

January, 2016

2015

ANNUAL REPORT



Fulton County
Dept. of Solid Waste
Johnstown, New York

Prepared By:

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Cindy G. Livingston, *Deputy Director*

Jeffrey Bouchard, *Operations Consultant*

Dianne Woske, *Recycling Coordinator*

Josh Brown, *Environmental Tech*

Robin Kane, *Principal Account Clerk, per diem*

Fulton County NY
POSITIVE

Fulton County Department of Solid Waste Annual Report 2015

Prepared For:
Fulton County Board of Supervisors
and the
2016 Economic Development and Environment Committee

William Waldron, Chairman
James Groff, Vice Chairman
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Jack Wilson

Department of Solid Waste Staff

Administrative

Clifford Engle, Director
Cindy G. Livingston, Deputy Director
Jeffrey Bouchard, Operations Consultant
Robin Kane, Principal Account Clerk, per diem
Account Clerks, Patricia Markes, Cynthia Wesselmann

Landfill Division

David Rhodes, Operations Manager
Joshua Brown, Environmental Technician
Edward Seeley, Equipment Maintenance Supervisor
Stephen Solar, Auto Mechanic
Pamela Subik, Weigh Scale Operator
Motor Equipment Operator: Jack Gifford
Heavy Equipment Operators: Gregory Coon, Stephen Solar, Donald Sweet, Michael Voght
Skilled Laborers: Joshua Barker, Erik Dutcher

Transfer Haul Division

Heavy Equipment Operators: Leon J. Anderson, Timothy Stock
Laborer: Jon Bronk

Recycling Division

Dianne Woske, Recycling Coordinator
Working Supervisors: Joseph Orlando, Daniel Kovalovich
Auto Mechanic: Martin Bilger
Motor Equipment Operators: Cory Bartlett, Victoria Dutcher, Nicholas Passero
Skilled Laborers: Rory Baker, Brian Bicheler, Andrew Bochenek, Andrew Bornt, Dona Gisondi, Jarrett Gray, Kevin Green, Gregory Jones, Robert Manchester, Jeff Reynolds, Sandra Rogers
Laborer: John Bates (temporary)

Transfer Station Operators: Robert Burns, David Cogavan, John DeWitt, Kenneth Felthousen, Thomas Flander, Suzanne Hamalak, James Johnson, Larry Johnston, Floyd Smith, William Vicciarelli
Supplemental Operators: Ivan Duesler, David Nilsen

EXECUTIVE SUMMARY

2015 was a year that saw many changes in the Fulton County Department of Solid Waste, primarily within the staff team. Cliff Engle joined the Department in August as the new director, replacing retired Director Jeff Bouchard, and Dave Rhodes came on board in June as the new Operations Manager. Several other long-serving employees also retired and the scale and office staff saw multiple changes, as new employees came on board, while others changed roles either within the Department or left the Department for challenges within County Government.

Operationally, the Department of Solid Waste continued to lead by example with a diverse operation in support of county residents and businesses.

2015 was the fifth full year of production of electricity from the Landfill Gas-to-Electric plant at the Fulton County Solid Waste Department, resulting in nearly \$1.47 million overall revenue on electric sales in 5½ years and the continuance of several contracts for carbon credit sales.

The Out-of-County ADC (Alternate Daily Cover) contract in 2015 brought in 10,347 tons of contaminated soils (in lieu of utilizing additional cover soil which provides no revenue gains). In-county ADC was 6,278 tons for the year.

The Villages of Schuylerville, Schoharie, Middleburgh, Canajoharie, and the Towns of Niskayuna and Edinburg continued their contracts with the county in 2015. A category for large loads of municipal solid waste was developed in 2013 for any loads larger than 25 tons, and this category resulted in 16,633.6 tons in 2015. This category assists the county operations with the first lift of refuse into new cells, and provides additional revenue.

The contract allowing Out-of-County waste from permitted haulers, (including the Town of Edinburg) at a rate of \$56 per ton, brought in an additional 5,752 tons of material.

In 2014 the Fulton County Board of Supervisors approved a 10-year contract with the potential of 2 (two) five-year renewals, for waste from Montgomery County. The landfill had experienced loss in county tonnages with increases in sludge/wet waste, resulting in operational inefficiencies. This new contract provides a better percentage of dry to wet waste for operations, as well as necessary revenues to support Department programs and reserves.

The contract with Montgomery County resulted in 35,417 tons, for a total revenue of over \$1.3 million in 2014 and 47,980 in tons and \$1.7 million in revenue in 2015 (the first full year of the contract). Total reve-

nue from all outside sources in 2015 resulted in \$3.1 million.

The Fulton County Demolition Team performed 7 demolitions in 2015, bringing the total count of demolitions performed since 2000 to 101. Five demolitions occurred in Gloversville through Operation Green Scene, and one demolition each occurred in the City of Johnstown and the Town of Caroga. The town of Caroga demolition helped prepare the site for the relocating fire department facilities.

In total, the 7 demolitions generated 89 loads of material totaling 641 tons. Disposal costs charged totaled \$16,035. With market rates of approximately \$15,000 to \$25,000 per house demolition seen in other areas, Demolition Team participation in these projects collectively saved Fulton County jurisdictions between \$90,000 and \$160,000 in 2015.

2016 will see the Demolition Team begin to address demolitions at the Tryon Technology Park, as well as at other previously identified locations already in the project pipeline.

In its recycling efforts, the department conducted a Household Hazardous Waste Collection event in 2015, collecting over 27 tons of materials such as cleaners, oils, pesticides and petroleum products.

Other continuing successes in the recycling division include the Latex Paint Exchange and the Electronics Collection, which has been in place for several years and was in place ahead of the New York State landfill ban on electronics, which began Jan. 1, 2015.

The Solid Waste Department continues to pursue grant potential and in 2015 Fulton County received payment of \$805,000 from NYSDEC, which was 50% reimbursement for recycling equipment purchases.

In 2015 the Department of Solid Waste utilized 211,826 cubic yards of space for the 164,671 tons of refuse and cover received. The landfill compaction rate over the 26½ years is approximately 2,000 lbs. per cubic yard, which is above the New York State average.

Recycling revenue of \$298,311 was reported in 2015, a \$174,109 decrease from 2014's sale of recyclables. Total tonnage on the sale of outgoing recyclables decreased by 216.3 tons when compared to 2014.

The Department of Solid Waste has received almost \$8.1 million in revenue for the sale of recyclable materials since its inception.

The DSW continued with its alternate labor programs for a total of 528.25 hours. Total alternate labor from the county Department of Social Services (since the program began in 1992) is 14,427 hours.

