

Department of Public Works

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Mission

Foster collaborative and innovative solutions that deliver value to our stakeholders by managing discarded materials to conserve natural resources and promote a healthy, vibrant and sustainable community.

Overview

The Department of Public Works acting through the Board of Public Works is an enterprise fund established by the Board of Commissioners to provide solid waste management services. The Department is divided into two divisions: Administration and Solid Waste Operations. The Solid Waste division has four components: Recycling and Resource Recovery, Waste-to-Energy, Landfill and Transfer Station, and Closed Landfill Remediation and Environmental Compliance.



Kent County Recycling and Education Center

Significant Accomplishments

- Fully integrated a strategy to rally Kent County residents and businesses to reduce the 602,083 tons of waste going to area landfills in 2015 by 20% by 2020 (to 481,670 tons) and by 90% by 2030 (to 60,210 tons).
- With this initiative, the “20x’20/90x’30 Vision”, DPW intends to bring focus, private/public investment and the necessary infrastructure to West Michigan to achieve diversion goals.
- Initiated the Master Planning process to develop 200+ acres of DPW-owned property into a Sustainable Business Park to attract public/private investment in infrastructure and implement sustainable materials management strategies.
- Hosted stakeholder meetings with over 50 individuals representing a seven segments of the community critical to the continued progress of the Master Plan.

Strategic Goals

- Complete a 20 x ‘20 and 90 x ‘30 sustainable materials management master plan to achieve a 20 percent landfill reduction for Kent County discards by 2020 and a 90 percent reduction by 2030 including a sustainable business park master plan. (Stable Revenues, Efficient Use of Resources, Proactive and Innovative Government, High Quality of Life)
- Develop strategic partnerships to attract investment in sustainable materials management collection and processing infrastructure. (Efficient Use of Resources, Proactive and Innovative Government, High Quality of Life)
- Fully implement the service fee/commodity revenue model to sustain Recycling & Education Center operations. (Proactive and Innovative Government)
- Develop Waste to Energy Front End Processing Facility recommendation for ferrous, nonferrous, plastics and OCC recycling to increase recovery and lower HHV at the plant. (Efficient Use of Resources, Proactive and Innovative Government)
- Launch a pilot multifamily residential recycling program with property managers to supplement DPW drop off recycling stations and establish route density that sustains private sector waste hauler service. (Efficient Use of Resources, Proactive and Innovative Government, High Quality of Life)
- Complete demographic study to identify barriers to residential curbside recycling and begin campaign to encourage participation in curbside recycling and right-recycling. (Citizen Participation, High Quality of Life)
- Finalize Sustainable Business Park master plan and develop phase II of the planning process to determine implementation schedule that supports market development and private/public sector investment in sustainable materials management infrastructure. (Proactive and Innovative Government, High Quality of Life)

Significant Accomplishments Continued

- Completed the concept of design study for Recycling & Education Center property for the suitability of a SafeHome Service Center for SafeChem - household hazardous waste, small quantity generator business waste, electronics recycling and community reuse programming.
- Through the West Michigan Sustainable Business Forum, expanded the Imagine Trash Partner Program to offer technical resources to small and medium-sized organizations in the ArtPrize district to improve their recycling efforts and potentially establish zero waste to landfill.
- Represented the Michigan Association of Counties on the MDEQ Solid Waste and Sustainability Advisory Panel.
- Conducted 198 tours for 6,602 adults and youth (a 30% increase from 2016) at the Recycling & Education Center and the South Kent Landfill and an additional 34 presentations to an additional 1,646 people.
- Produced 20.2 MW of renewable electrical generation at the Waste to Energy and South Kent Landfill Gas to Energy facilities producing enough electricity for 15,000 homes.
- Continued to grow the SafeSharps program in collaboration with Kent County Health Department to ensure safe, confidential and environmentally sound disposal of needles and other medical sharps from residential use. Containers for sharps disposal are distributed and collected through the Kent County Health Department clinic sites with 1218 sharps containers distributed in 2017, a 27% increase from 2016.
- Provided special waste destruction including secure and witnessed destruction of illicit drugs, evidence, confidential documents, medical records and prescription and over-the-counter medications; 298,120 pounds of these materials were destroyed, received from 78 local, State and Federal government and law enforcement agencies; a substantial increase from 2015 with 208,140 pounds.

DEPARTMENT: PUBLIC WORKS

Department Mission Statement:

Foster collaborative and innovative solutions that deliver value to our stakeholders by managing discarded materials to conserve natural resources and promote a healthy, vibrant and sustainable community.

Service Area: Recycling and Education Center (REC) and SafeHomes Programs

Service Area Mission Statement:

Provide Kent County residents and waste hauling businesses processing and outlets for recovered recyclable materials and household hazardous waste.

Goals

- Accept increased curbside recycling volumes at the REC and process 40,000 tons.
- Expand participation in the SafeHomes Programs through a comprehensive educational and advertising outreach program and open hours.
- Maintain 95% processing availability at the REC.

