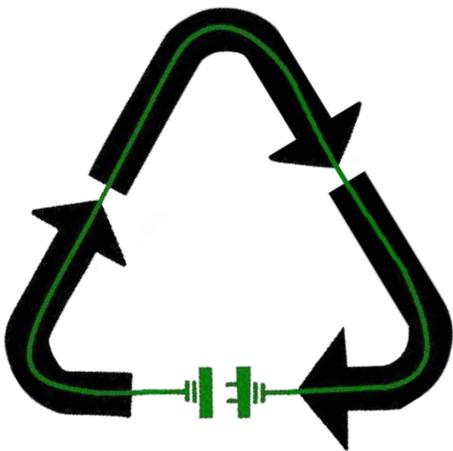


BROWN COUNTY RESOURCE RECOVERY



2018 Annual Report



Message from the Director

During 2018, the efforts of the Solid Waste Management Board and staff worked toward meeting the goals and objectives of the newly adopted 2017 Resource Recovery Strategic Plan and the overarching mission and vision for the Brown County Resource Recovery Department.

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. As an Enterprise Fund, Brown County uses revenues solely gathered through operations to fund its activities. There were a number of activities accomplished in 2018 that are increasing the effectiveness of the Department's solid waste management services.

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

A new 15 cy compactor was installed at the solid waste transfer station, a new front-end loader was purchased for the Recycling Transfer Station. The Hazardous Material Recovery Facility was modified, removing a wall and adding a separate entrance to the Product Exchange Room as well as adding a second scale and new register to reduce collection congestion and improve product flow. Additionally, significant research and effort was invested at the Solid Waste Transfer Station flow process for handling customers. The research determined a second scale, building modifications and two at-scale kiosks with new scale software will be needed in 2019.

The preparation efforts for the future South Landfill (SLF) continued in 2018. Communication to our stakeholders, especially the town of Holland are critically important. Significant effort was invested in preparing a new Plan of Operation, which is planned to be completed in spring of 2019 with the Wisconsin Department of Natural Resources (WDNR) approval by the end of 2019. This past year, leachate management options were evaluated with NEW Water agreeing to treat the SLF leachate. Additionally, meetings were held with the City of De Pere and Town of Ledgeview for leachate discharge agreements. Discharge and treatment agreements will be executed in 2019. A wetland delineation was completed on Section 18 of the South Landfill property and approved by WDNR and U.S. Army Corps of Engineers.

Brown, Outagamie and Winnebago (BOW) Counties agreed to determine the value of working together over the past 14 years; and based on the findings, options and alternatives will be proposed to continue working together beyond the South Landfill. BOW staff have determined that the BOW partnership has saved municipalities and private companies millions of dollars. BOW staff concluded that the BOW partnership should continue beyond the existing agreement. The existing agreement may be amended or a new agreement executed; until then the existing agreement will involve opening the South Landfill in 2022. Any change from the existing agreement will need the support of all three County Executives, Solid Waste Boards and County Boards.

Looking forward to 2019, the Department will continue providing effective solid waste management services and excellent customer service. 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.



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 has provided resource recovery programs when markets are available, for shingles, construction & demolition (C&D) material, clean wood waste, tires, Freon-containing and other appliances, electronics and a food waste drop-off 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 economically 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, starting with Winnebago County's landfill, currently using Outagamie County's landfill, and eventually using Brown County's south landfill. BOW also uses a centralized single stream recycling facility, and shares administrative and operational costs. This partnership has created economies of scale that have maintained some of the lowest tipping fees in Wisconsin and have saved millions of dollars for our municipal, industrial and commercial customers. The Tri-County recycling facility is one of the largest publicly owned and operated single stream recycling facilities in the country.

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.

