when the MMWAC bond payments end in the fall of 2014 to this budget item.