



RSA Task 7 | Away from Home Recycling

Pilot Project Proposal

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Background

At the outset of this project, two systems were being considered for the implementation of a public space recycling pilot project: PepsiCo's Dream Machine and Big Belly Solar's collection stations.

After researching both options, it is clear that Big Belly Solar is able to provide the best option for a public space recycling pilot project for WUTC customers.

While PepsiCo's Dream Machine has been a popular, high profile, and easy-to-use public space recycling system, there were key limitations to effectively implement in King and Snohomish Counties:

- PepsiCo requires an application for all proposed Dream Machine sites, and there is no guarantee that a site will be selected for Dream Machine implementation. Predominately, these containers are installed on college campuses.
In typical programs, the Dream Machine is leased. A purchase option is available.
- Once implemented, PepsiCo can pull the Dream Machine at any time.
- The Dream Machine is available for purchase, at a base price of \$16,000 each and this option does prevent the container from being pulled from a site, and relegates control to the owner.
- The Dream Machine only accepts aluminum and plastic bottles, thus limiting the list of accepted recyclable to a fraction of approved recyclables allowed by King and Snohomish County recycling systems.



Big Belly Solar Technology



The second container system considered for this pilot project is created by Big Belly Solar. After careful review, the technology used in this system seems to provide the most flexible, engaging and sustainable option for the pilot project.

Big Belly Solar public space waste and recycling collection stations have been implemented successfully in cities across the United States and in 30 countries. Locally, these have been implemented by the City of Kirkland (*left photo*) and the University of Washington (*bottom right photo*) as well as by King County Metro.

The collection stations have both solar compactor models (garbage containers only) for outdoor use and 12 volt battery-operated compactor models for indoor use. The containers have built-in sensors that monitor use levels and report automatically to an online web-based server, called CLEAN, allowing program managers to monitor and manage collection from any computer. A three-color LED status lighting system provides waste level information onsite to collection staff.

Big Belly Solar collection station highlights:

- Low voltage, low energy use
- Cordless, self-powered unit
- Leak-proof interior bin
- Constructed using steel with recycled content
- Handles are ADA compliant
- CLEAN remote monitoring software





Pilot Project Overview

The Big Belly public space recycling system has a well documented track record of success in helping municipalities across the United States, and around the world, with a durable, efficient and sustainable public space waste management system.

Waste Management recommends the WUTC public space recycling pilot project utilize 15 sets of Big Belly Solar garbage compactors and Smart Belly recycling containers, placed side-by-side, for a total of 30 total containers.

Five sets will be placed in King County and ten sets will be placed in Snohomish County. This division of the 15 total sets of containers reflects the WUTC residential population difference between the two Counties.

Each Big Belly container set will have an engaging wrap and/or instructional insert panels, designed by the project team, including Waste Management, King and Snohomish Counties. Design quotes received reflect a variety of wrap and panel designs, so each location can have a unique look.

Once ordered, the containers will take four weeks to arrive. During that time, the project team will work with design and media vendors to plan and implement the pilot launch. At this time, the goal is to launch in February 2013.

The media tactics used for the pilot launch will be tailored to the placement locations of the containers. Any number of tactics, including an ad buy (e.g. bus, bus stop, park kiosk, mall kiosk), launch event or news story placement will be developed to raise awareness about the containers and the new opportunity for the public to recycle “away from home”. Other key messages will highlight how public space recycling can make a positive economic and environmental impact in the community in which they are placed.

The placement of the container sets will be determined during stakeholder meetings with both King and Snohomish Counties following the review of this proposal. Three types of location options for the Big Belly Public Space Recycling pilot project have been researched, and are outlined below. Because each BigBelly+SmartBelly container set can be placed by itself as a stand-alone system, a combination of location types can be selected for this pilot.



Option One | Regional Shopping Destinations

When considering the best locations to pilot a public space recycling program, we first looked for **destination** locations within Waste Management's King and Snohomish County WUTC service areas. The goal for this option is to place containers where they will be seen and used by the widest variety of WUTC customers. After considering neighborhood centers, 'main street' locations, and parks within specific UTC cities, these were considered unlikely to have the exposure and use that major shopping destinations could provide.

