

BROWN COUNTY RESOURCE RECOVERY

2016 Annual Report



BROWN COUNTY
**Resource
Recovery**

Message from the Director

This past year of 2016, the Solid Waste Board and staff made significant strides in advancing the mission and vision for the Brown County Port & Resource Recovery Department.

The compactor installed in 2015 at the Recycling Transfer Station saved approximately \$85,000 in hauling costs in 2016. The resulting savings are being realized at a time when the commodity value of recyclables sold is low, helping to offset this decline in revenue.

An improved residential drop-off unloading area was constructed at the Solid Waste Transfer Station to improve efficiency and safety for residential users. Requirements for wearing safety vests were also implemented. A wood waste recycling program was started in 2016, providing beneficial use for the clean wood at lower management cost.

The Hazardous Material Recovery program saw an increase in both participation and volume of material. Recycling of paint and solvent distillation were evaluated and may be economically viable in the near future.

The planning and research efforts for the future South Landfill continue to move forward. This past year leachate management options were studied with trucking to the NEW Water interceptor in De Pere selected as the lowest cost management option.

As an Enterprise Fund, the Port & Resource Recovery Department uses revenues solely gathered through operations to fund its activities. For more than 40 years, the Department has been providing cost-effective, efficient and environmentally responsible solid waste management services for Brown County and, more recently, northeastern Wisconsin.

The Department is focused on providing effective solid waste management services and excellent customer service with a focus on resource recovery. The Department is also focused on professional development of staff, enabling us to better pursue new strategic business development opportunities while providing cross training and an improved team environment.



Dean Haen

Port & Resource Recovery Director

Resource Recovery's vision is to provide Brown County municipal, commercial and industrial customers cost-effective and sustainable solid waste management systems with the focus on resource recovery primarily through recycling, repurposing and energy recovery.

The Department is focused on providing effective solid waste management services and excellent customer service with a focus on resource recovery.



Department Overview

The Resource Recovery side of the Port & Resource Recovery Department offers solid waste management services which include operating a Solid Waste Transfer Station with resource recovery activities, a Single Stream Recycling Transfer Station, a regional Hazardous Material Recovery Facility, an East Landfill Gas-to-Energy Facility, maintenance of two closed landfills, and coordination of household sharps and pharmaceutical collection and disposal programs. The Department also provides recycling programs for shingles, construction & demolition (C&D) material, clean wood waste, tires, Freon-containing and other appliances, electronics and a drop-off food waste program. The success of these programs is based on a forward-thinking Solid Waste Management Board and staff that build and maintain long-term relationships with the public and private sector. These relationships have resulted in long-term agreements for solid waste, recycling and other resource recovery activities. The Solid Waste Management Board and staff are committed to learning about and pursuing emerging solid waste management technologies that are economical and environmentally beneficial.

The Department is part of the Tri-County regional solid waste and recycling agreements between Brown, Outagamie and Winnebago Counties known as the BOW. The three counties coordinate their waste disposal sequentially using one of the county landfills, a centralized single stream recycling facility, and sharing administrative and operational costs. This partnership has created economies of scale that have maintained some of the lowest tipping fees in Wisconsin and the largest publicly owned and operated single stream recycling facility in the country.

Mission

The *2012 Brown County Strategic Solid Waste Management Plan* continues to serve as a long range guiding document that identified strategic issues to address while establishing goals and objectives to strive towards. This annual report helps to ensure the strategic plan's goals and objectives are being advanced. The Department's mission statement is:

"The Port & Resource Recovery Department will meet the solid waste management needs of local communities, residents and businesses through methods that are environmentally sound and economical. These methods incorporate waste reduction, material reuse, recycling, household hazardous waste treatment and disposal, composting, solid waste disposal and waste-to-energy to the extent that these practices are technically feasible and economically appropriate."

