

DELAWARE COUNTY

-FINAL-

LOCAL SOLID WASTE MANAGEMENT

PLAN

(6 NYCRR Section 360-15.11)

UPDATE 2018 - 2027



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EXECUTIVE SUMMARY

Delaware County Solid Waste Management Plan - 2018 to 2027

This Local Solid Waste Management Plan 2018-2027 (LSWMP) is being submitted pursuant to 6 NYCRR Section 360-15, and pending regulation 6 NYCRR Section 366 (not fully implemented as of this writing). A ten (10) year plan for future solid waste activities, the term runs from January 1, 2018 thru December 31, 2027. The planning unit is restricted to Delaware County. This DLSWMP 2018-2027 is being developed in support of the County's ongoing efforts to provide smart, sustainable, and locally available solid waste services for the residents and businesses of Delaware County for both near and long term needs. The County will be submitting to NYSDEC a request to modify the operational permit for the County's Solid Waste Management Center to allow for the lateral expansion of the landfill footprint within the existing property defined limits. This lateral expansion, in combination with continued maintenance and operation of the compost and recycling programs is anticipated to provide an estimated 60 years of additional solid waste program service life for Delaware County.

Current Solid Waste Program

The County's current solid waste program has its hub of operations at the Solid Waste Management Center (SWMC), located at 32230 State Highway 10, Walton, NY. The SWMC currently contains separate lined municipal solid waste (MSW) and construction and demolition debris (C&D) landfills, materials recovery facility (MRF), mixed waste composting facility, landfill gas extraction system and flare, and the transportation hub to service eight town owned transfer stations throughout the County. Additional program activities are provided off-site, including the annual CLEAN SWEEP dropoff event for household hazardous waste (HHW), conditionally exempt small quantity generator waste (CESQG), qualifying agricultural pesticide wastes, and most recently, sharps, syringes, and household pharmaceuticals. Off-site activities coordinated through the Town owned and operated transfer stations, has allowed for enhanced recycling opportunities for electronics and battery recycling, wood recovery, freon capture, and scrap tire recycling.

Delaware County has met the milestones outlined in previous SWMPs, including the permitting and development of landfill expansion essential for continued in-house disposal capacity for non-recoverable/non-recyclable wastes, as well as the development and operation of a mixed waste compost facility, expanded operation of the materials recovery facility, expansion of the recycling program for unconventional materials, and a secure funding source for the solid waste program thru the use of a dedicated sales tax revenue stream. Program goals as stated in the Delaware County Solid Waste Management Plan - 2018-2027 are believed achievable, including the continuation and expansion of the materials recovery program, evaluation for reclamation of the oldest landfill cell(s), and lateral expansion for new contemporary lined MSW landfill cells at the Solid Waste Management Center that can accommodate 60 years or more of services.

Goals and Objectives - DLSWMP - 2018 to 2027

With the publication of BEYOND WASTE - A Sustainable Materials Management Strategy for New York State - December 2010, New York State renewed its commitment to work aggressively to reduce the amount of waste destined for disposal. This commitment comes with a change in approach, explicitly stated as "...a shift from focusing on "end-of-pipe" waste management techniques to looking "upstream" and more comprehensively at how materials that would otherwise become waste can be more sustainably managed through the state's economy."¹ BEYOND WASTE represents a policy shift, not an abandonment of the New York State Solid Waste Management Act of 1988 that declared the proper management of solid waste is necessary to protect public health and the environment. To achieve the goals of both policy statements, the DLSWMP provides for the continuation and enhancement of our current materials management infrastructure in addition to support of state and federal legislative actions and commercial / industrial actions to "upstream" management techniques.