Mission

The *2017 Brown County Strategic Solid Waste Management Plan* serves as a long range guiding document that identifies strategic issues to address while establishing goals and objectives to strive toward. This annual report helps to ensure the strategic plan's goals and objectives are being advanced. The Department's mission statement is as follows:

"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 materials 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 Chapter 59.70 (2) and Chapter 12 of the *Brown County Code of Ordinances*. The nine 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 and Transportation Committee oversees the SWMB and the Department. Three members of the SWMB are from within the city of Green Bay, three are from incorporated non-Green Bay municipalities and three are 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.

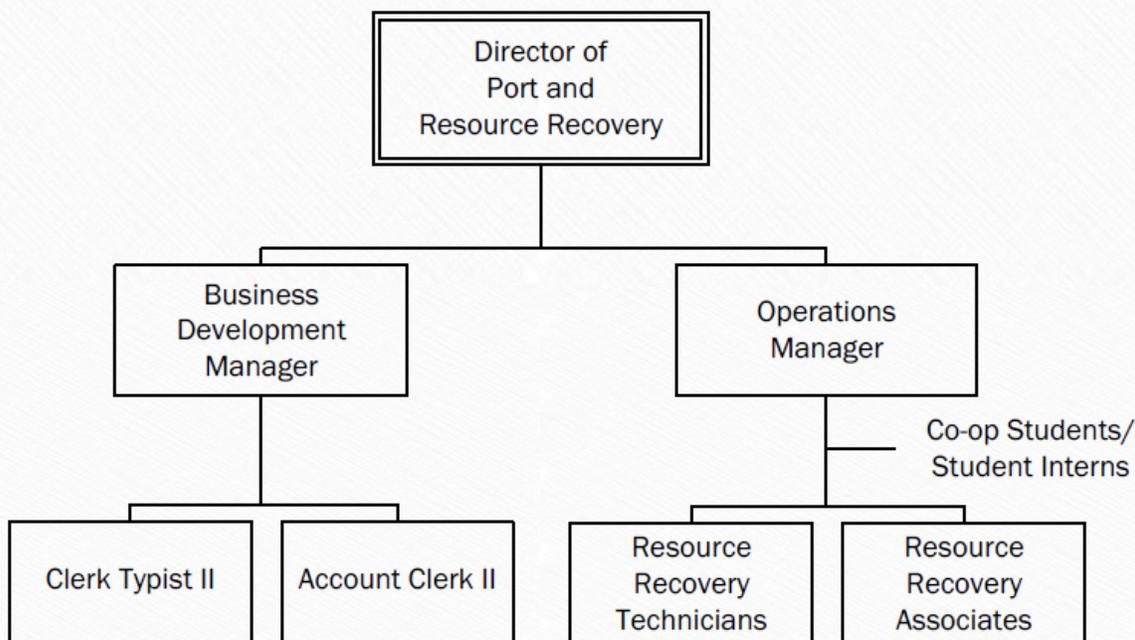


Solid Waste Board Members

John Katers, President
 Mark Vanden Busch, Vice-President
 Norb Dantinne
 Hallet "Bud" Harris
 Mike Lefebvre