The History of the Fulton County Department of Solid Waste

The Fulton County Department of Solid Waste has been in operation for 26½ years and has received a total of 2,459,323 tons of refuse. In the 1980's, Fulton County developed a strategy to address the Solid Waste needs of the community. By 1989 Fulton County had created a state of the art landfill, located in the Town of Johnstown. The Fulton County site was approved for 105 acres overall landfill footprint. Currently, 38.5 acres are lined and the county has invested over \$41 million in

facilities and infrastructure, which is expected to serve the County's solid waste needs for the next 55 years. This includes a Materials Recovery Facility, eight transfer stations and a Landfill Gas to Electric facility. The department is responsible for all permits and regulatory compliance requirements to ensure environmental protection. The New York State Department of Environmental Conservation permits and reports required to operate include:

NYSDEC Solid Waste Permit 4506; Contingency Plan; Operation and Maintenance Manual; Environmental Monitoring Plan; NYSDEC Facility ID Number 18S20; Site Analytical Plan; NYSDEC Part 364 Hauler Permit No. 5A-123; Landfill Gas Monitoring Plan; Title V Air

Permit 5172800005 /00006; Financial Analysis; Greenhouse Gas Report No. 527597; Annual Recycling Facility Report; Fulton Co. Local Solid Waste Management Plan (LSWMP) 2011-2021; Bi-annual LSWMP updates; Stormwater Pollution/Prevention Plan; Annual Plan-

ning Unit Recycling Report; SW Landfill Engineering Reports; Annual Transfer Station Report; NYSDEC Landfill Permit # 5-1728- 00005/00003; Annual Electronics Recycling Report; NYS Motor Vehicle Inspection Station Permit; Petroleum Bulk Storage Cert. 5-600404.

DSW STAFF

The Department of Solid Waste full-time staff of 35 continues to provide a multitude of services, which include operating a comprehensive solid waste and recyclables management program for the county, as well as extending itself in in-house projects and cooperative efforts such as Operation Green Scene and the Demolition Team. There are also 10 part-time transfer station attendants and two supplemental employees within the department.

2015 was a year of continued significant transition within the Department of Solid Waste, with personnel changes impacting 4 management or supervisory level positions, along with multiple front line employee positions. The Department needed to address the retirement of 4 long-serving employees including the Department's Director, Operations Manager, Principal Account Clerk and one Working Supervisor. Other personnel changes included internal or external movement of several existing employees including one Account Clerk, 3 Recycling Skilled Laborers, and one Transfer Station Attendant.

Additions to the Department's supervisory staff during 2015 included Cliff Engle as Director, Dave Rhodes as Operations Manager, and Joe Orlando who was promoted to Working Supervisor in the Recycling Department. Other transitions included Account Clerk Cindy Wesselmann moving from the scale to the office. New additions to Department staff included Pam Subik as the new landfill Weigh Scale Attendant, Patricia Markes as Account Clerk, Andrew Bochenek, Jarrett Gray, and Jeffrey Reynolds as Skilled Laborers in the recycling operations, and Suzanne Hamalak as Caroga Transfer Attendant. John Bates also joined the Department as a Temporary Skilled Laborer.

As we progress through 2016 and beyond, we anticipate a potentially significant number of additional personnel changes, either due to retirement of long-serving employees or modification or expansion of Department operations. Throughout this process, we emphasize to our Department team that change can be a good thing, and not necessarily something to be feared. By welcoming the next generation of public service employees into our work team, we



DSW Director Clifford Engle

are challenging ourselves by learning new ideas and methods while instilling within our staff the goal of continuous improvement in service to the residents and businesses of Fulton County.

DSW employees Erik Dutcher, Josh Barker, Josh Brown, Jack Gifford, and Mike Voght took Asbestos Abatement refresher courses in 2015.

County Contributions

The Department of Solid Waste is set up as an Enterprise Fund, which was established to raise all the necessary funds to finance its entire operations.

The Department receives no tax dollars from the County, as tip fees are established and charged to facility users for all waste received and hauled.

All municipalities are customers of this operation, and as such, the tonnage hauled from the municipalities is billed back at the designated per ton charge, which pays for utilization of departmental services.

State-required reserve accounts are designated for future expansions, gas projects, equipment purchases, capping of the landfill and future environmental monitoring. This approach has allowed the county to provide a wide range of services, maintain its fleet of equipment, and plan ahead for necessary projects in a self-sufficient manner, all without borrowing funds. All capital costs are paid for with departmental reserves and do not impact the County budget.

Annually, the Department of Solid Waste contributes over \$300,000 in revenue to the overall County budget, as well as services and equipment to assist in the reduction of various county departmental expenses.

SANITARY LANDFILL

In 2015, a total of 148,045 tons of refuse, and 16,626 tons of contaminated soil/ADC, were brought into the facility, delivered by 16,908 separate truckloads, (an average of 9.7 tons/load). *See tonnage breakdown below:*

The Department of Solid Waste averaged 643 tons per day in 2015, compared to 560 tons per day in 2014 and 378 tons per day in 2013.

In 2014 the Fulton County Board of Supervisors approved a 10-year contract with Montgomery County to assist the county with its overall operations. This contract continues to be extremely beneficial in assisting the overall operations of the landfill.

In 2013 Fulton County added a new category for loads of municipal waste that are 25 tons or larger, to assist with select refuse placement in the new cell, and added revenue.

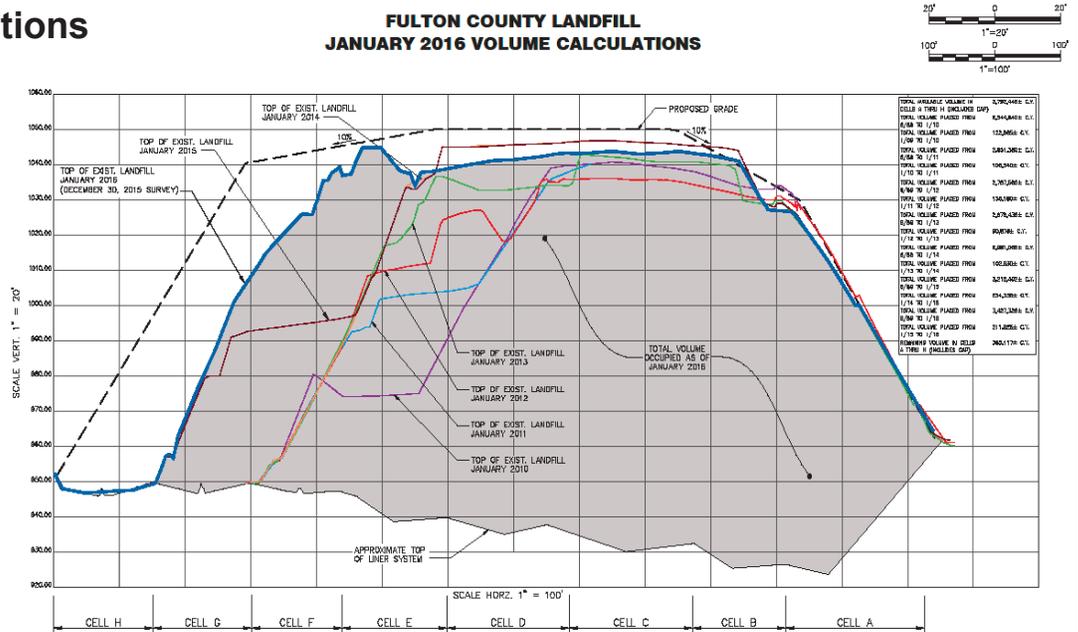
In 2015, a total of 16,633 tons came in from this category.

To date, the Department of Solid Waste has received over \$20.8 million in revenue from Out-of-County sources.