Supporting "upstream" waste management methods has very real and immediate benefits in controlling both the quantity and quality of wastes ultimately requiring "end-of-pipe" disposal. Recognizing that Delaware County's primary

¹ Excerpted from Executive Summary, BEYOND WASTE - A Sustainable Materials Management Strategy for New York State (2010).

need is to manage locally generated materials for as long as possible, the County's Solid Waste Mission Statement continues to be the "provision for Delaware County residents with long term, cost competitive, environmentally responsive, comprehensive solid waste management services"². The fundamental challenges for continued solid waste services, consistent with this mission statement are summarized in the three (3) following goals reflected in the DLSWMP:

- GOAL ONE: Maintain Infrastructure for Long Term Continued Recovery Opportunities
- GOALTWO: Enhance Program Compliance and Internal Resiliency
- GOALTHREE: Provide Long Term Reliability of Solid Waste Management Services

These goals and objectives are a continuation and expansion of the fundamental solid waste program goals articulated in earlier versions of the local solid waste management plan. As a "living document" the DLSWMP is written to continue the work of the solid waste program, and it is not intended to replace previously stated goals.

History of Local Solid Waste Management Planning

Delaware County completed its first Countywide Solid Waste Management Plan (SWMP) in 1974 to provide "... a detailed study, the results of which can be implemented immediately...to alleviate the existing solid waste problem in the County."³ At that time, consolidation of solid waste services, and primarily the provision of conveniently located, governmentally owned and operated landfills, transfer stations, and recycling opportunities was identified as a preferred activity. Based upon this original work, the County has long pursued provision of solid waste services to County residents and businesses in a coordinated program that is municipally run.

Pursuant to the requirements of the 6NYCRR Part 360 Regulations and the State Solid Waste Management Act of 1988, in 1992 Delaware County developed and adopted a new local solid waste management plan (1992 SWMP)⁴. The 1992 SWMP laid the path of activities currently followed by the County, for the operation on a centralized, single County owned and operated solid waste facility, with Town owned and operated supporting transfer stations. The 1992 SWMP was substantially updated in 1999⁵, at which time the current day Compost Facility was designated as the preferred method for achieving the significant solid waste diversion goals specified in the original 1992 SWMP.

Delaware County's SWMP was updated again and submitted in draft form to NYSDEC in 2011. Entitled Delaware County Local Solid Waste Management Plan Update 2011-2020, the draft document was reviewed and approved by NYSDEC Region 4 Office on 28 February 2012. NYSDEC Central Office requested additional modifications to the plan, for which Delaware County submitted response comments within the SWMP Plan Compliance Report 2011-2012. Maintaining compliance under 6 NYCRR Section 360-15.12, subsequent reports have been submitted to NYSDEC Region 4 and Central Offices for the following: SWMP Plan Compliance Report 2013-2014, and SWMP Plan Compliance Report 2015-2016.

With the 2014 construction and operation of the new single stream compatible materials recovery facility, the Department continues the successful implementation of the SWMP, providing cost effective and environmentally sound waste management for Delaware County residents and businesses. While challenges remain, the County is confident that with advance planning and a clear understanding of the dynamics of waste management, the goals outlined in the SWMP will continue to be achieved and exceeded.

² Delaware County Board of Supervisors Resolution 67 of 2013.

³ Delaware County Comprehensive Solid Waste Management Study 1974, Barton, Brown, Clyde & Loguidice

⁴ Delaware County Final Solid Waste Management Plan & Generic Environmental Impact Statement, Stearns & Wheler, 1992

⁵ Delaware County Solid Waste Management Plan, Update 1999 and Supplemental Final Environmental Generic Impact Statement, 1999, Delaware County DPW. Copies of the SWMP-Update 1999 were submitted to the NYSDEC Central Office, Schenectady Office, and Stamford Office, NYS Attorney General Office, and the NYC Department of Environmental Protection.

CHAPTER 1 - PLANNING UNIT DESCRIPTION

1.1 Size & Geographic Location

The planning unit consists of all Delaware County, including all Towns and Villages within the County boundaries. Covering approximately 1,468 square miles, Delaware County is located in upstate New York, bound by the Southern Tier on the west and the Catskill Mountains on the southeast.

1.2 Population Served

The US Census Bureau 2010 population for Delaware County totals 47,980 people. This is down less than 1% since the 2000 Census. The majority of the residents (95.2%) are white and non-Hispanic. US Census Bureau 2010 figures on housing indicate 31,222 housing units available, of which 11,324 housing units are vacant. The remaining 19,898 occupied housing units are split - 75% owner occupied and 25% renter-occupied. A comparison of US Census data from Census 1990, Census 2000, and Census 2010 shows that total population in Delaware County has remained fundamentally flat. Total housing units for this same 20 year period have increased 14% since 1990. Data suggests a stable to slightly declining population.

