

GBB Waste Outlook

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GBB and FleetRoute™ Assist City of Baltimore with Collection Re-Routing, Generating Significant Savings of Up to \$6 Million Per Year

New "One Plus One" Collection Program Selected and Implemented

Using FleetRoute™ route optimization software, GBB helped the City of Baltimore, MD to re-route its residential trash collection system. The route optimization project, which is expected to generate significant labor, fuel, equipment, and maintenance savings, was provided through a contract with the Northeast Maryland Waste Disposal Authority (NMWDA). For this project, GBB teamed with technology partner C2Logix to provide the City with a unique combination of solid waste and route optimization expertise.

The City has an estimated population of 630,000 with 190,000 households serviced by the Department of Public Works (DPW) trucks and crews. Before the re-routing project, the DPW collected refuse twice a week from

each residence, with approximately 63 trucks operating six days a week for a total of 214 routes.

"In 2009, the GBB FleetRoute™ Service Bureau developed five alternative conceptual route scenarios. Each of these optimized the routes, workdays, and equipment allocation, as well as analyzed cost savings," said Frank Bernheisel, GBB Vice President. "This in-depth analysis provided the City with the necessary tools to make an informed decision regarding changes in its collection operation and will allow for significant collection cost reductions for the City while improving services to residents with a more efficient operation."

The project included refining the geocoding of City customers on the GIS maps and geocoding and identification of customers serviced in alleys. In addition, the street centerline data were expanded to add alleys

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Green-Ness is Next to Godliness: Organics Diversion at a Religious Institution

When Congregation Beth El in Bethesda, MD, first attempted to implement a recycling program, they had no idea how far into its organization the program would go, or how much it would be able to reduce its waste.

As a religious facility, the temple hosts activities all week long, including various spiritual services and functions on different days; daytime administrative activities; a preschool; evening meetings; and a variety of special events. The 1,100 members use the building's sanctuary, offices, classrooms, a kitchen, rest-rooms, and multi-functional banquet and meeting rooms. With a commercial kitchen preparing snack foods and meals, the challenge was even greater to reduce the amount of material in the building's waste container and increase recycling.

Volunteers from their Green Tikkun Environmental Committee performed a waste sort in the spring of 2008, using interested parishioners and input from GBB staff. Waste was divided into categories of interest to the Committee in examining materials for increased recycling and waste reduction. The recyclables container was also sorted and they found that, although setting out



38% (by weight) for recycling, some of it was non-recyclable material. The waste sort discovered that 52% of what was in the trash was organics which could be diverted for composting, and another 15% of the trash

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Recent GBB Assignments

In the past few months, GBB has been selected for several new assignments, including:

- **Review/Procurement of Collection Programs**
City of Fort Wayne, IN
- **Integrated Waste Management Routing Solution Implementation**
Lexington-Fayette Urban County Government, KY
- **Recycling Policy Analysis**
The Aluminum Association

We appreciate the opportunity to assist these clients with their needs.

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and travel attributes that were not included in the City GIS baseline. City historical service data were used for set-out weights, and field observations were conducted to update the stop time information.

The alternative conceptual route scenarios were provided to NMWDA and the City, and included both weekly and twice-weekly refuse collection. The weekly collection also included recycling collection, referred to as One Plus One by the City. Scenarios included both

five-day work weeks and four-day work weeks. The analysis indicated that the change in the collection system could save the City about \$6 million a year. The City Council approved the change, selected the One Plus One scenario, and the City began the new collection program on July 13, 2009. The new program provides one trash collection and one recycling collection each week for single-family residences in Baltimore. The GBB Project Team developed the routes that were used in the roll-out of the new One Plus One collection program.

Green-Ness is Next to Godliness: Organics Diversion at a Religious Institution

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should have been put in the recycling container. The facility's waste generation breakdown (by weight) was as follows, based on total materials set out for collection, regardless of the container in which they were deposited: 45% recyclables, 33% organics, and only 22% trash.

Using the sort results, as well as knowledge of recycling services available in the area, the Committee rearranged waste container types and collection schedules to capture more volume and kinds of recyclables. In addition, they implemented policies and procedures inside the building and at various levels of the organization, to assist in delivering the appropriate materials to their respective containers. These activities included providing interior recycling containers as needed, complete with signage, and training service workers on the new segregation categories.

