


Circular Economy Actions: Cities and Solid Waste Management

Sustainability and Circular Economy Summit
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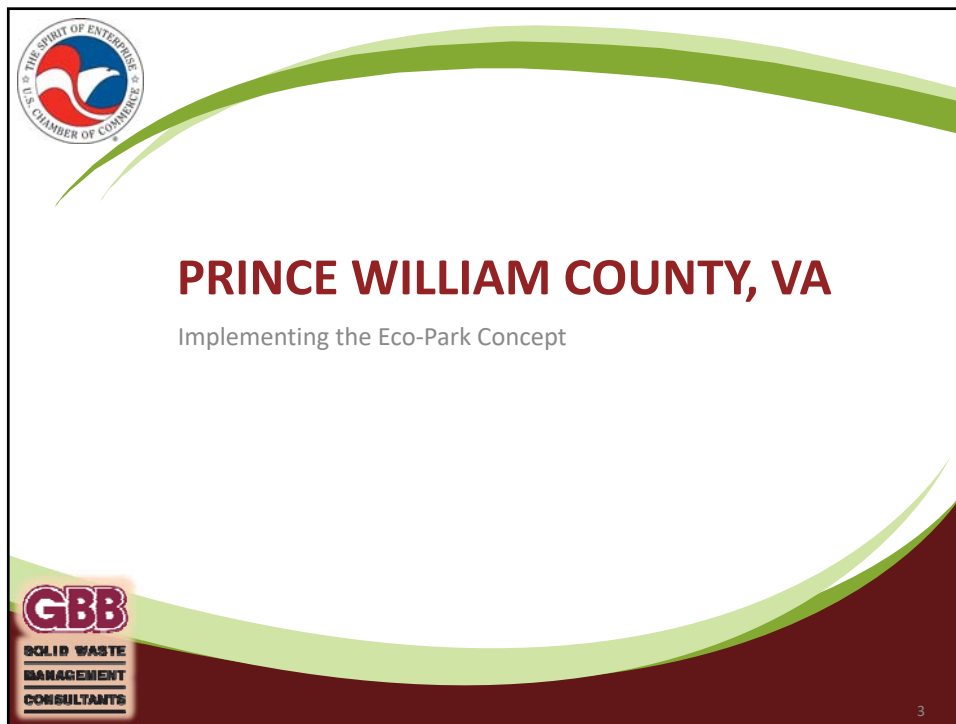



Gershman, Brickner & Bratton, Inc. Solid Waste Management Consulting

- 37+ years national consultant
- Works in partnership with clients to develop innovative, cost-effective approaches that achieve measurable results
- Thinks outside of the box
- Tells it like it is – independent objective advisor
- Significant consulting resources
- Client success stories




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PRINCE WILLIAM COUNTY, VA

Implementing the Eco-Park Concept






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Prince William County, VA

- Located in Northern Virginia
- Population around 440,000
- Department of Public Works owns and operates solid waste handling facilities
- Contracts with private haulers for collection of MSW & recyclables
- Yard Waste drop off services



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The image is an aerial photograph of a large landfill site. The site is characterized by several large, terraced areas of reddish-brown earth, which are the closed areas of the landfill. These areas are surrounded by a dense forest of green trees. In the foreground, there is a smaller, circular area of reddish-brown earth, which is highlighted by a blue oval callout with the text "Waste Conversion Site" and an arrow pointing to it. The overall scene is a mix of natural greenery and industrial waste management infrastructure.


THE SPIRIT OF ENTERPRISE
U.S. CHAMBER OF COMMERCE

Landfill site

- Award winning 1,000 acre landfill with extensive environmental controls receiving 900 tons/day of refuse.
- 350 acres of buffer, mostly forested with a number of species of plants, trees and wildlife.
- Wetlands on site with a large wetlands mitigation project underway.
- Large open space of landfill closed areas.
- Supportive community and County commitment


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 **Landfill Gas Well**




The landfill has 78 extraction wells for collection of landfill gas.


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 **Landfill Gas to Energy Program**

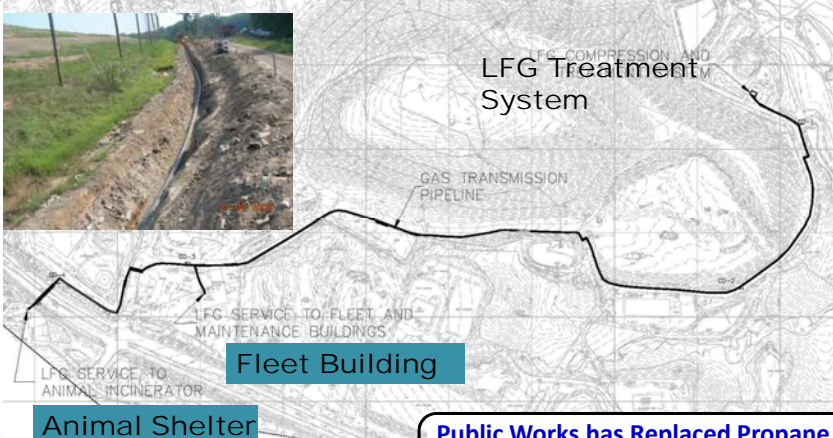


The landfill gas is converted to electricity to produce 6.7 megawatts of power.


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 **Landfill Gas Pipeline Route**




Public Works has Replaced Propane with Landfill Gas, a Renewable Fuel Resource


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 **Solar**

- Private company to phase project with net metering to supply power to buildings on site (1.3 MW).
- Up to 10 MW solar generation possible when the landfill is fully built out



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Organic Waste Management Project

- Public-Private Partnership (PPP)
- 20-year agreement with extension options
- Project Technologies:
 - Anaerobic Digestion (AD) of food waste– 30,000-45,000 tpy
 - Advanced Composting of yard waste – 30,000-50,000 tpy
 - Combined heat and power – electricity generation
 - Indoor Organic Food Production
 - Mulching of wood waste



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Balls Ford Road Yard Waste Site



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Conversion Technology Demonstration

- Final Phase of Eco-Park is a conversion technology demonstration
- County is seeking non-combustion technology to recover additional recyclables and to convert remaining non-recyclable waste into products and /or energy
- Active procurement underway




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KENT COUNTY, MI

Developing a Resource Park



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 **Kent County Waste Management System**



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 **Kent County System Review**

- GBB engaged to review County waste management system and to make recommendations for change
- Surveyed existing infrastructure
- Conducted stakeholder meetings with local industry
- Found strong support for zero waste to landfill initiative



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 **Why a Resource Park?**

- Build environmental industry
 - Employment
 - Green jobs
 - Redevelopment
- Increase options for diversion
 - Keep resources at home
 - Create a solution to the Green Fence / National Sword in China

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 **Use Land Acquired for a Future Landfill to House a Resource Park**



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The slide features a dark red background with a green curved border at the top and bottom. In the top left corner is the U.S. Chamber of Commerce logo, which includes the text "THE SPIRIT OF ENTERPRISE" and "U.S. CHAMBER OF COMMERCE". In the bottom left corner is the GBB logo, which includes the text "GBB", "SOLID WASTE", "MANAGEMENT", and "CONSULTANTS". The main text is centered and reads:

Thank you!

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