2013-2014-2015 Tonnage Comparison			
	Tons 2013	Tons 2014	Tons 2015
Asbestos & Uncovered Loads	8.96	0.1	371.5
Construction & Demolition Debris (including: Commercial C&D, County Transfer Haul C & D, Municipal C & D, County Demolition Team C & D)	6,308.9	8,278.6	8,411.1
Commercial	19,234.9	18,830.9	19,659.6
County Transfer Haul	8,802.6	8,788.5	9,111.5
Industrial Wet	1,372.9	1,594.6	1,291.1
Industrial Dry	3,584.6	4,296.6	4,342.5
Municipal Direct Haul	10,755.3	10,612.0	10,963.6
GJWWTF & Municipal Sludge	21,267.8	19,475.3	21,618.3
Contaminated Soil (In-County)	3,855.4	1,689.5	6,278.2
Clean Up Program	307.0	350.4	342.8
Out-Of-County Waste (All)	21,306.0	69,010.5	82,280.5
Total	96,804.3	142,927.7	164,665.5

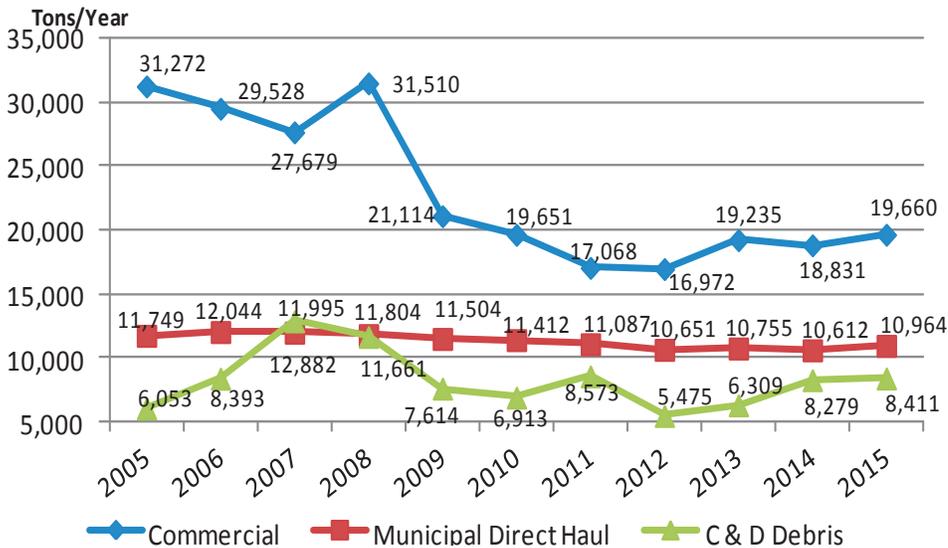
Site Life Calculations

Cells A-H have a total of 38.5 acres of liner system, which have 365,117 cubic yards of space remaining for refuse. At the 2015 airspace consumption rate of 211,926 cubic yards, the landfill's current lined system has 1.7 years of site life available, (estimated at 164,000 tons per year of refuse). The landfill projections are used to determine the next landfill expansion project.



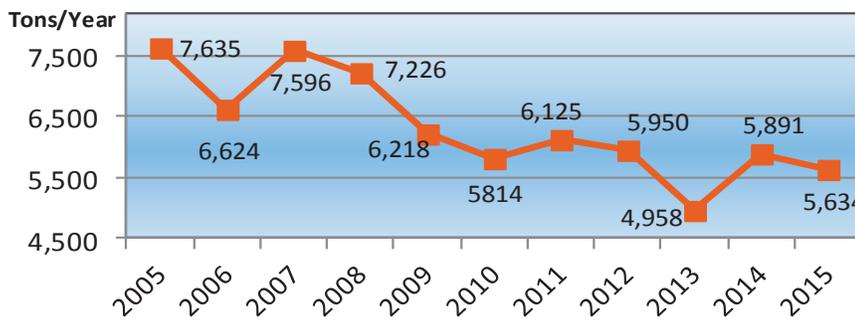
TRENDS

Commercial / Municipal Direct Haul / C&D Debris - 10 Year History



- **Commercial Waste** in Fulton County increased by 829 tons from the previous year (with 18,831 tons in 2014 and 19,660 tons in 2015).
- **Municipal Waste** showed a slight increase of 352 tons in 2015, with 10,612 tons reported in 2014, compared to 10,964 tons in 2015.
- **C&D Debris** showed an increase of 132 tons in 2015. There was a total of 8,279 tons in 2014, compared to 8,411 tons reported for 2015.

Industrial Wet/Dry Waste



The Industrial Waste category showed a decrease of 258 tons over the previous year, (reverting to a downward trend that reflects a decline in the local manufacturing industry). In 2014 there were 5,891 tons of combined wet and dry industrial waste reported, compared to 5,634 tons in 2015.

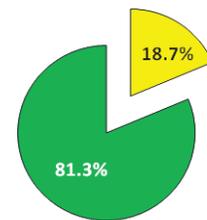
Out-of-County Waste

This is one category that has grown substantially in the past few years, with several out of county categories created, including an agreement with an adjoining county and establishing a “large-load” category for loads over 25 tons.

In 2014 the Fulton County Board of Supervisors approved an Out-of-County contract, (via a 2014 Resolution of 2014) with Montgomery County for 10 years, with a potential of two five-year renewals. 2015 was the first full year of the new contract.

The total of all Out-of-County Tonnage received to date is 461,015 tons, (out of 2,459,323 total tons received in the past 26.5 years).

% Out-of-County Waste



Total Out-of-County Revenue in 26.5 years:
\$20.8 million

Successful Programs

- Household Hazardous Waste Day
- Latex Paint Exchange
- Composting
- Electronics Collection
- Fluorescent Bulb Drop-Off
- Rechargeable Battery Drop-Off
- Mercury Thermostat Drop-Off
- Propane Tank Drop-Off
- Textile/Clothing Collection
- Small Business Recycling and Non-Profit Recycling Programs
- Demolition Team
- Confined Space Safety Training
- Government Surplus Program
- Metal Processing
- Equipment Sharing
- Clean Wood/Clean C&D Disposal
- Out-of-County Contracts
- Alternate Daily Cover Materials
- Financial Contributions to the County
- Municipal Clean-ups
- Public Event Recycling Program

IN-HOUSE PROJECTS - INSTALLATION AND REPAIRS

Department of Solid Waste staff perform many tasks in-house, from refurbishing vehicles, to construction projects, to force main and line cleanings.

In-house projects in 2015 included installing new windows at the scalehouse; gas well development; installation of HDPE piping; leachate line cleaning;

compost grinding; installation of air operated pumps into methane wells; demolitions; modifying a forklift for specialized use; and installing erosion blankets on side slopes.

The Maintenance staff also continued with regular preventative maintenance on vehicles and equipment.



Clockwise, from above) DSW workers install an erosion blanket on a side slope of the landfill.; Operations Manager Dave Rhodes and DSW worker Erik Dutcher, on the right, work on installation of a 12-inch header pipe installation; Equipment Maintenance Supervisor Ed Seeley works on the fabrication of a customized forklift adapter; well drilling for gas recovery and the installation of collection lines is a continuing project at the landfill.



COMPOST

With the exception of the “out-of-county” category for Clean C&D/Wood, (which stayed at \$25/ton), all other compost categories went to zero tipping fee beginning in 2015. This was reflected in a marked increase across the board in 2015 in compost categories.