Although the program was initiated by citing the Jewish mitzvah "Do Not Waste," the cost of service was still an important consideration. While adding more recycling services and initiating food scraps/organics collections, by making initial small changes in waste collection services, the temple held its service cost stable. As the program continues to de-

velop, oversight of waste collection needs is anticipated to allow a reduction in waste service levels and in collection costs.

After one year, another waste sort was performed to evaluate progress. The results showed marked gains and revealed additional activities that will help further improve waste reduction. Through operational modifications, program upgrades, and training, they had been able to revise their actual waste generation to a composition of 66% organics, 25% recyclables, and only 9% trash. However, not all of the material was being captured in the appropriate collection containers, and the facility was setting out 47% of its waste as compostable organics, another 20% as recyclables, and 33% (by weight) as trash. Amazingly, they noticed that even the 33% portion set out as trash still consisted of 52% organics, 23% recyclables, 5% reusable items, and only 20% actual trash, leading them to ponder further programmatic adjustments to capture all of the materials in proper disposal streams and reduce the actual volume in the trash container to virtually nothing!

View the presentation made at the U.S. Composting Council Conference: gbbinc.com/speaker/MinstrellUSCC2010.pdf

Harvey Gershman Comments on NY Times Article on WTE NYT: Europe Finds Clean Energy in Trash, but U.S. Lags

On April 13, 2010, the New York Times published an article by Elisabeth Rosenthal entitled "Europe Finds Clean Energy in Trash, but U.S. Lags," which confirms what many in the solid waste industry have known for some time: Municipal solid waste is no longer a nuisance when the technology exists—and is used—to extract energy and raw materials on an industrial scale. The article is available via: tinyurl.com/nyt-wte

Harvey Gershman, GBB President, responded to the article with some additional facts and his comments on the current state and future of Waste-To-Energy in the U.S.:

Elisabeth Rosenthal's article, "Europe Finds Clean Energy in Trash, but U.S. Lags," confirms what many of us in the solid waste industry have known for some time: Municipal solid waste is no longer a nuisance when the technology exists—and is used—to extract energy and raw materials on an industrial scale.

At our company, we have worked on more than 70 waste-to-energy projects, we have seen how today's waste-to-energy (WTE) facilities in the U. S. (some 89 in number) meet the most stringent environmental standards in the world and serve as an alternative to land disposal and power generation from fossil fuels, preventing the release of tons of harmful nitrogen oxides and volatile organic compounds. As noted by Columbia University's Waste-to-Energy Research and Technology Council (www.wtert.org; see article tinyurl.com/2dwan4c), WTE allows for energy and metals recovery, greenhouse gas reduction estimated conservatively at one ton of CO2 per ton of municipal solid waste processed by WTE rather than landfilled, and—important from the standpoint of sustainable development—land conservation. Further, WTE has a "beautiful friendship" with recycling, as the experience in many communities with WTE demonstrates. Studies show that at the local level, communities that have built WTE plants have an average recycling rate higher than the national average. Yet even with the recycling and WTE that currently exists in the U.S., over half of our waste stream is still buried in landfills.

While Ms. Rosenthal is correct that no new WTE plants have been built in the U. S. in recent years, she overlooked the fact that existing WTE facility expansions have occurred or are underway in Hillsborough County, FL; Lee County, FL; Honolulu, HI; Olmsted County, MN, and Baltimore, MD. New projects are in advanced development for Frederick County, MD; Harford County, MD; Palm Beach County, FL; and the U.S. Virgin Islands.

In the United States, we need to manage our wastes better, including doing more to reduce the amount of waste generated in the first place and boosting our recycling rate from the 30 percent level. We can expand the types of plastics collected and processed for recycling, we can do a better job of recycling away from home, and we can add food waste to other organics we already compost. We need to work collaboratively to establish national goals, such as recycling at least 50 percent of our waste, say by 2015, and then use the remaining waste for its energy value while establishing economic incentives to encourage the domestic use of both these waste-derived recyclable and energy resources. Failure to act will result in a continuation of fragmented policies, recycling plateaus, and too much waste transported and buried in landfills that get farther away from where the waste is generated in the first place. WTE needs to be in partnership with recycling so together recycling and WTE can help get us much closer to sending "zero" waste to landfills.