Solid Waste Management Board

The Brown County Solid Waste Management Board (SWMB) sets policy for the Department’s services. It is authorized by Wisconsin State Statute and Chapter 12 of the *Brown County Code of Ordinances*. The nine (9) members of the SWMB are appointed by the County Executive and serve as an oversight committee of the County Board. The County Board’s Planning, Development & Transportation Committee oversees the SWMB and the Department. Three members of the SWMB are from the city of Green Bay, three from incorporated non-Green Bay municipalities and three from unincorporated areas of the County. Two SWMB members are County Board Supervisors. SWMB members serve three-year terms. Minutes of the Solid Waste Management Board meetings are reviewed and approved by the County Board.

Solid Waste Board Members

- John Katers, President

Mark Vanden Busch, Vice-President

Lisa Bauer-Lotto

Mike VanLanen

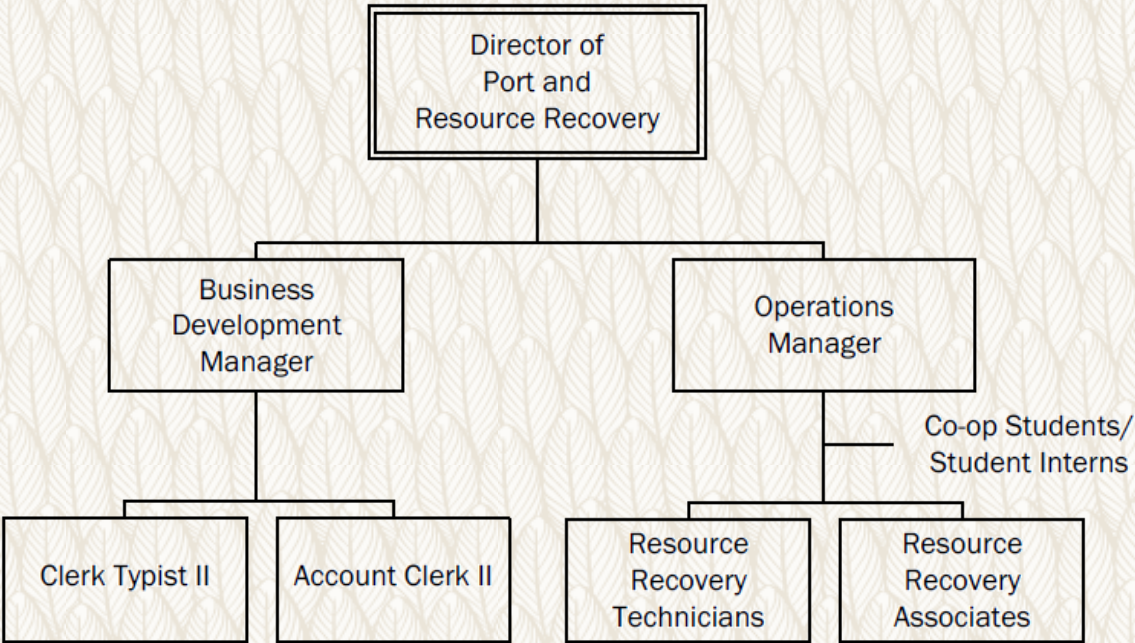
Norb Dantinne
- Dave Landwehr

Hallet "Bud" Harris

Ryan Holzem

Bill Seleen

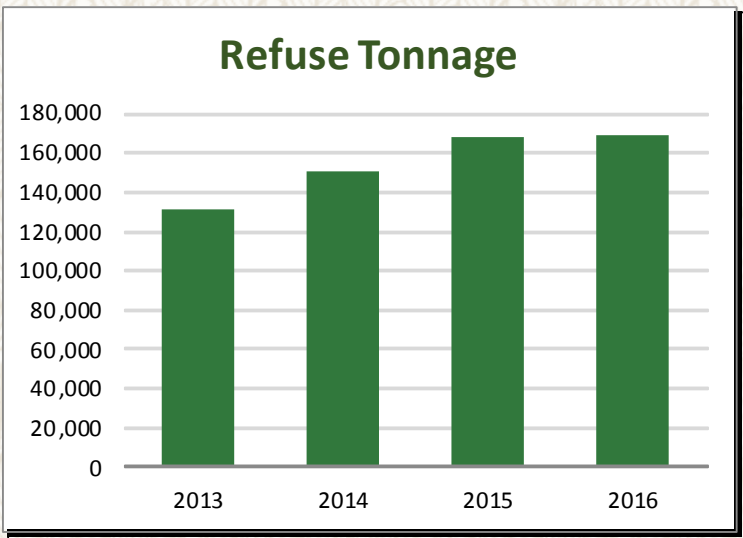
Port & Resource Recovery Table of Organization