Malls have become a community gathering place for teens, adults and families alike. Many malls, including the ones recommended for the pilot, have a toddler play area, food court, restaurants and entertainment venues built into the mall property itself. Southcenter Mall has approximately 15,763,800 annual customer visits. Research conducted by General Growth Properties found that 43% of consumers visit the mall at least once a week, 80% visit at least once per month and 4 in 10 visitors have kids under 18 in the household.

In addition to shopping, people also visit malls to walk indoors, meet friends and participate in community activities hosted there, including charity walks, recycling collection events, and community safety and health fairs.

Malls are also a customer destination that do not require a fee for entry. This is an important factor when considering equal access to the containers in the pilot program.

If the goal for placement is destination shopping areas, the following locations are recommended for consideration for a public space recycling pilot:

Snohomish County

- Seattle Outlets, Marysville
- Alderwood Mall, Lynnwood
- Everett Mall, Everett

King County

- Super Mall/The Outlet Collection*, Auburn (*new name)
- Bellevue Square, Bellevue
- Southcenter Mall, Tukwila
- Redmond Town Center, Redmond
- North Bend Outlets, North Bend
- The Commons, Federal Way



Option Two | Transit Centers and Park & Ride Locations

Transit Centers present another high traffic area option for installing public space recycling containers.

In King County, this option would create an opportunity to partner with King County Metro and the Washington State Department of Transportation. Within the King County Metro transit system, there are many options for Park & Ride or individual bus stop placement of the recycling stations, including the King County Metro’s RapidRide transit program, which provides frequent trips throughout the day in busy cross-county corridors:

- Tukwila to Federal Way on Pacific Highway S / International Boulevard
- Bellevue to Redmond on NE Eighth Street and 156th Avenue NE via Crossroads and Overlake
- West Seattle to downtown Seattle using Fauntleroy Way SW and California Avenue SW
- Ballard to Uptown and downtown Seattle along 15th Avenue NW
- Aurora Avenue N (State Route 99) between Shoreline and downtown Seattle
- Burien to Renton via Tukwila and Southcenter

In Snohomish County, potential partners include Community Transit, Everett Transit and the Washington State Department of Transportation.

Community Transit’s SWIFT bus rapid transit system serves a 17-mile route between Everett and Shoreline. The SWIFT buses operate every 12 minutes weekdays from 6 a.m. to 7 p.m. and every 20 minutes weekdays from 5-6 a.m., weeknights and on Saturdays.

If a transit option is selected as the focus, or an aspect of the pilot project locations for King County or Snohomish County, the stakeholder group will work together to identify which bus stops or Park & Ride locations will best serve WUTC customers.



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Option Three | County Parks

Parks are an important part of a community's landscape, as both a recreation destination and a place to gather with friends and family. There are a total of 254 County Parks located in King (200) and Snohomish (54) Counties.

If a park, or multiple parks, are selected as installation sites for the Big Belly pilot project, it will be important to use the following criteria to determine which parks will be best served by this recycling system:

- Proximity to UTC service area
- Primary use of park (playground, sports fields, picnic tables, trails, dog park, etc.)
- Estimated frequency of use

Implementation Timeline

2012

October	Report Review Stakeholder meetings
November	Report Revisions: Addition of park and transit sites as location options; Stakeholder Q/A; updated invoice
December	Stakeholder Meetings Place Big Belly Order
January	Identify installation locations Design container wraps and container instruction panels Design media/customer awareness campaign
February	Installation Onsite staff training <i>(as needed, if placed in areas that WM does not provide collection service)</i> Kick-off event(s) and media announcements Launch media campaign Idea: "I (heart) Recycling" theme



2013

- March** Container audit - verify contamination levels
Stakeholder review

- April** Optional: Earth Day Everywhere advertising campaign

- May** Container audit - verify contamination levels
Stakeholder review

- July** Optional: Endless Summer advertising campaign

- August** Container audit - verify contamination levels
Stakeholder review

- Oct-Dec** Optional : Holiday advertising campaign
Container audit - verify contamination levels

2012 Implementation Budget | \$150,000

Item	Quantity	Cost
Big Belly Containers	15 garbage, 15 recycle	\$115,014 <i>*includes containers, custom wrap, delivery, installation and maintenance</i>
Container Panels	Design, print	\$4,080
Media Outreach	Ad buy, launch event, PR outreach	\$30,000
TOTAL		\$149,094



STAKEHOLDER DISCUSSION | Questions & Answers

Please provide 2-3 locations which have had these in place the longest, and the dates of placement.