An increase of 1,237 tons was reported in 2015 - with 2,398 tons of limbs and branches received in 2015, compared to 1,161 tons in 2014. Limbs and branches are chipped and turned monthly to advance the composting process. This compost is used for on-site vegetation and side slopes.

A slight increase (4.3 tons) was seen in the “Clean Construction & Demolition/Wood” category this year, with 180.3 tons (from in-county) reported in 2014, compared to 184.6 tons in 2015. However, a notable increase was reported in the Clean C&D/Wood that came from out of Fulton County (5.24 tons in 2014 compared to 38.9 tons in 2015, a 33.7 ton increase).



A DSW worker cuts up logs (above) before the material is ground up. Notice the pieces of plywood and lumber in the top right part of the pile, which is part of the “Clean Wood” program. This material will be loaded into the department’s tub grinder (below) and turned into mulch or compost.

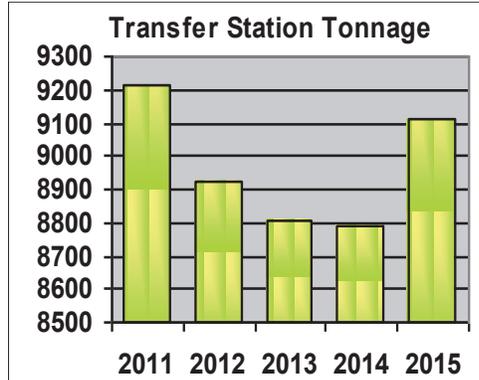
This material, eligible for LEED (Leadership in Energy and Environmental Design) certification, is non-residential disposal for construction and demolition debris. It is run through the tub grinder and chipped, and used as landfill cover. A magnetic separator keeps nails from pallets and other “clean C&D” out of the compost.



TRANSFER OPERATIONS



DSW Scalehouse - these windows were replaced in 2015.



Community Spirit

A FCDSW truck, driven by H.E.O. L.J. Anderson, participated in the 2015 Gloversville Holiday Parade.

A total of 9,112.4 tons of residential refuse; 534 tons of metal; 557.4 tons of recyclables from A-frames; 35.7 tons of miscellaneous recyclables, (including motor oil, tires and vehicle batteries); 226 tons of electronics and 76.6 tons of textiles were handled through the seven transfer stations and the transfer station at the DSW.

There were 154,683 vehicular loads deposited by residents in 2014 compared to 159,878 loads in 2015.

New stairways leading to the metal bins were installed at the Oppenheim and Ephratah Transfer Stations.

MOVIEMAKING AT THE LANDFILL

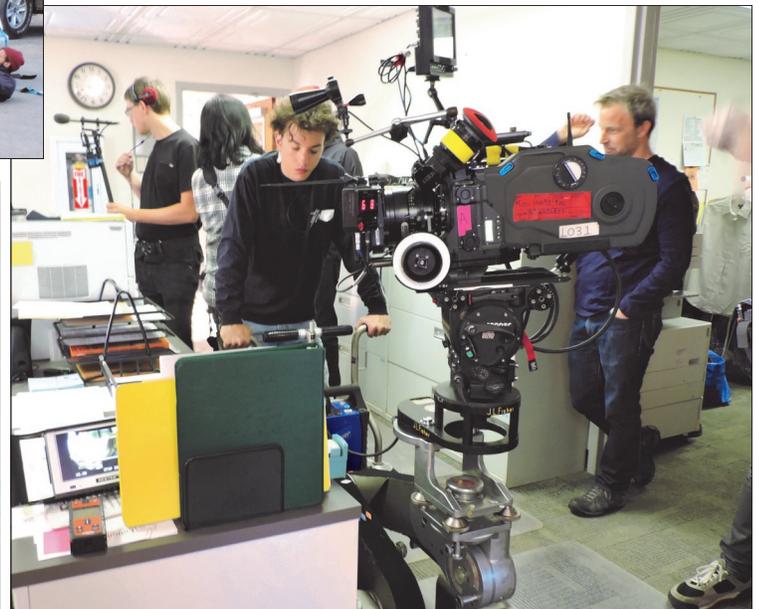


For a few days in October and November of 2015, a number of scenes for an upcoming movie were filmed at the Fulton County Department of Solid Waste, including the administrative offices and landfill.

The movie, entitled “Weightless,” is an independent feature film shot in upstate New York. It’s a story about a father and son who learn how to be a family again after the disappearance of the boy’s mom. It stars Alessandro Nivola (who plays the father, a landfill worker, in the movie) and Johnny Knoxville. It is produced by Oscar-winning producer Greg Shapiro and Tony-winning producers Patrick Milling Smith and Brian Carmody.

Clockwise from above:

- A scene is shot in the landfill, with the star of the movie Alessandro Nivola (exiting the compactor);
- Movie crews unload equipment in the DSW parking lot;
- Movie crews set up for an office scene;
- Cast and crew of the movie enjoy a catered lunch in the facility garage (on far right, in blue ball cap, is Johnny Knoxville);
- Mounting a camera onto the hood of a car for a motion scene.



GAS TO ENERGY

2015 continued as a successful year for electrical sales through the landfill gas-to-energy project at the Department of Solid Waste, grossing approximately \$1.65 million in revenue. Since production began. This can be attributed to the countless man hours spent by DSW staff expanding and maintaining the landfill's vast gas collection system.

In addition, Recovery Drilling was hired to install 11 more vertical gas wells in the landfill. The wells were 6 inches in diameter and 479 feet total in depth. All of these endeavors bolster production by supplying a higher flow rate of good quality gas (50% Methane or higher) to run the two 3520 CAT engines at the landfill gas to energy plant, run by Landfill Energy Systems (LES). The Department has started looking into utilizing waste heat from the gas-to-electric Cat engines as a pilot project.



CARBON CREDITS

The Fulton County Department of Solid Waste continued the carbon credit offset project in 2015. Verification of the 2014 credits was performed by Ruby Canyon in the first quarter of 2015.

DSW Operations Consultant Jeff Bouchard and Environmental Technician Josh Brown worked with Ruby Canyon and consultants from Environmental Capital and Barton & Loguidice through this process to ensure

that VCS (Verified Carbon Standard) protocols were followed.

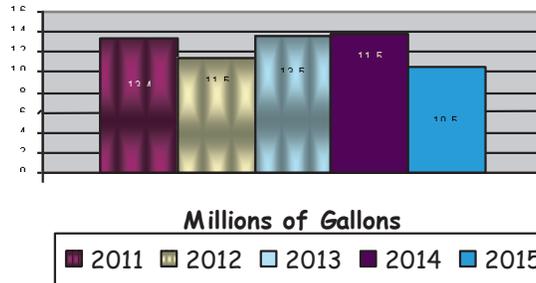
Sale of the 2014 credits (and a portion of 2013's credits) occurred in April 2015, with \$62,415 received.

Department of Solid Waste staff continue to devote numerous hours insuring all of the gas-to-energy plant monitoring plans are adhered to, including calibration of equipment and monitoring reports.

LEACHATE

A total of 10,467,566 gallons of leachate were pumped to the Gloversville-Johnstown Joint Wastewater Facility in 2015, a 3.3 million gallon decrease from the 13,796,807 gallons reported in 2014.