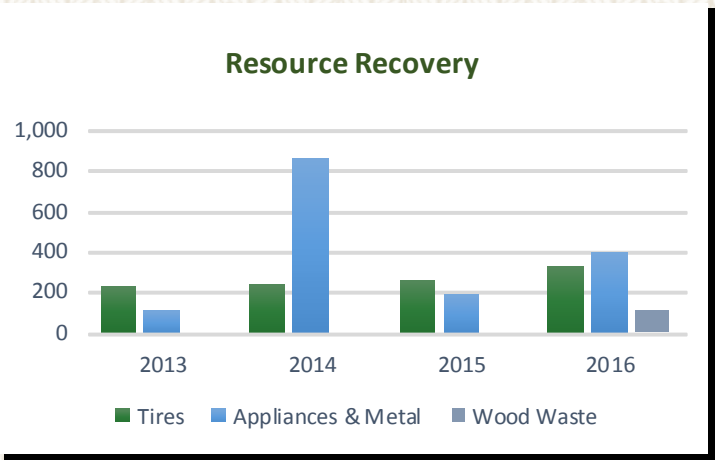
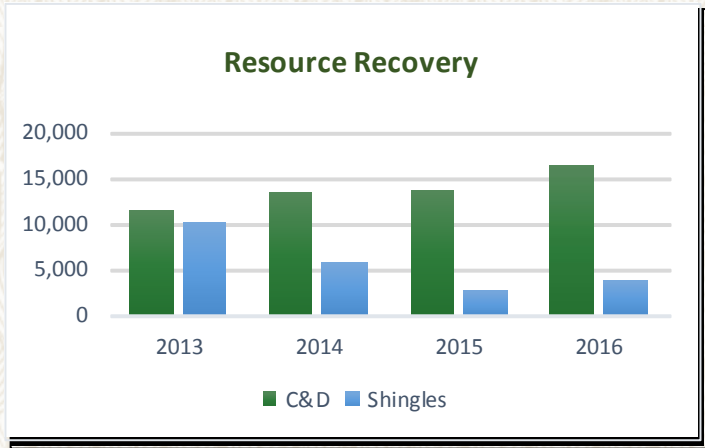
Solid Waste & Resource Recovery

The Department operates a Solid Waste Transfer Station that receives, compacts and transports refuse produced by county residential, commercial and industrial users to the current BOW landfill located in Outagamie County. More than **144,000 tons of refuse were processed** through the Brown

County Waste Transfer Station in 2016 with another **24,000 tons of refuse delivered directly** to the BOW landfill for a total of **168,705 tons**. In addition, another **34,000 tons of alternative daily cover** were delivered to the BOW landfill which accepted more than 605,000 tons of material in 2016. A newly developed residential drop-off area was completed in 2016 to make it easier and safer for residents with small loads to use the Solid Waste Transfer Station.



In 2016, **16,294 tons of C&D material** and **3,738 tons of shingles** brought to the Solid Waste Transfer Station were recycled as were **327 tons of tires** and **399 tons of appliances and scrap metal**. Clean wood waste was accepted for recycling for the first time in 2016. After getting weighed, the wood is transported to a local wood waste recycling company that grinds it for use as boiler fuel. Nearly **107 tons of wood waste** was recycled in 2016.



East Landfill Gas-to-Energy Facility

In 2016, the East Landfill Gas-to-Energy Facility produced **2,621,385 kW of electricity** from waste that had been placed in the East Landfill. The facility produces enough energy to provide electricity for more than **1,000 homes** in Brown County.