1.3 Population Density Breakdown

Delaware County population density breakdown is 69.09% rural, 30.91% suburban, and 0% urban. These statistics are taken from the default Delaware County population data provided in the NYSDEC Population and Municipal Solid Waste Composition Calculator and is consistent with observed local demographics as reported by the Delaware County Planning Department. This is the same calculator utilized in the estimates of weights and composition of wastes generated within Delaware County and projections of future waste characteristics.

1.4 Planning Unit Members

The planning unit consists of all municipal entities of Delaware County, including the Towns of Andes, Bovina, Colchester, Davenport, Delhi, Deposit, Franklin, Hamden, Hancock, Harpersfield, Kortright, Masonville, Meredith, Middletown, Roxbury, Sidney, Stamford, Tompkins, and Walton, and the Villages of Delhi, Deposit, Fleischmanns, Franklin, Hancock, Hobart, Margaretville, Sidney, Stamford, and Walton. The planning unit members are unchanged in the past ten years and are anticipated to remain unchanged in the next 10 years of the planning period for this SWMP.

1.5 Membership Changes Since Last Approved LSWMP

Planning unit membership is unchanged since 1992.

1.6 Municipalities in Planning Unit Not Participating in the LSWMP

All municipalities and entities within Delaware County are participating in the LSWMP. There are no exclusions within the planning unit.

Delaware County, New York



Location in the state of New York



New York's location in the U.S.

Founded	1797
Seat	Delhi
Area	
- Total	1,468 sq mi (3,802 km ²)
- Land	1,446 sq mi (3,745 km ²)
- Water	22 sq mi (57 km ²), 1.48%

http://en.wikipedia.org/wiki/Delaware_County,_New_York

Delaware County	47,980
Andes town	1,301
Bovina town	633
Colchester town	2,077
Davenport town	2,965
Delhi town	5,117
Deposit town	1,712
Franklin town	2,411
Hamden town	1,323
Hancock town	3,224
Harpersfield town	1,577
Kortright town	1,675
Masonville town	1,320
Meredith town	1,529
Middletown town	3,750
Roxbury town	2,502
Sidney town	5,774
Stamford town	2,267
Tompkins town	1,247
Walton town	5,576

2010 Census: Public Law 94-171

1.7 List of Neighboring Planning Units

Planning Units that are adjacent to Delaware County are: Otsego County, Schoharie County, Greene County, Ulster County, Sullivan County, Broome County, and Chenango County. The northern half of the Town of Hardenburgh in Ulster County (127 estimated population), is authorized to utilize Delaware County solid waste infrastructure under contractual agreement between the Town and County. This contract is subject to a fee based annual renewal and may be terminated at any time. This long standing arrangement is driven by geography in which Hardenburgh's northern portion is accessible through Delaware County only. The population and waste stream serviced are readily accommodated by existing infrastructure. The arrangement is expected to continue. Hardenburgh is not an official member of the Delaware County solid waste planning unit.

1.8 Effects of Tourism and Seasonal Variations of Population and Land Use

Information provided by the Delaware County Chamber of Commerce indicates increased tourism activities over the past decade. In most recent years, tourism has been strongest among those taking day trips and short weekend trips. Economic recession in surrounding communities has translated into increased tourism activity, as Delaware County becomes a cost attractive, scenic vacation destination. Municipal solid waste (MSW) seasonal quantity variations are explained largely by tourist population increases in the summer. Short increases in waste and recyclables are experienced around the winter holiday season associated with increased consumer activities. Decreases in construction and demolition debris (C&D) are governed largely by weather, with winter measurably decreasing construction activities and the associated waste stream.

Waste quantities variations are additionally impacted by environmental regulations addressing waste water, solid waste, and most recently open burning. With the prohibition on open burn barrels for trash, more individuals are using Town and County solid waste facilities. The net impact of these conditions offsets and dampens the seasonal differences in quantity and quality of waste serviced by the County's solid waste program. Waste disposal rates have leveled through the year, with smaller seasonal flux than historically experienced.