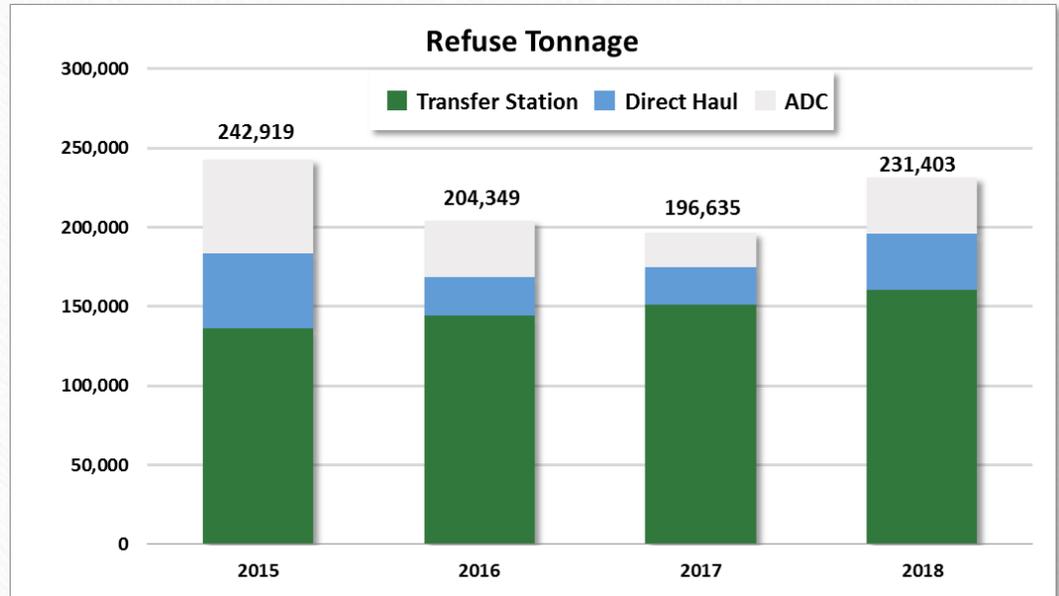
Dave Landwehr
 Doug Martin
 Bill Seleen
 Mike VanLanen

Port & Resource Recovery Table of Organization

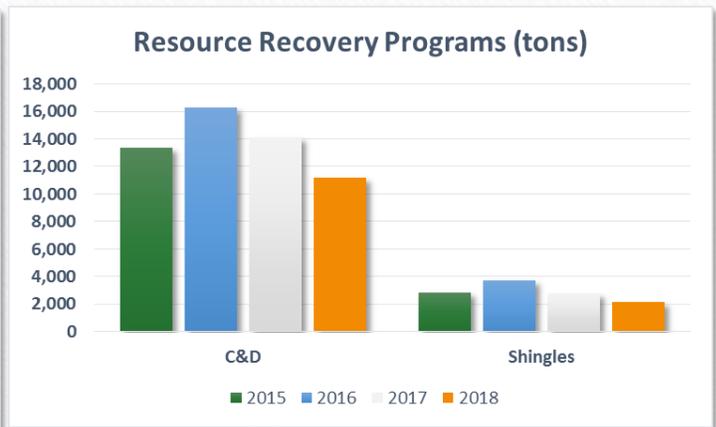
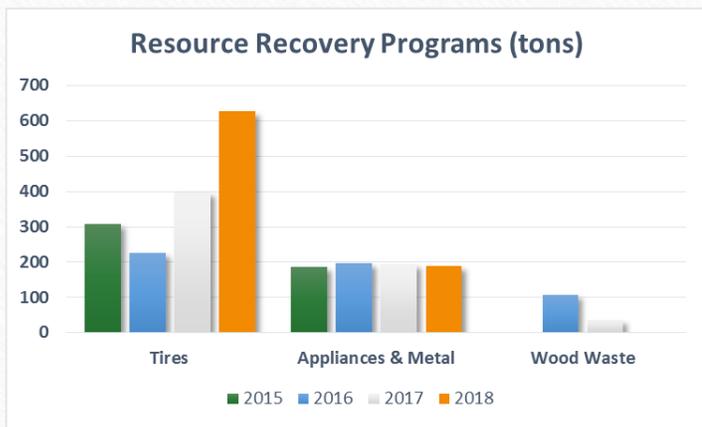


Solid Waste & Resource Recovery

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. More than **160,850 tons of refuse** were processed through the Brown County Solid Waste Transfer Station in 2018 with another **34,970 tons of refuse delivered** directly to the BOW landfill for a **total of 195,800 tons**. Another **35,575 tons of alternative daily cover** were delivered to the BOW landfill for a **total Brown County tonnage of 231,400 tons**. The Outagamie County Landfill accepted 650,862 total tons of material in 2018.



