

# MEMORANDUM

**TO:** Common Council-City of Madison, WI

**FROM:** Greg Galica and Ken Hallam (District 10 Residents)

**DATE:** 06/15/2010

**SUBJECT:** The need for the City of Madison to implement an automated waste cart/dumpster cleaning system, in order to protect our citizen's health, water, and community cleanliness.

## **THE PROBLEM:**

We Madisonians put everything in our city garbage carts: food waste, dirty diapers, pet fecal matter, paints, solvents, and other chemicals, all of which leave unwanted debris. This debris causes offensive odors, fly and rodent infestations, and disease causing bacteria. This debris then spills into our parkways/curbs when knocked over by wind, or when getting emptied.

The carts are so large, most people can't/won't wash them, but when they do, illicit discharges are released down the curb & into our ground water/lakes.





### **THE SOLUTION:**

Regularly scheduled washing of waste carts/dumpsters will protect our ground water and lakes, improve community cleanliness, and aid in eliminating a variety of community health concerns, such as pestilence, offensive odors, fly and rodent infestations, and disease causing bacteria.

With Madison having 170,000+ garbage/recycle carts, we saw the need for automated cleaning trucks similar to city garbage/recycle trucks that would be able to handle this large job 2-3 times per year.

What we found while researching the options for designing & building such a vehicle, is that it has already been built by a company called Blast-N-Clean, LLC.

**The Residential Side-Load Truck** can clean a multitude of sizes and shapes of waste containers. As the truck approaches the curbside cart just emptied by the local waste hauler, the truck's robotic side arm reaches out and grasps the cart with a soft-grip-c-claw and raises the cart to the top of the hopper. The cart is then inverted a full 180 degrees, placing it over a dynamic spray head containing numerous spray nozzles.

The sprayer then blasts every interior square inch with powerful streams of water that have been premixed with biodegradable fluids that clean, degrease, sanitize, and deodorize the cart. The debris that has been blasted off the interior sides and bottom of the cart fall to the bottom of the truck's catch basin, and are conveyed to the rear of the truck to be held in another refuse bin.

The water used to clean the cart is then sent through a series of filters, cleaned and returned to be used again. The entire cleaning cycle takes less than fifteen seconds per cart. At the end of the production day, the truck safely disposes of the gray water and other refuse, according to state and local regulations.



**The Commercial Truck** operates in a similar way except the truck will pick up the dumpster from the front of the truck and lift the container over the cab and hopper. Total cleaning cycle time is two minutes for these larger units.



**THE BENEFITS:**

- Helps to protect Madison from a variety of urban health concerns such as pestilence, disease-causing bacteria, fly and rodent infestations, and very offensive odors.
- Helps protect illicit discharges from entering Madison's ground water supply.
- Helps protect illicit discharges from entering Madison's lakes and rivers.
- Helps Madison to comply with its own ordinance, Chapter 37 (The Public Storm Water System).
- Helps Madison to comply with the EPA's "Best Management Practices".
- Helps increase Madison's public awareness as a pioneer for the environment.
- Helps increase Madison's tax base by creating new jobs in operation, maintenance, and support.

## **FINANCIAL INFORMATION**

### **RESIDENTIAL CART CLEANING TRUCK INVESTMENT/RETURN:**

- Residential trucks have a cleaning capacity of 600-800 carts per day.
- Madison has approximately 170,000 residential carts.
- One residential cleaning truck can clean 3,000 carts per week based on 600 cleanings per day.
- Six trucks can clean 170,000 carts in 9 ½ weeks.
- Two cleanings per year in approximately 19 weeks.
- Three cleanings per year in approximately 28 ½ weeks.
- Initial investment is \$398,000 per truck. Cities also have an option to lease the trucks to reduce the amount of initial investment.
- Recommended pricing is \$6.00 per cart, per cleaning on city utility bill.
- There is a \$1.50 royalty to Blast-N- Clean, LLC per cart cleaned.
- City of Madison will receive \$4.50 per cart cleaned.
- At 2 cleanings per year the total charge is \$24.00 on city utility bill.
- At 3 cleanings per year the total charge is \$36.00 on city utility bill.
- 170,000 carts equal \$765,000 per cleaning, revenue to Madison.
- 2 cleanings per year equals \$1,530,000 revenue to Madison, to cover operations, maintenance, and support of the residential cart cleaning program.
- 3 cleanings per year equals \$2,295,000 revenue to Madison, to cover operations, maintenance, and support of the residential cart cleaning program.

## **FINANCIAL INFORMATION CONTINUED**

### **COMMERCIAL DUMPSTER CLEANING TRUCK INVESTMENT/RETURN:**

- Commercial trucks have a cleaning capacity of 35 dumpsters per day.
- Initial investment is the same as the residential truck, \$398,000 per truck. Cities also have an option to lease the trucks to reduce the amount of initial investment.
- Recommended pricing is \$60.00 per dumpster, per cleaning on city utility bill (for businesses, condos, and rentals with dumpsters).
- There is a \$15.00 residual to Blast-N-Clean, LLC per dumpster cleaned.
- City of Madison will receive \$45.00 per dumpster cleaned.
- At 2 cleanings per year the total charge is \$120.00 on city utility bill.
- At 3 cleanings per year the total charge is \$180.00 on city utility bill.
- Madison has ??????? number of dumpsters, for reference purposes we will use 1,000.
- At the reference number of 1,000 dumpsters, this equals \$45,000 per cleaning, revenue to Madison.
- 2 cleanings per year equals \$90,000 revenue to Madison, to cover operations, maintenance, and support of the commercial dumpster cleaning program.
- 3 cleanings per year equals \$135,000 revenue to Madison, to cover operations, maintenance, and support of the commercial dumpster cleaning program.

### **CONCLUSION:**

We recommend the City of Madison, in its continued effort to help protect the health and welfare of its residents, businesses and guests, consider the purchase of automated residential/commercial trucks from Blast-N-Clean, LLC.

Let's keep Madison a leader in environmental and health concerns by being the first major city to implement this all important service!

Greg Galica and Ken Hallam

District 10 Residents

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