BB: We are now on our 4th generation Big Belly. We have 15,000 stations deployed since 2004 across all 4 generations. Stations from 2004 are still in service with the DCR (Massachusetts park system). The BB3 model, which is the most similar to the BB4 (current model) have been deployed since 2007. Larger 2007 deployments include Surrey BC, Boston MA, Cincinnati OH and Philadelphia PA.

Are the Big Belly containers still in place in the two cities listed in the attached case studies?

BB: They absolutely are still in service at these locations and both cities are continuing to realize savings.

Has there been any customer satisfaction surveys completed?

BB: We have customer testimonials posted on our website which I encourage you to check out.

Boston University Testimonial: <http://www.youtube.com/watch?v=vvFzVliA0HA>
Learn more: <http://www.bigbelly.com/benefits/testimonials/>

Is there any information about contamination rates? As well as how these compare with other public space waste systems?

BB: We see very low contamination because of the increased interaction required with the Big Belly station. People are more inclined to make a conscious decision of what goes where. In addition, the CLEAN monitoring system is available online and gives 24/7 real-time information about every container in your program.
Learn more: <http://www.bigbelly.com/solutions/clean/>



Is there any park or parks using these?

BB: Big Belly has helped numerous communities bring a recycling option to parks and playing fields where water and sports drink bottles make up the majority of the waste stream. Everett Parks in Washington is also a power user of the Big Belly solution, they have 44 stations across their parks.

Learn more: <http://www.bigbelly.com/places/parks/>

Are there any bus stops or transit stations using these?

Yes, Kitsap Transit (20 stations) and King County Metro Transit (70 stations) to name a few local customers. Other transit customers include Pierce Transit, Hampton Roads Transit, the Greater Dayton RTA, Orlando LYNX and Pinellas Suncoast Transit.

Learn more: <http://www.bigbelly.com/places/transit/>

Are the Big Belly containers leased or purchased?

WM: The Big Belly containers are purchased and come automatically with a 1-year warranty.

Who is responsible for installation?

WM: Waste Management will receive the Big Belly containers fully built on pallets at the WM Woodinville Hauling facility. WM staff will deliver the Big Belly Solar garbage compactor and Smart Belly recycle container sets to each designated location.

Once placed, can the Big Belly containers be moved to another location?

WM: Yes. Containers can be moved at any time, and can be placed in any approved location, as determined by King and Snohomish Counties.



Is Big Belly, cost-wise an effective way to go? (i.e. replication, relevance, etc.)

WM: The Big Belly containers have been documented as a successful public space waste and recycling system from both an efficiency perspective (solar compactor and real-time online container monitoring system can reduce collection trips by up to 70-80%), a contamination perspective (every side of the container can be designed with clear instructional messages, including hot-stamped messages on the container disposal pull-down doors, and color coding options; recycling disposal doors or flap openings can be designed to limit types of items) and an environmental perspective (garbage compactors are solar powered).

Is a media campaign really needed for this?

WM: We have included a media campaign for this project to pay for a number of tactics to raise awareness about the new containers, including a launch event; bus, bus stop and Park & Ride kiosk ads if transit locations are selected; signage to place in parks and park kiosks, if park locations are selected; mall kiosk ads if shopping locations are selected; and environmental ads in community newspapers with images of the stations, highlighting the new program and where the Big Belly stations will be placed.

Has WM used these containers elsewhere? If so, give us some information about their performance.