Objectives

- Process and sell at 90% of incoming recycle tonnage - REC
- Increase the number of households served by 10% - SafeHomes Programs
- Increase the pounds of Household Hazardous Waste material by 5% - SafeHomes Programs

Indicators	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Outcomes				
Percent of tons sold/tons processed (REC)	79.54%	90.00%/ 77.30%	90.00%/ 74.09%	90.00%
Percent increase in number of households served (SafeHomes Programs)	8.03%	10.00%/ 16.11%	10.00%/ 10.43%	10.00%
Percent increase in the pounds of Household Hazardous Waste material collected (SafeHomes Programs)	2.29%	5.00%/ -37.07%	5.00%/ 70.67%	5.00%
Tip Floor Availability (REC)	NA	NA	98.00%/ 92.00%	98.00%
Process Availability (REC)	NA	NA	95.00%/ 90.00%	95.00%

Indicators	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Efficiencies				
Net cost per ton processed (REC)	108.65	94.49/ 115.24	86.70/ 98.10	65.83
Cost per pound collected (SafeHomes Programs) (less than goal is good)	1.90	1.66/ 1.31	2.14/ 1.08	1.16
Cost per pound disposed (SafeHomes Programs) (less than goal is good)	0.50	0.58/ 0.98	0.81/ 0.44	0.38

Indicators	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Outputs				
Tons processed (REC)	33,396	40,000/ 34,821	45,000/ 32,132	45,000
Tons marketed (REC)	26,563	34,000/ 26,916	34,000/ 23,807	34,000
Tons landfilled (REC)	5,326	5,856/ 6,832	6,750/ 6,753	6,750
Number of households served/year (SafeHomes Programs)	3,930	4,400/ 4,563	5,019/ 5,039	5,543
Pounds of material collected (SafeHomes Programs)	242,866	260,000/ 152,842	160,484/ 260,856	266,073

Service Area: South Kent Landfill (SKL) & North Kent Transfer Station (NKT)

Service Area Mission Statement:

Provide municipal solid waste landfill, ash monofill disposal and solid waste transfer services to serve primarily Kent County residents and businesses.

Goals

- Operate disposal and transfer facilities in compliance with license and permits
- Ensure availability of long-term disposal services for Kent County residents with stable and competitive rates
- Develop new site plan for NKT to provide more recycling opportunities and accommodate increased commercial truck traffic.

Objectives

- Process 100% of incoming waste within budget and MDEQ guidelines
- Achieve a minimum of 80% compaction ratio

	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Indicators				
Outcomes				
Process 100% of incoming waste	100.00%	100.00%/ 100.00%	100.00%/ 100.00%	100.00%
Compaction Ratio (tons/CM)-SKL	81.00%	80.00%/ 82.00%	80.00%/ 88.00%	80.00%

	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Indicators				
Efficiencies				
Cost per ton for processing - SKL	18.00	20.00/ 18.95	20.00/ 11.86	30.00
Cost per ton for processing - NKTS	21.38	27.00/ 21.33	30.00/ 18.55	24.00

	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Indicators				
Outputs				
Tons of solid waste processed-SKL	289,410	259,000/ 312,256	275,000/ 347,464	250,000
Tons ash residue landfilled-SKL	41,104	42,500/ 41,847	42,500/ 42,735	42,500
Tons of solid waste processed-NKTS	83,898	82,000/ 92,397	84,000/ 101,680	90,000

Service Area: Waste To Energy Facility (WTE)

Service Area Mission Statement:

Provide environmentally effective, reliable and secure solid waste disposal and transfer services to residents and businesses in the six cities as part of the County solid waste management plan.

Goals

- Accept all solid waste delivered and process solid waste for disposal, energy recovery or transfer in a cost effective and environmentally responsible manner
- Maintain the WTE Facility Clean Corporate Citizen certification
- Develop preprocessing site plan to divert recycling materials while reducing Higher Heating Value (HHV) to improve throughput

Objectives

- Achieve contractual electrical production requirement of at least 103,000 MWH annually
- Intercept and transfer unacceptable waste in incoming loads through Supplemental Transfer
- Divert tires into the Tire Recycling program
- Achieve facility water use ratio of 0.3, or lower, of billing units per ton of waste processed
- Achieve facility sewer use ratio of 0.25, or lower, of billing units per ton of waste processed
- Achieve in house electric consumption ratio of 20%, or lower, of MWH of electricity sold
- Maintain a HHV below 5600 BTU's

Indicators	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Outcomes				
Electricity sold (MWH) WTE	100,234	103,000/ 100,944	103,000/ 99,570	103,000
Tons of waste rejected	4,633	4,000/ 6,291	5,000/ 5,778	5,000
HHV of waste (measurement to be lower than goal)	5,524	5,600/ 5,478	5,600/ 5,487	5,600
Water billing units consumed per ton of waste processed	0.22	0.30/ 0.32	0.30/ 0.30	0.30
Sewer billing units consumed per ton of waste processed	0.28	0.25/ 0.28	0.25/ 0.29	0.25
In house electrical consumption ratio to MWH of electricity sold	19.79%	20.00%/ 19.56%	20.00%/ 20.04%	20.00%

Indicators	2015 Actual	2016 Expected/ Actual	2017 Expected/ Actual	2018 Expected/ Actual
Outputs				
Water billing units consumed	40,051	40,000/ 53,772	40,000/ 49,812	50,000
Sewer billing units consumed	49,826	45,000/ 48,650	50,000/ 51,793	50,000
Tons Received	250,234	250,000/ 258,991	250,000/ 262,788	260,000
Tons of solid waste processed	178,434	185,000/ 182,470	185,000/ 185,209	185,000
Tons transferred	65,962	65,000/ 69,467	65,000/ 72,250	70,000
Mwh of electricity consumed	19,836	20,000/ 19,744	20,000/ 19,950	20,000
Long Tons of ferrous metal recovered	3,090	3,000/ 3,617	3,000/ 2,750	3,000
Ferrous metal as % of tons processed	1.73%	2.00%/ 1.98%	1.62%/ 1.48%	1.62%