The direct pumping of leachate in the double contained HDPE leachate pipe line that runs to the Wastewater Facility replaced the previous method of disposal, which consisted of driving the leachate in a tanker truck. To date, over 276 million gallons have been sent to the GJWWTF.



CLEAN UP PROGRAM

The 21st year of the County-sponsored Clean Up program was offered in spring or fall, at \$50 per ton, with several municipalities participating. Totals for the year were: 338 tons of refuse (a 58-ton decrease from the 2014 total of 280 tons), in 92 loads.

Also taken in were 34 tons of metal, 19 tons of electronics and 633 tire units for a total cost of \$19,294 to the municipalities.

Municipal Clean Up (by ton)	
2011	349
2012	266
2013	307
2014	280
2015	338

GRANT HISTORY

The Department of Solid Waste continues to monitor submitted grants awaiting payment or submission approval with the State DEC.

In December of 2015 the department received payment on a \$805,000 recycling equipment grant, which was 50% reimbursement on a number of equipment purchases, going back several years.

Potential grant money being pursued, going into 2016, includes a \$15,051 grant to cover half the costs of the 2015 Household Hazardous Waste Collection. A \$125,000 recycling education grant is expected to move forward with full application in 2016.

To date, the Fulton County Solid Waste Department has received over \$3.89 million in grants.

2015 Recycling Report

Although recycling revenue and processed tonnage dropped significantly in 2015, two bright spots in this division included a big increase in compost and commercial recycling, which almost tripled, compared to the previous year. Both of these categories (compost and commercial recycling) went to zero tipping fees this year, which was meant to encourage recycling through financial incentives, - and did so.

Outgoing recycling tonnage decreased by about 7% from the previ-

ous year (3,068.6 tons in 2014 compared to 2,852 tons in 2015).

Revenue received for recyclable materials decreased sharply in 2015, with \$298,311 received in 2015 compared to \$472,420 in 2014, a \$174,109 decrease. This was due in part to weak commodity prices.

Focus remained strong on the updated textile recycling program.

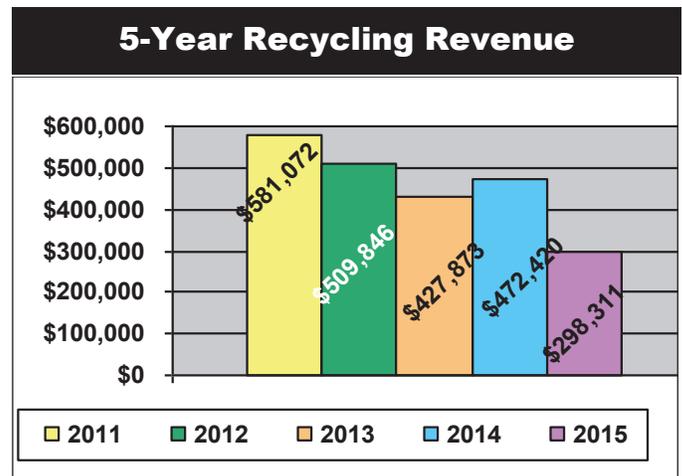
Some loads were also moved as “singlestream recycling” (where all materials are combined for collection and mechanically sorted). Fulton

County uses a dual-stream collection and mostly hand sorts materials.

Significant decreases in the “comingled” categories (plastics, tin, glass and deposit containers) can be attributed to the 303.7 tons of unsorted material processed outside of Fulton County. This is used to alleviate staffing shortages, since a full crew is needed to sort this product.

Materials coming into the electronics program rose by 26 tons in 2015, following the first dip in the program in 2014.

RECYCLING TONNAGE					
5-Year Comparison					
<i>measured in tons</i>	2011	2012	2013	2014	2015
Paper	1,136	1,209	1,079	1,053	912.1
Cardboard	325.0	321.0	295.7	312.9	359.4
Plastic	232.3	224.2	210.3	235.3	211.3
Tin Cans	156.8	177.2	129.2	122.6	103.4
Aluminum	0	17.0	16.9	0	17.5
Glass	318.9	307.6	312.3	262.8	237.8
Deposits	46.6	47.9	45.9	41.6	34.1
Bulky Metal	430.5	408.5	268.3	502.2	237.8
Singlestream	<i>Started in 2014</i>			149.6	303.7
Tires	40.8	51.8	27.5	83.2	14.5
Old Motor Oil	17.2	22.1	20.2	19.1	17.6
Veh. Battery	4.8	7.6	7.4	7.1	7.6
Textiles	107.9	107.9	68.1	56.4	35.7
Compost	1,358	1,191	1,295	1,161	2,624.5
HHW	18.0	0	17.3	0	21.9
Electronics	85.0	169.7	218.4	200.7	226.4
Latex Paint	2.3	2.0	3.9	3.6	2.6



Public Event Recycling Program

Borrow-A-Bin

The “Borrow-A-Bin” Public Event Recycling Program (bin loan-out) continues to be used by different groups. These clear, snap-together recycling barrels were obtained at no cost in 2008 through a grant from Coca Cola and the National Recycling Coalition, to encourage recycling at public events. Barrels are available to loan out, free of charge, to anyone or any group hosting an event. In 2015 the program was taken advantage of by a number of different groups – including the Northville/Lake Placid Trail Park, Johnstown Block Party, Caroga Museum Festival, Gloversville Railfest, Vintage Café Car show, “The Eddie” at Pine Lake Park, Fonda Fair, the annual OFA Senior Picnic at the Concordia Club, and the New York State Farm Days Festival, held at Rogers’ Orchards in Johnstown.



RECYCLING MARKETS AND MATERIALS

Paper Market

In 2015, there were 359.4 tons of **Corrugated Cardboard** sold, which represents a 46.5 ton increase from 2014. Although more cardboard was sold than the previous year, there was very little difference in revenue (with \$35,589 reported in 2014 and \$35,515 in 2015), due to fluctuations in the commodities market.

The total tonnage of **Mixed Paper** sold in 2015 decreased by 141.1 tons, compared to the previous year, and also showed a dip in revenue, of around \$6,000. This material grade consists of newspapers, magazines, sheet paper, junk mail and chipboard. It is sold on a monthly basis.

In 2014, there were 1,053.2 tons of Mixed Paper marketed, with a total revenue of \$79,929, compared with 912.1 tons and \$73,956 in 2015. This reflects an industry-wide change, as newspaper readership drops and papers are smaller.

Plastic Market

Revenue and tonnage for recyclable plastics both showed decreases in 2015, compared to 2014.

In 2014, sales of the five grades of plastic sorted and sold by the Fulton County netted \$125,569, compared to \$76,480 reported in 2015 (a decrease of \$49,089).

Total plastics tonnage was 235.3 tons in 2014, compared to 211.3 tons in 2015 (a decrease of about 24 tons).

Glass Market

Fulton County continued separating and marketing recyclable glass in two categories, (clear and colored). Traditionally a low value material, Fulton County receives \$12/ton for clear glass and \$9/ton for mixed colored glass (mainly green and brown), and transports it to the Tomra plant in Rotterdam.

In 2015 the DSW hauled 237.8 tons of glass for a total revenue of \$2,426. This is a slight decrease

from the 2014 totals of \$2,753 in revenue and 262.8 tons reported.