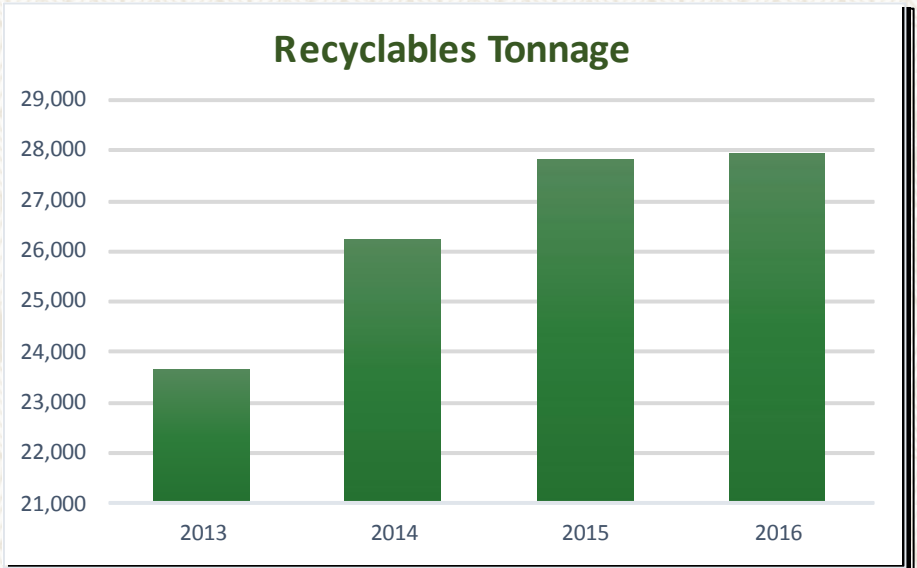


Recycling

The Department operates a Recycling Transfer Station that collects and transports single stream recyclables produced by residents, municipalities and commercial users to the BOW regional single stream Materials Recovery Facility (MRF) in Outagamie County. This BOW facility is one of the largest municipal MRFs in the country. The MRF processes and markets comingled residential and commercial recyclable containers from the three counties and other Wisconsin communities.

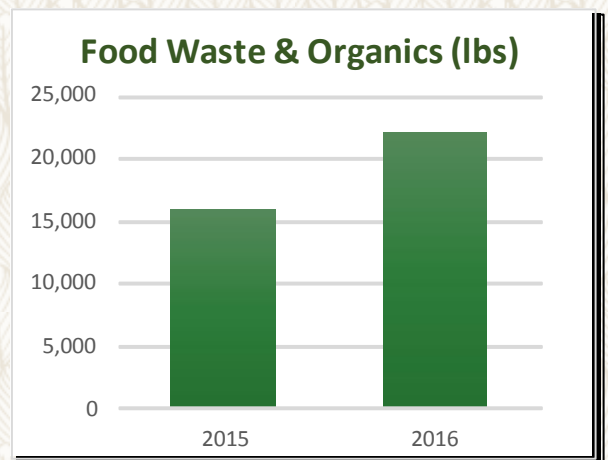
In 2016, **27,893 tons** of single stream recyclables were hauled from the Brown County Recycling Transfer Station to the Tri-County recycling facility which processed

more than 110,000 tons of recyclables. Single Stream Recycling now includes recycling of all plastic bottles, tubs and containers, aluminum and tin cans, glass and all paper products.