In 2018, **11,211 tons of Construction & Demolition (C&D) material** and **2,150 tons of shingles** brought to the Solid Waste Transfer Station were recycled, as were **625 tons of tires** and **187 tons of appliances and scrap metal**. Affordable tire recycling prices at Brown County are resulting in a higher delivery of scrap tires. Markets for recycling wood waste were not available in 2018 while C&D recyclers ceased operations in our area in the latter part of the year.



East Landfill Gas-to-Energy Facility

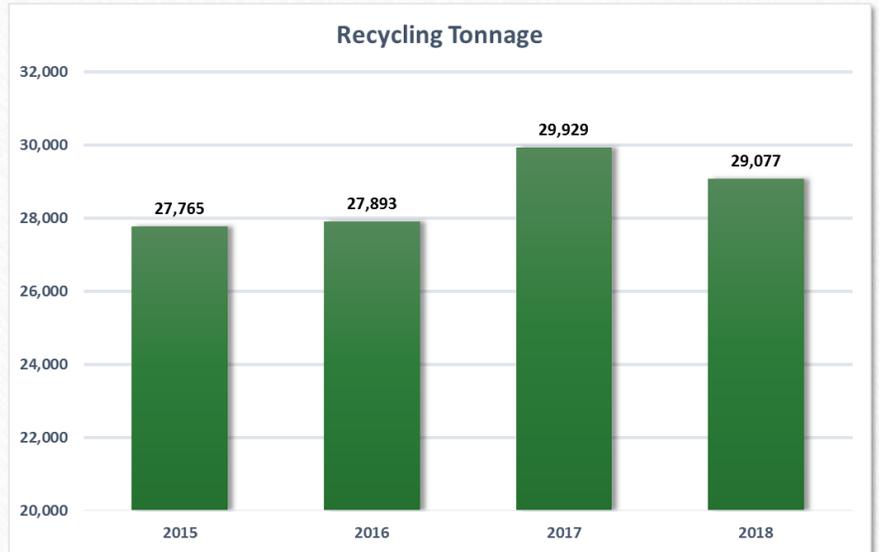
In 2018, the East Landfill Gas-to-Energy Facility produced **2,361,136 kW of electricity** from waste that had been placed in the East Landfill. This is a decrease of 24 percent in kW from 2017 as the facility enters its last year of service.



Recycling

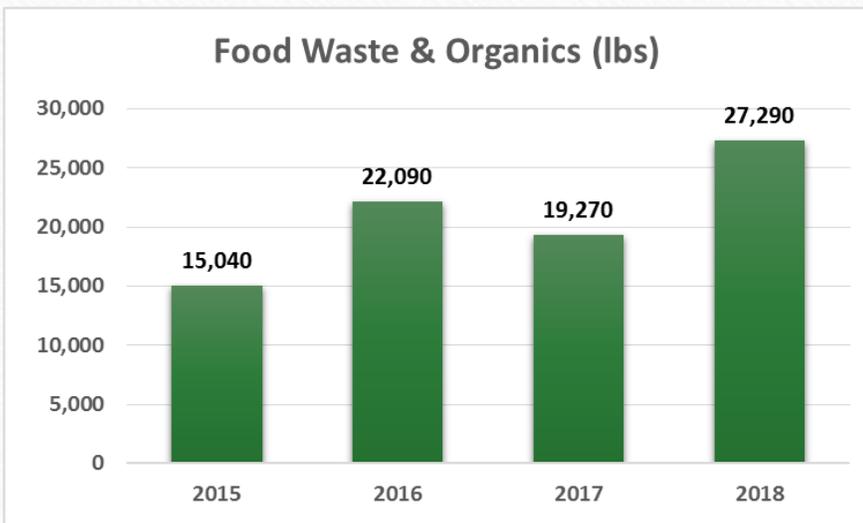
The Department operates a Recycling Transfer Station that collects and transports single stream recyclables produced by residents, municipalities and commercial users to the BOW regional single stream Materials Recovery Facility (MRF) in Outagamie County. This BOW facility is one of the largest municipal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

In 2018, **29,077 tons of single stream recyclables** were hauled from the Brown County Recycling Transfer Station to the Tri-County MRF which processed more than **112,125 tons of recyclables**. Single Stream Recycling includes recycling of all plastic bottles and caps, tubs and containers, aluminum and tin cans, glass and all paper products. The facility serves more than 10 counties in northeast Wisconsin.