Tin Market

Total tonnage and revenue for tin (steel) cans decreased by 19.2 tons from the previous year (122.6 tons in 2014 compared to 103.4 tons in 2015). This resulted in a drop of \$13,820 in revenue from the previous year (\$17,318 was reported in 2015, compared to \$31,138 in 2014.)

Aluminum Market

Although the 2015 total of \$14,484 in revenue for 1.5 tons of scrap aluminum looks like a big jump, compared to the zero reported in both categories in 2014, this only accounts for one load.

This product, mainly a mixture of non-deposit beverage containers, cat food cans and pie plates, is traditionally the most valuable per-ton material sold. However, since the majority of aluminum cans are put into the deposit program, it takes in excess of one year to produce a load.

Deposit Bottles & Cans

Revenue from the deposit program decreased by \$7,952 in 2015, compared to the previous year, with \$44,293 reported in 2014 and \$36,341 reported in 2015.

Staff at the county's recycling facility sort out deposit bottles and cans to redeem them for the nickel deposit, (a better return than the bulk rate paid for recyclable materials, especially glass). More than \$691,341 has been received from deposit bottles since the program began.

Not reflected in the categories above are 303.7 tons of unsorted container recycling that was taken directly to another facility for processing at a no revenue basis. (see Singlestream).

Bulk Metal Market

A disappointing year was seen in bulk metal sales, with both revenues and tonnages dropping steeply.

Total revenues of \$27,849 were received in 2015, with 237.8 tons sold. This was a \$79,237 drop in the \$107,086 reported in 2014 for 502.2 tons.

However, these 2015 results are more a reflection on fluctuating metal pricing, as well as staffing shortages to load, since tonnages for incoming bulk metals from transfer stations rose during the period, with 481.9 tons reported in 2014 and 534.6 tons in 2015.

Freon is removed from all refrigerators and freezers by an outside firm, before the appliances are included with the bulk metal collection.

The same Freon reclamation company takes all air conditioners and dehumidifier to be recycled at their facility, recycling 10.6 tons in 2015, an increase from the 2.8 tons of these Freon units in 2014.

Single Stream

The Solid Waste Department doubled the amount of "singlestream" (or unprocessed) recycling in 2015, compared to the previous year. In 2014 the DSW sold 149.6 tons of unprocessed recycling for a revenue of \$10,673. In 2015 there were 303.7 tons taken to a Schenectady processing facility, for zero revenue.

"Singlestream" is where all types of recyclable materials are combined loose for collection and mechanically sorted. Fulton County presently uses a dual-stream collection (three separate streams of materials that are collected in plastic bags) and mostly hand sorting materials.

This option is used when there is not sufficient DSW staff available to sort recycling.

OTHER RECYCLING MATERIALS

Batteries

The DSW sold 7.6 tons of used **vehicle (wet cell) batteries** in 2015 (an estimated 528 batteries at 28 lbs each). This was a half ton increase from the 7.1 tons sold in 2014. Although tonnage was up, revenues for batteries decreased from the previous year, with \$2,594 received in 2015, compared to \$3,794 in 2014. This was due to a price drop for batteries.

The amount of **rechargeable batteries** recycled in 2015 was 751.5 lbs., a 331.5 pound increase from the 420 pounds recycled in 2014. The DSW receives no income from these, but participates in a free mail back program with the Rechargeable Battery Recycling Corporation (a product stewardship program).

Tires

Fulton County reported 14.9 tons of **tires** going out in 2015, compared to 83.2 tons 2014, a 68.3 ton drop. This large decrease reflects more the loss of a valid market, when the tire recycling firm being used went out of business (not that incoming amounts declined). A new company was later located to properly dispose of the tires received at the DSW.

Tire disposal fees paid by the public in 2015 were \$8,020, a \$3,943 decrease from the \$11,963 reported in 2014.

Used Motor Oil

Used motor oil is gathered from the eight transfer stations, the DSW's garage, and the Landfill-Gas-To-Energy plant located at the landfill. The old motor oil is used for heating the recycling facility and maintenance shop— saving on fuel costs as well as disposal cost of the waste oil.

The amount reported in 2015, (4,400 gallons) was a 375-gallon decrease from the 4,775 gallons used in 2014.

In total, the DSW has collected 145,650 gallons of used motor oil since 1991.



Propane Tanks

Although the Department previously had a local source that purchased good, used **propane tanks** for a small amount (for a total revenue of \$146 in 2014 and \$80 in early 2015), starting in mid-2015 they no longer wanted this product. (Old propane tanks are diverted from the bulk metal program, where they can be of concern if any gas is present, and are handled separately).

Although several avenues were investigated, no (paying) market for

this product could be found and in November almost one ton (.99/ton) of propane tanks were taken to Bornt's Waste Metal in Gloversville at zero cost/zero charge.

Fluorescent Bulbs

The Electronics Trailer at the Solid Waste Department also serves as a drop-off spot for rechargeable batteries, **fluorescent light bulbs (both CFLs and tubes)** and mercury containing thermostats. All these programs are aimed at keeping potentially dangerous materials out of the landfill.

Fluorescent light bulbs are packed in special, pre-paid mailer boxes and shipped to a firm specializing in their disposal. (This program is open to residents only). In 2015, 664.8 pounds of fluorescent bulbs were recycled, a small decrease from the 660 pounds reported in 2014.

Thermostats and rechargeable batteries both have manufacturer sponsored mail back programs, and are open to all residents or businesses in the county.



Recycling Working Supervisor Joe Orlando, above, is pictured with the new stretch wrap machine, which was received in 2015. This semi-automatic dispenser is used to palletize electronics for transport.

RECYCLING PROGRAMS

Household Hazardous Waste Drop-Off Day

The total cost of the 13th Household Hazardous Waste program in 2015 was \$32,010. This is eligible for a 50% reimbursement grant from NYSDEC. Although more total tonnage was reported, the cost was \$3,942 less than the \$35,952 reported in 2013. The HHW Drop-Off event is held every two years.

A total of 21.9 tons of household hazardous waste was collected at the 2015 event, an increase of 4.65 tons from the previous collection (with 17.3 total tons reported in 2014).

The number of county residents participating in the HHW Drop Off Day decreased slightly in 2015, with 298 participants reported, compared to 323 in 2013.

The Department of Solid Waste also took in 105 gallons of used motor oil (.42 tons), during the HHW event (which is used to heat the Recycling Facility and Maintenance Shop); 360 pounds of cardboard which was recycled; as well as vehicle and rechargeable batteries, computer equipment and latex paint, which was all diverted into established programs.



Recycling Working Supervisor Dan Kovalovich, (above, on left), works at the August 8 event.



DSW employee Vicky Dutcher, right, assists a resident in unloading their vehicle.

Latex Paint Exchange

There were 425 gallons of latex paint recycled during 2015 as part of the Latex Paint Exchange, which runs Saturday mornings during June, July and August. This low cost/low tech program accepts good, reusable paint from residents and offers it back to the public at no charge.

Staffed mostly by temporary summer help, all paint cans are opened and checked, then either put on shelves to give away (good paint), or bulked up or dried in the can and disposed of. As well as giving away latex paint to help residents and encourage community beautification, the program also diverts this material from the more expensive HHW disposal. Although residents are encouraged to dry up old paint themselves and dispose of cans of solidified paint with their garbage (with the lids removed) – many are reluctant to do so and the paint program ends up taking in and handling many gallons of unusable paint.