Food Waste & Organics Drop-Off Program

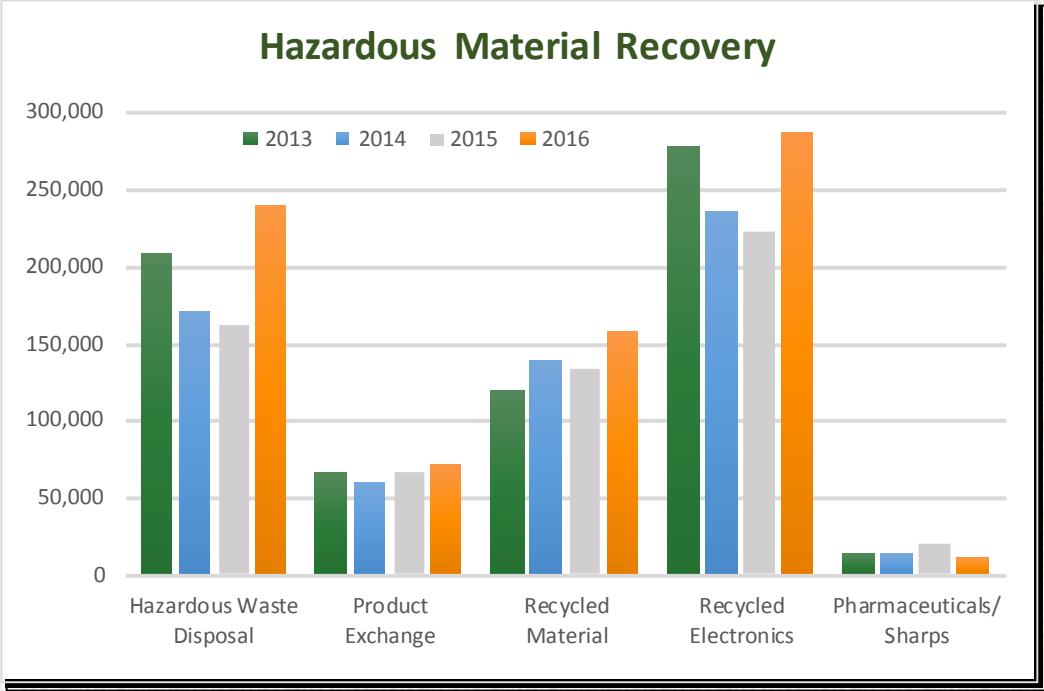
Late in 2014, the Department began a voluntary drop-off food waste & organics program at both the recycling and solid waste transfer stations. In 2016, the program was expanded to include an east side drop-off location at the UW-Extension offices and, due to very low use, the Solid Waste Transfer Station site was closed. A total of **21,840 pounds** of material was collected, an increase of more than 5,000 pounds from the previous year. Brown County residents who are collecting food waste & organics from their home may participate in the free drop-off program.



Hazardous Material Recovery

The Department operates the Hazardous Material Recovery Facility providing an environmentally responsible outlet for hazardous, universal and special wastes for residents of Brown County and northeast Wisconsin. This program is funded in partnership with NEW Water, the Oneida Tribe and other rural municipalities not connected to the NEW Water wastewater treatment facility. Additionally, Brown County provides cost-effective Hazardous Material Recovery services through out-of-county collection agreements with Calumet, Outagamie, Shawano, Waupaca and Winnebago counties. The program also provides regional businesses that qualify as Very Small Quantity Generators (VSQGs) with economical disposal options for hazardous, universal and special wastes.

During 2016, the Hazardous Material Recovery Facility took in **852,400 pounds** of hazardous materials from **7,640 residential and business sources**. The facility was able to recycle or make available to the public more than one-fourth of the collected material while 237,900 pounds of hazardous waste was kept out of the environment and properly destroyed. Staff managed several counties' collection events, assisted with another county's collections, and served as the disposal outlet for material collected from a different county's hazardous waste program. Beginning January 1, 2017, the facility will be called the Hazardous Material Recovery Facility to more accurately reflect the mission and evolving nature of what is accomplished at the facility.