Food Waste & Organics Drop-Off Program

The Department currently operates a drop-off food waste and organics program at the Recycling Transfer Station. A total of **27,290 pounds of material** was collected which was significantly more than in previous

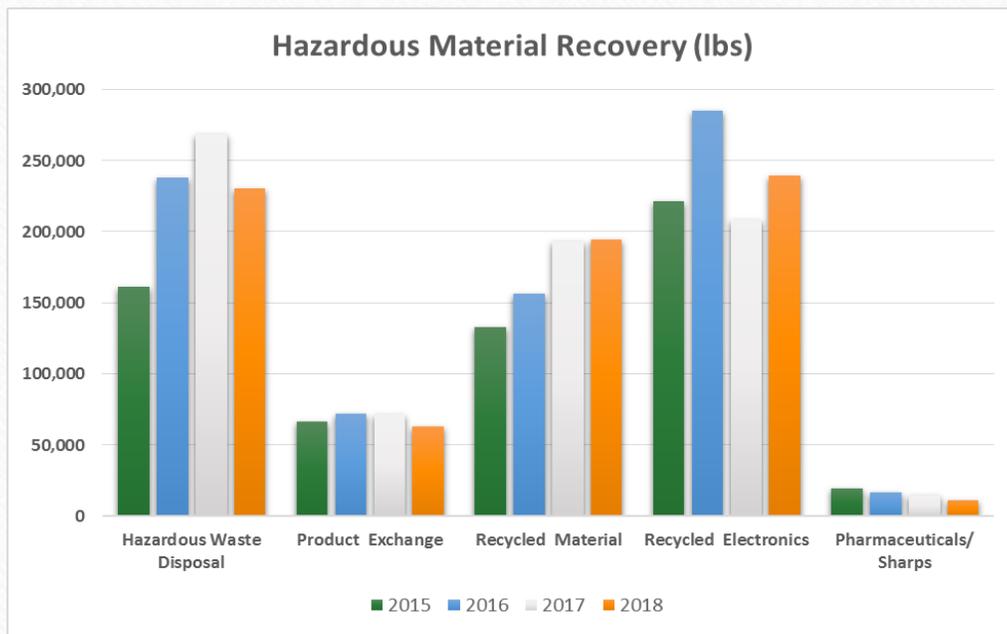


years even though the program has not been successful in finding a viable east side site that can serve the public on a regular basis. Brown County residents who are collecting food waste and organics from their home may participate in the free drop-off program. Currently more than 190 households participate in the program.



Hazardous Material Recovery

The Department operates the Hazardous Material Recovery Facility (HMR) 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 HMR 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 2018, the HMR facility took in **818,600 pounds of hazardous materials** from an estimated **7,239 residential and business sources**. The facility was able to recycle or make available to the public more than a quarter of the collected material while **230,000 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.