Although a decrease from 2013's record 647 gallons of paint, or the 593 gallons given away in 2014, this was still considered a successful year, since there was also 2.2 tons (336.7 gallons) diverted from the Household Hazardous Waste collection in August and handled in-house.



Over 5,458 gallons of this (non-hazardous) paint has been diverted from the HHW collection or landfill disposal since the program began in 2001.

Although Fulton County's Latex Paint Exchange is a fairly small program serving a rural population, it has received attention as a success story. On April 9, the Recycling Coordinator was one of four participants on a panel for a national webinar on paint disposal, sponsored by the Product Stewardship Institute of Boston. Fulton County was also prominently featured in the resulting printed brochure produced by the PSI.



Donated latex paint is checked to make sure it is good, then arranged on shelves, by color, (above) to give out free to the public.

RECYCLING PROGRAMS

Textiles

The department continued its successful textile collection program, (for the drop-off bins located at each transfer station) showing a decrease in tonnage, but increase in revenue, from last year.

In mid-2014 the DSW made some major changes in this program, switching collection vendors to American Clothing Recyclers of Glens Falls, and expanding the list of acceptable materials. The new company pays Fulton County \$100 per ton for the textiles, with \$2,438

worth of revenue reported in 2014 and \$3,248 in 2015. The total weight of textiles in 2014 was 56.4 tons (although this was an estimated weight for part of the year) and 35.7 tons in 2015.

Although previously only clothing and paired shoes were accepted, residents can now dispose of an expanded list of materials, including all clothing (even ripped or stained items), shoes and accessories, as well as linens, towels, curtains, and stuffed animals. (The only exceptions are wet, mildewed or petroleum-soaked items).



A resident drops off bags of old clothing at a transfer station textile drop box. All transfer stations have textile/clothing drop-off boxes, open to any county resident (no transfer station permit is needed).

Commercial Recycling

Beginning in 2015, the **commercial recycling** tipping fee went to zero, giving businesses and private haulers an attractive financial incentive to recycle. This was reflected in a noticeable increase, with 111.4 tons reported in 2015, compared to 38.4 tons in 2014, almost triple the amount of recycling brought into the Mud Road facility for processing.

There were also 1,308.3 tons of commercial recycling reported by

private companies in 2015 that did not come to the Fulton County facility, a 522.7 ton decrease over 2014's total of 1,831 tons. This particular category should be considered as an estimate, since these figures are voluntarily reported by only a few haulers and textile recyclers. There are possibly other textile recyclers, scrap metal dealers, mulch producers or recyclers located within the county, who decline to report or have not been contacted.

Other programs aimed at increasing non-resident recycling rates are

the **Small Business Recycling Program** - where a small business pays a \$25 annual fee, and then can bring all their recycling directly to the Mud Road Recycling facility to be processed at no charge.

Another program designed to increase recycling rates is the **Non-Profit Recycling Program**, where non-profit groups like churches can bring recycling directly to the Department of Solid Waste on Mud Road. The \$25 registration fee is waived for this group, and there is no charge for the recycling.

Electronics

There were 226.4 tons of electronics recycled in 2015, versus 200.7 tons in 2014, an increase of 25.7 tons. This follows the general trend on increases in the electronics program since it started in 2008, with 2014 the only year showing a dip.

An expansion in the number of collection sites in 2012 (providing free electronics drop-off at each transfer station), put Fulton County ahead of the total landfill ban of electronics in New York State, which began Jan. 1, 2015. The focus on keeping old electronics out of landfills is particularly on CRTs (Cathode Ray Tubes) which contain significant amounts of lead and are mostly found in old-style monitors and televisions. (New CRTs are no longer being manufactured, so there is no market for the recycled leaded glass).

No expenses for the electronics program are charged back to municipalities, plus the avoided cost of disposing of electronics as garbage could represent further savings to municipalities. Non-profits, municipalities and small businesses are allowed to bring material to the Electronics Drop-Off at the Mud Road site (also at no charge).

Electronics Drop-Off					
Year	2011	2012	2013	2014	2015
Tons	85.1	169.7	218.4	200.7	226.4



Crews from the Recycling Department pick up electronics from transfer stations and bring them back to the DSW to be sorted, consolidated and loaded for transport to the electronics recycling firm.

RECYCLING COORDINATOR

The Recycling Coordinator continued with regular duties, which include marketing recyclables on a competitive basis, issuing press releases, overseeing advertisements, and working with residents, as well as commercial and governmental entities on recycling issues.

The majority of printed materials, such as stickers, posters, fliers, ads, the recycling calendar, and annual reports are designed and paginated in-house.

Other projects in 2015 included overseeing the Latex Paint Exchange and the Public Event Recycling Program, helping with the HHW event, generating and mailing out recycling calendars, updating information on the DSW website.

In April of 2015, the Recycling Coordinator was one of four participants on a panel for a national webinar on paint disposal, sponsored by the Product Stewardship Institute of Boston.

Another project the Recycling Coordinator assisted on in 2015 was helping the Broadalbin High School Green Club set up a Christmas tree composting program, with the chips produced used on the school's walking trail.

Trade Association Participation

The Recycling Coordinator remained active in state and national recycling organizations in 2015, including serving on the Board of Directors of NY-SAR³ (New York State Association for Reduction, Reuse and Recycling). Fulton County's Recycling Coordinator also continued as a participant in developing a state-wide clothing and textile recovery campaign, attending the statewide Textile Summit II in Syracuse. The Recycling Coordinator served as the moderator for the Plenary Session at the NY State Recycling Conference in November, as well as moderating at the NY Federation of Solid Waste & Recycling Association's Spring conference.

Promotions

Promotional items purchased in 2015 were a logo "toothpaste tube squeezer," meant to promote waste reduction and logo ice scraper (both made out of recycled-content plastic). Regular items in stock included recycled content pencils, (made from old newspaper), and 12-inch rulers (made from recycled plastic and ground up dollar bills), which are handed out to school children at tours and presentations.

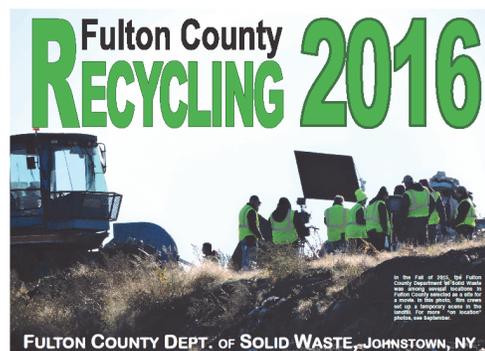


A group of students tour the Recycling Facility (above), as Recycling Coordinator Dianne Woske, (lower left), explains how recycled products are sold and made into other products. Bales of mixed paper behind the students are ready to go to market.

A to Z Policy Guidebook - The Department of Solid Waste updated and produced informational booklets such as "2015 A to Z Policy Guidebook For Municipal Clerks & Transfer Station Attendants," an alphabetical compilation of recycling and solid waste disposal questions and procedures in Fulton County and "2015 DSW Employee Handbook," which is issued to departmental employees.

