



Memorandum

To: City of Menasha Board of Public Works
From: Adam Alix, Deputy Director of Municipal Operations
Date: August 9, 2016, 2016
RE: Leaf Collection Pilot Program

BACKGROUND

Since the early 1980's, the City collected loose leaves from our residents on their terraces with the use of vacuum machines. During peak collection periods we would supplement the two vacuum machines with the use of a front end loader and dump truck. These vacuum machines are single purpose pieces of equipment, meaning they are only used for the collection of leaves during the fall of the year.

In 1995 we fabricated a trailer vacuum machine into a skid mounted unit that is attached to a dump truck via the plow mount on the front of the truck with the leaves being blown into a box mounted on the dump body. Then in 1997, we built an additional front plow mounted vacuum machine to help supplement this collection due to the continued growth of the City.

Early into our leaf collection season this past fall, we experienced an engine failure with our 1997 front mount unit. Due to the singular nature of these units and the costs associated with maintaining them, we decided to not replace the unit until we had a chance to review our leaf collection options. As in the past, we supplemented the two vacuum machines with a loader crew to enable us to collect the remainder of the leaves before winter arrived.

My observations with the use of these machines often left me to believe there is a means of being able to accomplish this collection in a more timely manner. This led us to look at the method used by the City of Appleton, and others, as they primarily use an end loader with a specialty bucket better suited for scooping up piles of loose material such as leaves. They have their residents place their leaves out in the street along the gutter on their scheduled day for collection. The leaves are pushed into larger piles for loading them into a rear load refuse truck to compact them for hauling to their drop site. The City of Appleton still uses vacuum machines for use on their collector and four lane streets to minimize disruptions for motorists.

Analysis/Fiscal Impact

Our costs for collecting leaves in 2015 ranged from \$12.96 per cubic yard to \$29.10 per cubic yard depending on many variables. On average, I believe \$17.65 per cubic yard is a conservative estimate of our costs. Appleton's average cost was \$8.92 per cubic yard. Granted, we don't know all the costs they have included in that number. However, I feel the spread justifies our attempting a similar method of leaf collection.

Other than the type of equipment used, the main difference in their collection is where the leaves are placed. In order for this means of collection to be cost effective, the leaves and yard waste materials need to be placed onto the edge of the street so the loader operators are removing the leaves from the street, not the terrace. When the leaves are in the street they can be pushed into larger piles to be loaded out.

This summer we were able to purchase an end loader with a claw bucket attachment. This attachment will enable us to better handle the piles of leaves and be more efficient with our time in the loader. Although, we do have a rear load refuse truck, it is used to collect solid waste on a daily basis. For the initial stages of this pilot collection program we would still need to use dump trucks for hauling. Once we have identified our expenses we will then be able to determine a realistic cost with the use of a compaction body truck for hauling.

Recommendation

The Department of Public Works recommends implementing a pilot leaf collection program for the Fall of 2016. We further recommend this area to be the Monday A recycle route which is all of the City's Doty Island. The residents will be given an information packet outlining how and where to rake their leaves and on what dates they will be collected. This information will also be included in the fall edition of the *In The Works Newsletter*. In order for this method to be cost effective, the residents will be instructed to place their leaves out onto the edge of the street which is contrary to our current stated practice. No doubt this will generate some confusion but I believe the financial savings will be worth the effort to educate our residents.