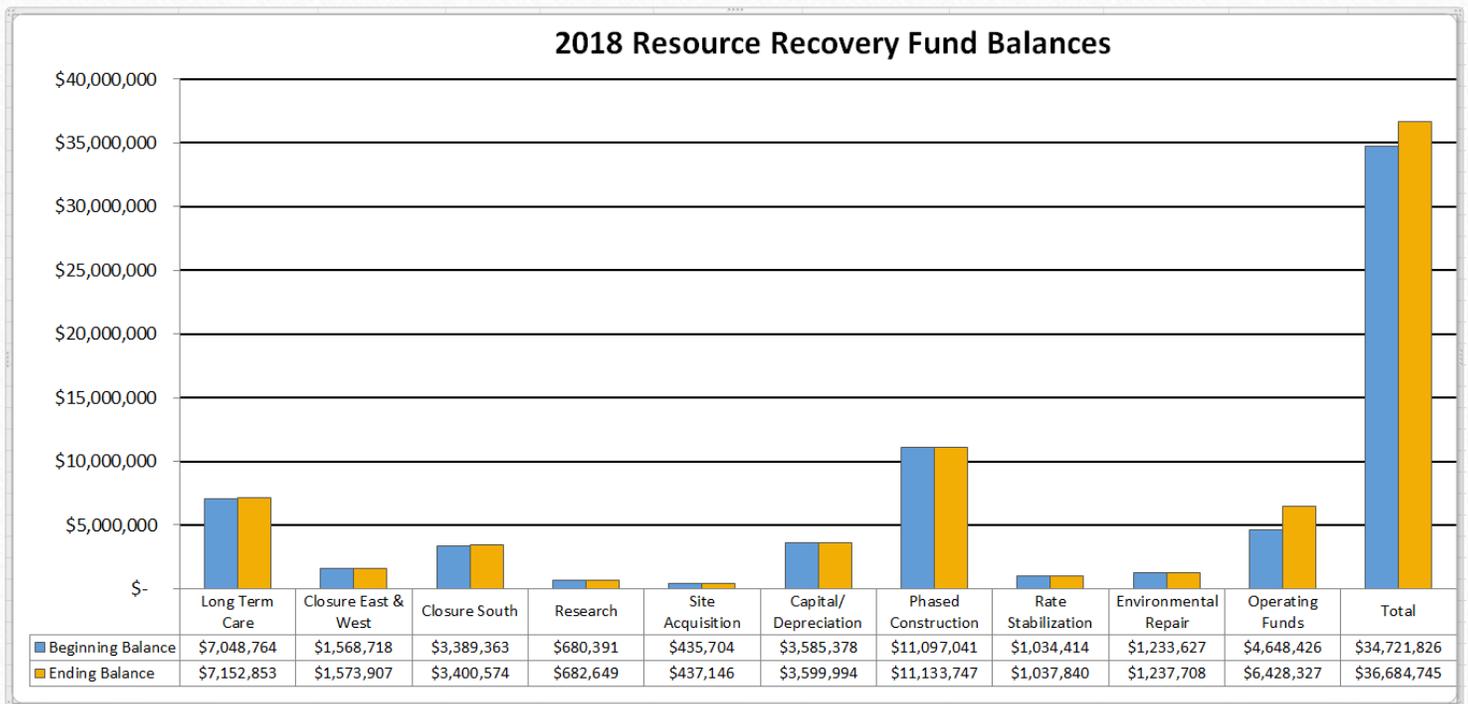
Sharps & Pharmaceutical Collection Programs

Since 1996, the Department and the County Health Department have collaborated in managing the Brown County Household Sharps Program collecting nearly 178,000 pounds of sharps (needles, syringes and lancets) with over **10,000 pounds** collected in 2018. 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’s 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 strengthening businesses, especially manufacturing businesses, and giving them a reason to stay in the area. Single stream recycling programs continue to be operated successfully with efficient processing, while dealing with an ever-changing commodities markets in which the recyclables are sold.