WM: Most recently, in Washington, WM has installed Big Belly waste and recycling containers in the City of Kirkland and on the University of Washington's main campus. In both cases, the customers have been very happy with the systems and how much waste has been diverted as recycling and compost. From an operations perspective, the online CLEAN tracking system has been easy to use to monitor when collection is needed. John MacGillivray (Kirkland) and Emily Newcomer (UW) are both available to answer questions from their perspective, and Jeff McMahon (WM) can answer specific operations questions.

Provide a description of what the agreement or plan will be with respect to the custodial/janitorial end of this plan. Are these folks being paid to service them (11K)? What is meant by maintenance?

WM: We have separated the Delivery cost from the Installation & Maintenance in the budget to help clarify each cost. The Delivery cost line item covers the operational cost of delivering the units to fifteen locations. The Installation & Maintenance cost line item covers 1) the cost of permits, approval process and



installation if containers are placed in the public right-of-way, including the option to bolt the containers to the sidewalk, if needed, or to another permanent surface. 2) It also covers the cost of replacing the wraps or panels, if damaged by graffiti, or the cost of replacement parts after the 1-year warranty expires.

None of these line items cover the cost of collection because collection will be routed based on current UTC customer routes.

How/who services the containers if their electronic systems fail?

WM: The \$5,589 per set cost (one Big Belly Solar garbage compactor and one Smart Belly recycling container) includes a lifetime warranty on the electronic monitoring system, CLEAN. When needed, a service request is placed and service is provided by a trained Big Belly technician.

What is the record regarding how these containers hold up in weather, with vandalism? The case studies have glowing recommendations, have you confirmed these by talking to those cities?

WM: The most recent example of durability is the Big Belly Solar container that was the only thing left on the NJ Boardwalk after Hurricane Sandy.



Is the media outreach a partnership with the mall? If not, why is the mall not involved in this effort?

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WM: We have not explored this yet, as we wanted to wait for confirmation of the location choices before engaging potential partners.

How will these containers be branded including what educational displays will be included?

WM: We have a design and print estimate from the Kore Group to custom design a variety of tailored container wraps (think bus wrap) and/or insert panels for the container sets.

The design process will involve all stakeholders and the designs can be as creative as the group would like. I encourage looking on Big Belly Solar's website, as there are many examples of custom container wraps and panels. In Kirkland, they has a "WANTED" design created for the recycling container with images of the recyclables they encouraged the public to place in the container.

What is the expected collection of recyclables for these containers, how much will be collected for the cost of the program?

WM: Each Smart Belly recycling container can hold 32-gallons of materials. With fifteen total recycling containers, there is the capacity to store 480 gallons of materials before collection. The frequency of collection, the total amount of recyclables collected and pattern of use will be unknown until the pilot is underway.

Are you proposing the containers collect multiple recyclables?

WM: This is a decision for the project team. The containers have a flap option or a shaped-opening option.



Resources

- **Big Belly Solar** <http://bigbellysolar.com>
- **Pepsi Dream Machine** <http://www.dreammachinelocator.com/>
- **GGP Customer Research**
<http://www.ggp.com/marketing/research-statistics-overview>
- **King County Parks**
<http://www.kingcounty.gov/recreation/parks/inventory.aspx>
- **Snohomish County Parks** <http://www.snocoparks.org/>
- **Community Transit** <http://www.commtrans.org/swift/>
- **Everett Transit** <http://www.ci.everett.wa.us/default.aspx?ID=290>
- **King County Transit** <http://metro.kingcounty.gov/>

Appendices

- A. Big Belly Solar Compactor Technical Specs
- B. SmartBelly Technical Specs
- C. Big Belly Solar FAQ
- D. Big Belly Case Study #1: City of Philadelphia
- E. Big Belly Case Study #2: Port Jefferson, New York
- F. Glimcher Marketing Guide
- G. Westfield Marketing Guide
- H. Big Belly Parks Overview
- I. Big Belly Transit Overview
- J. Big Belly Case Study #3: Orlando LYNX, Florida
- K. Big Belly Maintenance Plan
- L. Big Belly Containers Preliminary Invoice