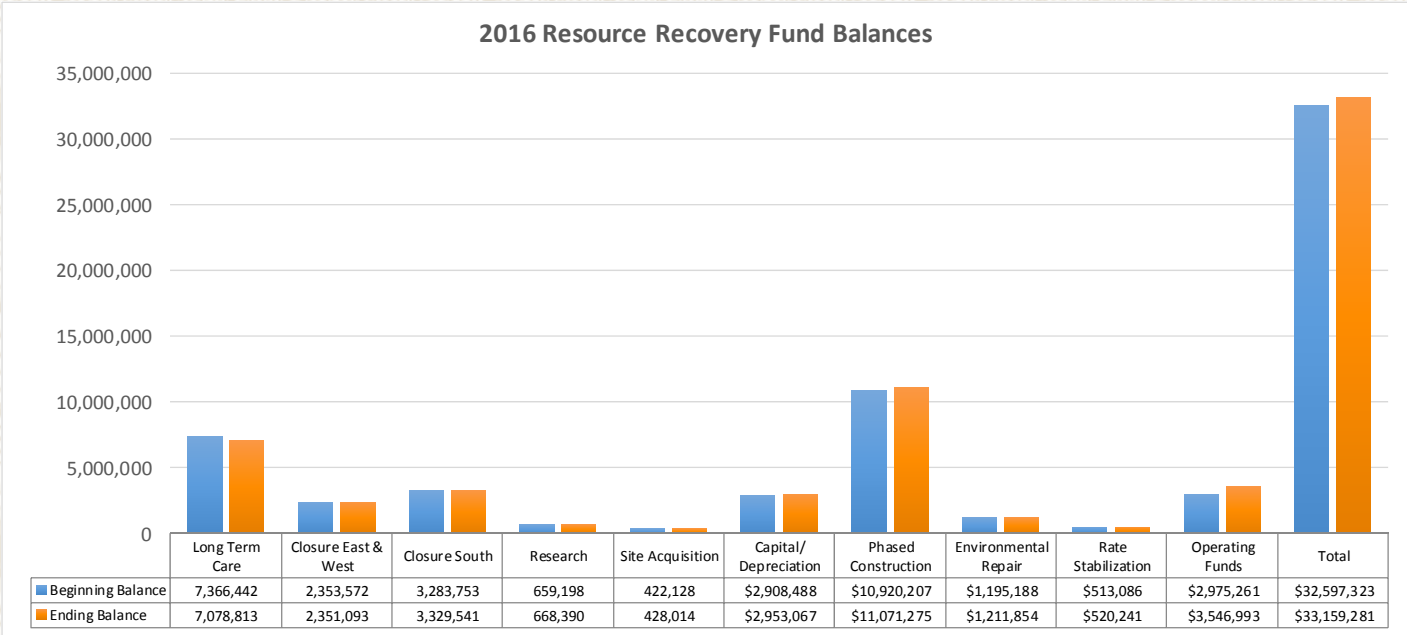
Sharps & Pharmaceutical Collection Programs

Since 1996, the Department and the Brown County Health Department have collaborated in managing the Brown County Household Sharps Program collecting nearly 170,000 pounds of sharps (needles, syringes and lancets) with **9,477 pounds** collected in 2016. The Department also provides law enforcement with regulatory and disposal guidance along with a low cost disposal outlet for non-controlled pharmaceuticals. These efforts have led to an average of **3,800 pounds** of pharmaceuticals collected each year in the county.