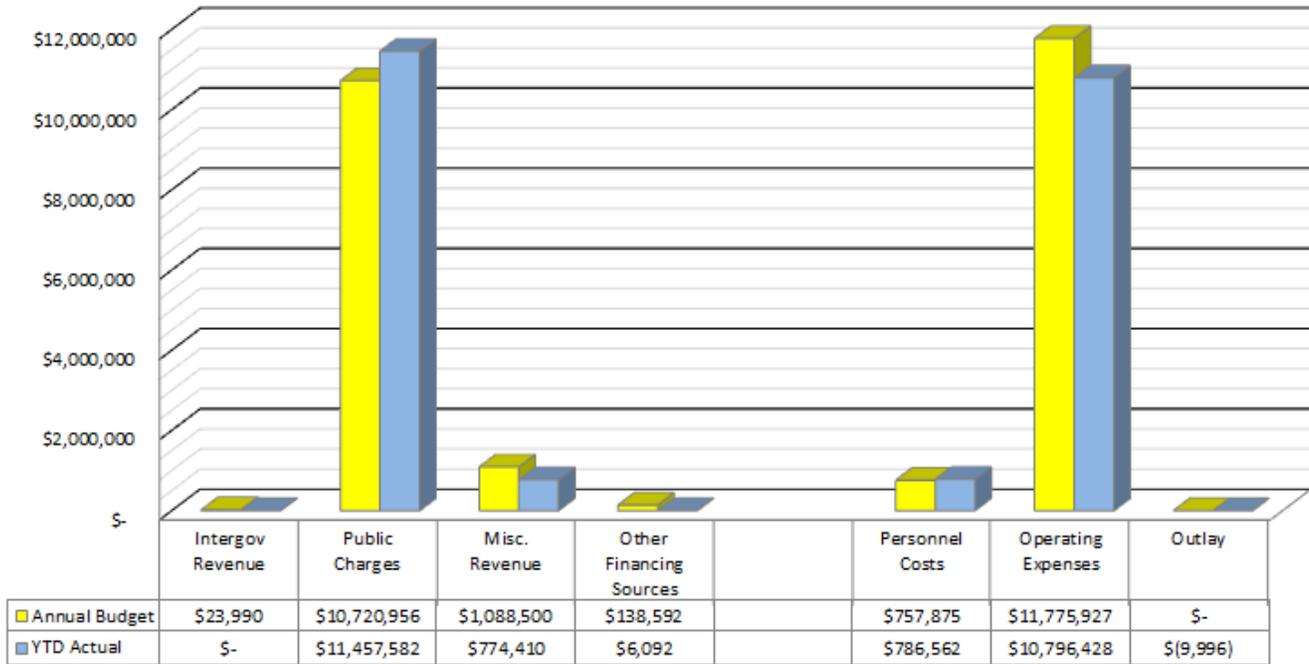
**Financials are unaudited and will be finalized by the Administration Dept. in March.*



**Brown County Port & Resource Recovery Department
Resource Recovery Area Budget Status Report
December 31, 2018**

		Annual Budget	YTD Actual	YTD %	YTD Total	Comments
R e v e n u e	Intergov Revenue	\$ 23,990	\$ -	0%		
	Public Charges	\$ 10,720,956	\$ 11,457,582	107%		
	Misc. Revenue	\$ 1,088,500	\$ 774,410	71%		
	Other Financing Sources	\$ 138,592	\$ 6,092	4%		
					\$ 12,238,085	
E x p e n s e s	Personnel Costs	\$ 757,875	\$ 786,562	104%		
	Operating Expenses	\$ 11,775,927	\$ 10,796,428	92%		
	Outlay	\$ -	\$ (9,996)	-		
					\$ 11,572,993	