Conventions & Tradeshows:

GBB will be present at the following industry events:

Virginia Recycling Association Conference

Virginia Beach, VA
May 18-19, 2010

Mary-Jane Atwater,
Speaker
"When You Need Community Support: Making Informed Decisions Using Low-Cost Research"

Harvey Gershman,
Speaker,
"Green-Ness Is Next To Godliness: Organics Diversion at a Religious Institution"
vrarecycles.org

Washington State Recycling Association Conference and Trade Show

Vancouver, WA
May 23-25, 2010
GBB, Exhibitor
wsra.net

Maryland Recycling Network/SWANA Mid-Atlantic Conference

Linthicum, MD
June 24-25, 2010
GBB, Exhibitor
tinyurl.com/mrn-swana

WTE Finance & Investment Summit

San Diego, CA
July 19-21, 2010
Harvey Gershman, Speaker
"Market Overview"
tinyurl.com/wte2010

Visit the conference / tradeshow section of our Website for a continuously updated list of events!

New Ohio-based Associates Enhance GBB's Midwest Presence

GBB is pleased to announce that Michael D. Long, P.E. and Timothy D. Giardina have joined the firm as Principal Associates. Based in Ohio, they will both enhance GBB's Midwest presence and contribute to projects throughout the country with their extensive hands-on solid waste management background and expertise.

Michael Long has 40 years of public service experience with substantial expertise in waste reduction, recycling and the conversion of waste to products, fuels and energy. For 18 years, he was Executive Director of the Solid Waste Authority of Central Ohio. Previously, he served as the Director of Public Utilities and Aviation for the City of Columbus, OH for more than 5 years. He also worked for the Ohio Department of Transportation in various engineering and management capacities.



Timothy Giardina has over 24 years of industry experience with a focus on collection, transfer station, landfill, recycling and medical waste operations. Prior to joining GBB, he spent 13 years with Waste Management Inc. He previously held various positions for Browning-Ferris Industries in Maryland, Pennsylvania and New Jersey.



Visit GBB's Website for the press releases and more information on their backgrounds.



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Updates from the Guam Receiver

In a Court Order dated March 17, 2008, U.S. District Court Judge Frances M. Tydingco-Gatewood appointed GBB to be Receiver with full responsibility for bringing the Guam Solid Waste Management Division into compliance with the 2004 Consent Decree for violation of the Clean Water Act. The latest information about the receivership is available at: www.GuamSolidWasteReceiver.org



Receivership - Two-year Anniversary

March 2010 marks the two-year anniversary of work for the Receivership. In a Court Order dated April 9, 2010, Chief Judge Frances Tydingco-Gatewood stated: "The court finds the work performed by GBB and SWMD employees in concert with the various governmental agencies over the last two years truly impressive.... What was once perceived as an insurmountable hurdle is now becoming a long awaited reality for the people of Guam." View a list of the major achievements of the Receivership: www.quamsolidwastereceiver.org/updates-achievements.shtml

New Trash Cart Program

The Solid Waste Management Division significantly increased its customer base during the 1st quarter of 2010. During the registration period for the new cart-based collection system, both new and previous customers were required to register. As of March 31, 2010, a total of 17,309 customers were registered, a 37 percent increase over the number of registered customers (12,589) before the registration period began.



Quarterly Report

On April 8, 2010, the Receiver submitted to the U.S. District Court of Guam its eighth Quarterly Report, which included updates on the following: Review of Receiver's First Two Years; Layon Landfill and Access Road Construction, Construction Management, Design and Permitting; Trash Cart Rollout and SWMD Operations; Financial Issues and Capital Funding; Next Steps.

The complete Report is available in the documents section of www.GuamSolidWasteReceiver.org

Speaker's Corner

"Overview of Waste Management 'State of Mind' In the U.S."

Presentation by Harvey Gershman

On April 16, 2010, GBB President Harvey Gershman made a presentation entitled "Overview of Waste Management 'State of Mind' In the U.S." during a symposium entitled: "Science, Policy & Politics of Waste... Revisiting Our Solid Waste Management Infrastructure," hosted by King County, WA Councilmember Kathy Lambert. The event, which was aired on KCTV, featured presentations and interactive dialog about international experience with recycling and waste-to-energy, best practices and the future of solid waste planning in the Northwest.



View PDF of presentation at: www.gbbinc.com/speaker/GershmanKingCounty2010.pdf
View broadcast of presentation (20 minutes) at: tinyurl.com/kctv-gershman