Recycling Calendar - The DSW produces a recycling calendar, which is one of the main ways to get recycling and solid waste information out to Fulton County residents.

This free publication lists the recycling curbside pick up schedule, transfer station information, holiday closings and special programs. The 10,000 copies were distributed to municipalities and community organizations, and it was publicized by announcements, posters and ads in local newspapers. They are also mailed to residents upon request.



NEW EQUIPMENT



New equipment received in 2015 included (clockwise from left):

- Kobelco excavator,
- Two 65-yard “open-top” containers, which haul materials between transfer stations;
- A pair of compactor wheels;
- A “walking floor” trailer, which has a type of conveyor system in the floor to unload, which will haul items such as tires or recyclables to market.

Also purchased (but not shown): three 40-yard and two 56-yard receiver container (used at transfer stations), and a stretch wrap machine.



GOVERNMENT SURPLUS PROGRAM



The DSW buys vehicles and equipment from other state and federal departments at substantially reduced amounts.

This forklift, (above, right) with a book value of \$38,951 was purchased in 2015 through the Government Surplus Purchasing Program, at a cost of \$1,900.

Also purchased in 2015 was a 2001 Ford F350 pick

up truck, (above, left) valued at \$24,072 and purchased for \$9,900, as well as several Tyvek suits and masks, valued at \$5,362 and purchased for \$1,261.

Items are refurbished (mostly in-house) before being put into service. Since the DSW began this program in 1994, it has purchased almost \$2.7 million worth of equipment, at a cost of \$171,272.

DEMOLITION TEAM

Five dilapidated homes in Gloversville and one each in the City of Johnstown and the Town of Caroga were taken down in 2015 by the Fulton County Demolition Team.

The Fulton County Demolition Team is a municipal cooperative effort formed in 2000 to fight blight and make removal of old buildings more economical. The DSW purchased an excavator and other equipment needed to demolish and remove dilapidated, municipal-owned structures.

Fire Chief Tom Groff, of the City of Gloversville

Fire Department, assisted with all Gloversville properties by providing a constant supply of water and staff to perform the NYS Department of Labor (NYS DOL) wetting procedures.

Due to changes in NYSDOL regulations regarding variance fees, the DSW was exempted from over \$14,000 in fees on the seven projects. The required air monitoring was accomplished by an independent firm.

Over 100 structures have now been demolished for a total of 1,353 loads, 9,348 tons at a cost of \$232,354. Many municipalities are paying over \$20,000 per structure for demolition, while the County has saved over \$2 million dollars in total fees using its Demolition Team since its inception in 2000.

GLOVERSVILLE DEMOS in 2015



4 Wheaton Avenue, above.



128 West Fulton Street. Notice how close this structure is to the buildings on either side (above). Below is a view from the back side of this same project.



26 East Fulton Street, (above) another close one for the team. All demolitions must be constantly hosed down to control dust; (below) the Gloversville Fire Department provides cooperative support.



17 Park Street (above), is shown half down. Another structure on Park street, number 14, was also demolished, but is not pictured here.

2015 Demolitions

ADDRESS	ASSISTANCE (PROVIDED BY MUNICIPALITY)	NO. of LOADS	TONS	COST
14 Park St., Gloversville	GFD, GVDPW: assist w/backfill	15	100.9	\$2,524.75
17 Park St., Gloversville	GFD, GVDPW: 3 drivers	10	69.4	\$1,734.25
26 E. Fulton St., Gloversville	GFD, GVDPW	15	109.7	\$2,744.50
128 W. Fulton St., Gloversville	GFD, GVDPW	15	111.7	\$2,792.25
4 Wheaton Ave., Gloversville	GFD, GVDPW	11	89.2	\$2,230.50
104 Hoosac St., Johnstown	JFD, JDPW 2 drivers	9	54.6	\$1,365.25
3237 St. Hwy 29A, Caroga	Caroga FD, Caroga SPW driver	14	105.7	\$2,643.25
TOTAL		88	632.9	\$16,034.75



CAROGA LAKE

This old house, on Route 29A in Caroga Lake, was razed in 2015 to help with a building project for the Caroga Fire Department.



Before

By the end of the day, all demolition was hauled away and soil was brought in and leveled (right).

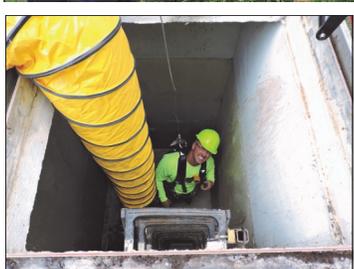
JOHNSTOWN

This dilapidated structure, at 104 Hoosac St., was a safety hazard for the neighborhood.



After

CONFINED SPACE TRAINING



In October of 2015, the DSW hosted a 16 hour confined space entry training course and an 8 hour refresher course with participants from the Gloversville-Johnstown Waste Water Treatment Facility, City of Johnstown, as well as DSW staff. Employees are trained to safely enter confined spaces they may encounter. This includes writing permits, calibrating and using a meter to check for potentially hazardous atmospheres, proper ventilation equipment, appropriate personal protective equipment and safety gear, and learning how to perform non-entry rescues. The course was put on by FCDSW Environmental Technician Joshua Brown as part of the CSEA's Peer Trainer Program.



A Look Back In History

TIPPING FEES (per ton)			
Category	1995	2005	2015
Commercial, Industrial & Construction/Demolition	\$65.50	\$46.00	\$55.00
Contaminated Soil	\$65.50	\$23.00	\$25.00
County Transfer Haul	\$77.50	\$48.00	\$53.00
Municipal Direct Haul	\$50.50	\$28.00	\$33.00
Municipal C & D	\$50.50	\$25.00	\$25.00
Municipal Sludge	\$65.50	\$28.00 & \$36.00	\$34.00 & \$44.00
Municipal Clean-ups	\$25.50	\$40.00	\$50.00
Transfer Station Recycling	\$43.50	\$12.50	\$10.00
Curbside Recycling	\$49.00	\$25.00	\$20.00
Commercial Recycling	\$24.00	\$10.00	\$0.00

EFFICIENCIES *2015 cost effective actions:*

Intermunicipal Benefits

- ◆ Scissor lift loaned to City of Johnstown
- ◆ Roller loaned to the Town of Stratford
- ◆ Crusher loaned to the town of Ephratah
- ◆ DSW box truck loaned to the county Board of Elections.
- ◆ Firing Range for Fulton County Sheriff's Dept. on site
- ◆ Confined space training

DSW & Landfill Projects

- ◆ Landfill gas system maintenance & expansion; eleven wells were drilled and piping installed in 2015
- ◆ Upgrade maintenance program on pumps, vehicles and heavy equipment
- ◆ Government surplus use of equipment to prevent rental needs & purchases.

Future Projects

- ◆ Solar array at the landfill
- ◆ Ener-G-Rotors waste-heat project
- ◆ Investigate GPS use to improve operational efficiencies
- ◆ Investigate other alternate cover systems to conserve airspace and soils.

The Local Solid Waste Management Plan update was submitted in March of 2015. This document is required to be submitted to the state every other year.



Thank You

To 2015 ED&D members:

Charles Potter, Chairman - William Waldron, Vice Chairman
 Richard Argotsinger, Todd Bradt, John E. Callery, James Groff, Frank Lauria Jr.