Resource Recovery - December 31, 2018



**Financials are unaudited and will be finalized by the Administration Dept. in March.*



2018 Goals

Completed

- ◆ **Marketed recycling services to neighboring counties and made retention calls to existing municipal customers.** These marketing efforts were focused on existing customers in Brown County and new customers in Door, Kewaunee and Oconto Counties. An existing contract with a private customer was extended an additional three years, while a new municipal customer was added. Ten private and municipal customers were contacted regarding existing contracts to maintain strong relations and seek input.
- ◆ **Marketed landfill and resource recovery services to neighboring counties and made retention calls on existing municipal customers.** These marketing efforts were focused on existing customers in Brown County and new customers in Door, Kewaunee and Oconto Counties. Existing 5-year contracts with four private and five municipal customers were extended an additional five years. One new commercial customer signed a 5-year contract.
- ◆ **Conducted Hazardous Material Recovery Process Map for collection, storage and processing of hazardous materials.** This completed effort involved developing an outline, timeline, assignment of responsibilities and fulfillment. During the map development, it was determined that building modifications should include a separate entrance for the product exchange room. Other modifications included adding a second scale and cash register, increasing the existing door opening to the processing area and adding a second door opening to the processing area. Tuesday collection hours were added during the summer to reduce wait times on other days.
- ◆ **Work completed on South Landfill wetland delineation.** Exemptions for man-made wetlands were requested and mitigation of natural wetlands will occur in 2019.
- ◆ **Excavation of South Landfill Clay.** More than 43,435 cubic yards of clay were excavated from the South Landfill in 2018. Efforts to excavate clay will continue in 2019.
- ◆ **Agricultural Land Lease** and Farm Building Lease were awarded for a 15-year term.
- ◆ **Replaced Solid Waste Transfer Station compactor, Recycling Transfer Station Front-End Loader and HVAC unit.** Quick Doors were changed to variable lift setting of existing door openers.
- ◆ Determine strategy for dealing with **South Landfill mass balance of clay.** All excess soil is capable of being stockpiled on site. Other strategies including use of clay for the future Southern Bridge, mine reclamation and other uses will be pursued.



In Progress

- ◆ **Evaluate Leachate Management Options for South Landfill.** Evaluation completed. The most cost-effective management option was found to be trucking. The most cost-effective wastewater treatment facility is NEW Water. The evaluation found that the County leachate unloading station in the De Pere industrial park is the most cost-effective option. The County is currently working on treatment agreements with the NEW Water and discharge agreements with De Pere and Ledgeview. Received acceptance letter from NEW Water.
- ◆ **Advance South Landfill Plan of Operation and submit for Department of Natural Resources (DNR) approval.** No modification of the South Landfill Feasibility Determination is required. Wetland delineation and re-design of the landfill was completed in preparation of new Plan of Operation submission to DNR in early 2019.
- ◆ **Convert existing Gas-To-Energy (GTE) plant to passive flare including building modifications and sale of existing equipment.** Conversion plan has been developed. GTE plant continued to operate through 2018. GTE plant will shut down no later than the expiration of the Power Purchase Agreement, June 30, 2019.
- **Evaluate Existing BOW Landfill Agreement and potentially renegotiate extension.** BOW landfill agreement efforts were initiated in late 2015. BOW planning effort will resume in 2019.

Deferred

- ◆ **Revise 2013 5-year BOW Solid Waste & Resource Recovery Management Plan.** To be adopted in 2019.
- ◆ **Assess leasing of non-landfill land** to Dynamic Concepts for animal waste bio-digester facility. Decided to allow private land owner to lease land for facility.
- ◆ **Conduct BOW Waste Technology Committee research.** An analysis of Mattress Recycling was initiated in late 2017 with the outcome to be determined in 2018. Effort was further deferred due to BOW staff vacancies and other priorities.



2019 Goals

- ◆ Solid Waste Transfer Station Building modifications including adding additional scale, by-pass lane and scale kiosks.
- ◆ Evaluate South Landfill operating strategy including public versus private construction and operations strategy.
- ◆ Execute South Landfill leachate discharge and treatment agreements.
- ◆ Receive WDNR approval of Plan of Operation for South Landfill.
- ◆ Implement Conversion Plan for existing Gas-To-Energy (GTE) plant to passive flare including building modifications after June 30, 2019 power purchase agreement ends. Sell equipment and develop a use for the facility.
- ◆ *Revise 2013 5-year BOW Solid Waste & Resource Recovery Management Plan.*
- ◆ Market Recycling and Landfill Services to new customers and make retention calls with a third of existing customers and municipalities.
- ◆ Complete BOW Diversion Committee evaluation of mattress recycling.
- ◆ Evaluate Existing BOW Landfill Agreement and potentially renegotiate extension.
- ◆ Excavate an additional 20,000 cubic yards of South Landfill Phase 1 Clay.

Brown County Resource Recovery

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