Financials

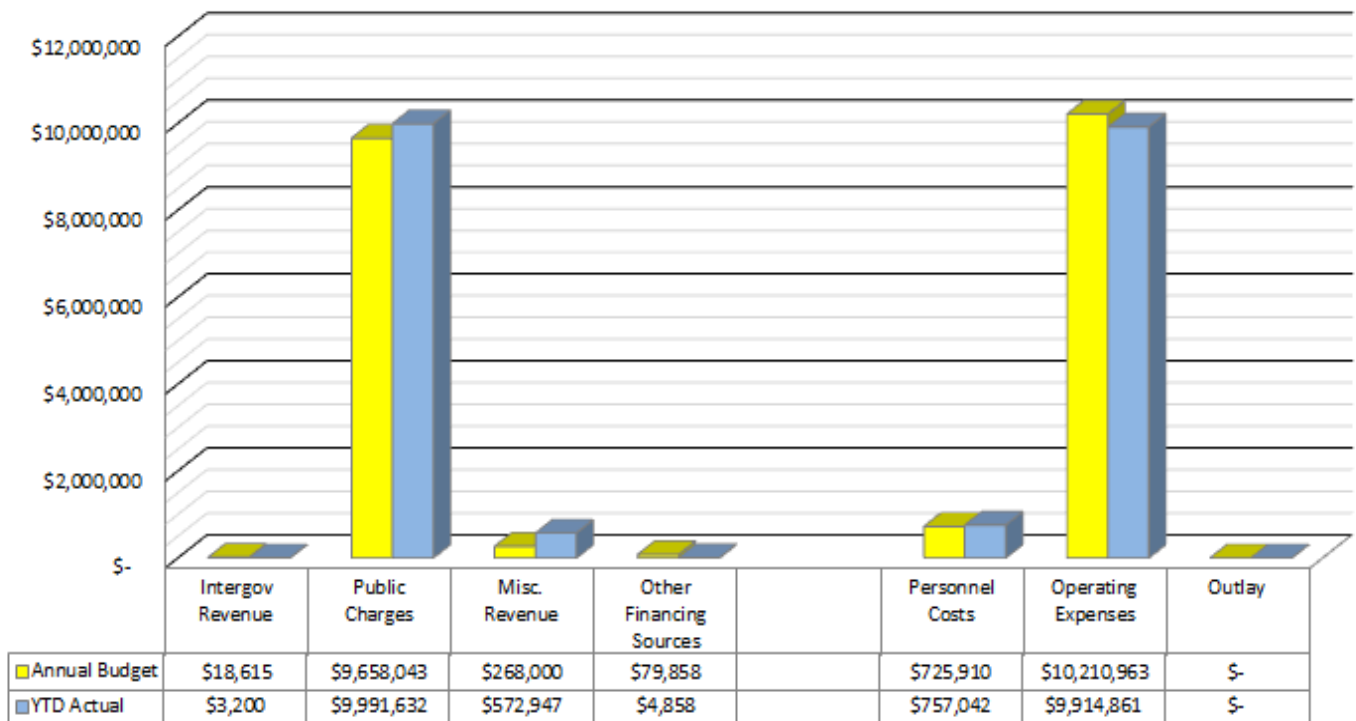
The Department services are among the least expensive and most complete services offered by any operation in the State of Wisconsin. The Department operates as an Enterprise Fund, solely using revenues gathered through operations to fund its activities. The low cost of solid waste disposal is an economic engine to the economy of northeastern Wisconsin. Landfill tipping fees are low and help keep local municipal budgets stable while keeping businesses, especially manufacturing businesses, strong and located here. Single stream recycling programs continue to be operated successfully with efficient processing and the ever changing commodities markets in which the recyclable are sold.



Brown County Port & Resource Recovery Department
Resource Recovery Area Budget Status Report
December 31, 2016

		Annual Budget	YTD Actual	YTD %	YTD Total	Comments
R e v e n u e	Intergov Revenue	\$ 18,615	\$ 3,200	17%		Intergovernmental Revenue difference reflects a 2016 HHW grant of \$18,615 not received as of Dec. 31 2016. Misc. Revenue is interest earned and includes the market value on a specific day. Variations is the change in market value not actual cash value. Other Financing Sources included partial reimbursement of the recycling compactor. BOW fully reimbursed the recycling compactor costs under Due from Local Municipalities (Public Charges) and not under Other Financing Sources.
	Public Charges	\$ 9,658,043	\$ 9,991,632	103%		
	Misc. Revenue	\$ 268,000	\$ 572,947	214%		
	Other Financing Sources	\$ 79,858	\$ 4,858	6%		
					\$ 10,572,637	
E x p e n s e s	Personnel Costs	\$ 725,910	\$ 757,042	104%		
	Operating Expenses	\$ 10,210,963	\$ 9,914,861	97%		
	Outlay	\$ -	\$ -	-		
					\$ 10,671,904	

Resource Recovery - December 31, 2016



2016 Goals

Completed

- ✓ **Residential Drop-off Center:** An improved residential drop-off unloading area was constructed at the Solid Waste Transfer Station to improve efficiency and safety for residential users. Requirements for wearing safety vests became mandatory August 1, 2016 for anyone unloading refuse, shingles or wood waste at the Solid Waste Transfer Station and working inside the Recycling Transfer Station.
- ✓ **Evaluate Leachate Management Options for South Landfill:** Evaluation considering trucking, piping and on-site treatment options. The most cost effective management option is trucking. The most cost effective waste water treatment facility is NEW Water. The evaluation determined the County leachate unloading station in the De Pere industrial park should be directly connected to the nearest NEW Water interceptor. The connection will need to be made in advance of opening the South Landfill.
- ✓ **Research and Evaluate Wood Waste Collection Program:** Evaluation determined wood waste recycling would be a cost-effective resource recovery solution. Wood waste recycling program was implemented in 2016 with reduced tipping fees established in 2017.
- ✓ **Evaluate Implementation of a Pharmaceutical Collection and Disposal Program:** No role for Brown County. Bellin Foundation and city of Green Bay are working together.
- ✓ **Evaluate Feasibility of BOW C&D Recycling:** Determined a BOW operated program was not cost effective. Each county of BOW negotiated a 5-year contract with Landfill Reduction & Recycling that lowered tipping fees and stabilized future rate increases.
- ✓ **Extend Operation of Gas-To-Energy Project beyond 2016:** Leachate recirculation program extended GTE project into 2017. Operating on a daily basis. Decision made to not complete 100,000 hour regular maintenance on engines along with preparing plans to convert the system to passively flare in 2017.
- ✓ **Expand Drop-off Organics Program at UW-Extension:** Established an east side collection site at UW-Extension.
- ✓ **Evaluate Solvent Distillation at HHW:** Determined solvent distillation is not possible under current DNR rules.
- ✓ **BOW Waste Technology Committee Research:** Construction & Demolition (C&D) and Wood Waste Recycling was assessed in 2016.
- ✓ **Market HHW Services to VSQG Industry Sectors to Expand Customer Base:** Marketed HHW services by placing ads in the Business News and doing direct mailings.

In Progress

- **Evaluate On-site Paint Recycling:** Determined to be cost effective, if sale of 50% of the paint can be secured. Work continues on securing a market for 50% of the paint.
- **Lease MRF Building Space:** Working towards contracting with a Realtor to secure a lease.
- **Excavate 20-50,000 cy of South Landfill Phase One Clay:** Excavated 5,400 cy in 2016.
- **Evaluate Feasibility of Regional Composting:** UWGB graduate student is working to complete the evaluation of regional composting as a thesis project.

Deferred

- **Evaluate Existing BOW Landfill Agreement and Potentially Renegotiate Extension:** BOW landfill agreement efforts initiated in Summer 2015. Deferred until dispute with Outagamie County is resolved.
- **Lead Legislative Effort to Reconsider Recycling of Glass:** Effort being lead by others including; SWANA, Council on Recycling, and AROW. AROW Glass Task Force published report with legislative recommendations in October.



2017 Goals

- ♦ Modify South Landfill Feasibility Determination and submit for DNR approval
- ♦ Convert existing Gas-To-Energy (GTE) plant to passive flare including building modifications and sale of existing equipment
- ♦ Revise *2012 5-year Solid Waste Management Plan*
- ♦ Renegotiate 5-year Solid Waste Management Services Agreements with urban municipalities
- ♦ Evaluate in-house processing of florescent, incandescent, and LED lamps
- ♦ Implement “Black Ice Software” for electronic recycling and solid waste transfer station scale tickets verification and billing purposes
- ♦ Evaluate existing BOW Landfill Agreement
- ♦ Evaluate Regional Composting Feasibility Study
- ♦ Market recycling services to neighboring counties and do retention calls on existing municipal customers
- ♦ Market landfill and resource recovery services to neighboring counties and do retention calls on existing municipal customers
- ♦ Conduct Hazardous Material Recovery Process Map for collection, storage and processing of hazardous materials. Effort will involve an outline, timeline, assignment of responsibilities and fulfillment

Brown County Resource Recovery
2561 South Broadway | Green Bay, WI 54304
Phone: 920-492-4950 | Fax: 920-492-4957
www.BrownCountyRecycling.org