1.9 Influence of NYC Watershed

A majority 54% percentage of Delaware County land mass is situated within the NYC watershed, including the location of the Solid Waste Management Center (SWMC) within the NYC watershed Cannonsville Basin⁶. The site of the SWMC was selected and developed, consistent with the County's 1974 SWMP⁷. Recognizing the significance of the SWMC, the Memorandum of Agreement (MOA) between NYC and watershed communities and the subsequent NYC Watershed Regulations include provisions explicitly allowing for the continued operation of the SWMC at its current location.

§18-41 Solid Waste.

- (a) Siting or horizontal expansion of a junkyard or a municipal solid waste landfill, within the limiting distance of 250 feet of a watercourse or wetland, or the siting or horizontal expansion of a junkyard or a solid waste management facility within the limiting distance of 1000 feet of a reservoir, reservoir stem or controlled lake is prohibited **except for:**
- (1) Recyclable handling and recovery facilities that handle non-putrescible solid waste, such as newspapers, magazines, corrugated boxes, glass, cans and plastic, but not non-putrescible solid waste such as batteries, car batteries, and waste oil;
 - (2) Composting facilities for individual households for personal use;
or
 - (3) **Expansion of the existing permitted municipal solid waste landfill located within Delaware County.**

Source: Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and Its Sources. Final Regulations - Effective May 1, 1997 As Amended April 4, 2010.

⁶ Constructed from 1955 to 1967, the Cannonsville Reservoir was first placed in service in 1965. The Stilesville Dam impounds 95 billion gallons of water in a reservoir that is 16 miles long. Five communities were condemned to make way for this reservoir: Beerston, Cannonsville, Rock Rift, Rock Royal and Granton. 941 people were forced to move. Water from the Pepacton, Neversink and Cannonsville Reservoirs is sent to the Rondout Reservoir by gravity via the 25-mile-long East Delaware Tunnel, the 44-mile West Delaware Tunnel and the Neversink Tunnel, which is six miles long. The combined waters are then sent to the city in the world's longest continuous underground tunnel, the Delaware Aqueduct, which extends 85 miles from the Rondout Reservoir to Hillview Reservoir in Yonkers. The aqueduct, 1,550 feet below ground at one point, runs 600 feet beneath the Hudson River at Chelsea. Historical background provided by Catskill Watershed Corporation. www.cwconline.org/about/ab_hist.htm

⁷ Delaware County Comprehensive Solid Waste Management Study, 1974 (Barton, Brown, Clyde & Loguidice PC). . The site design and construction details were provided by Smith and Mahoney (Consulting Engineers) in 1977, with the first landfill cell opening for waste disposal in 1977.

In 1986, the passage of the Federal Safe Drinking Water Act (SDWA) brought new demands to provide protections on land use and drinking water systems. The location of the landfill within the boundaries of the NYC watershed for drinking water has demanded a program response by County officials that minimizes dependency on land burial and maximizes waste recovery. Programmatically unique, the Solid Waste Management Center hosts the only operational full scale municipal mixed solid waste composting facility in the State, and a full spectrum comprehensive solid waste program addressing C&D debris to household pharmaceutical waste. The result of the County's efforts has been a significant and successful decrease in dependence on landfill space for waste burial.

1.10 Significant Commercial Activities & Industries

Delaware County maintains a significant agricultural economy. Even with the steady decline of farming in the region, agriculture has retained a strong foot hold with the help of diversification of agricultural and specialty farm products. Over 700 farms occupy nearly 200,000 acres. Principal sources of cash farm income include milk, vegetables, grain and livestock. From honey and maple syrup, to fresh produce, pastured beef, chicken, pork, lamb, goat, eggs, jams are produced locally, with market opportunities both wholesale and direct retail through many farmers' markets, farm stores, back road farm stands or restaurants offering true farm-to-table dining.⁸

Natural resource based industries are dominated by bluestone and wood products. Products include medium-density fiberboard (MDF), bluestone, and engravable wood products. Natural resource-based industries include: Integrated Wood Component, New England Wood Pellets, Johnstone and Rhodes Bluestone, Sonny and Sons Bluestone, Tompkins Bluestone, Schaefer Enterprises, and Cannonsville Lumber.

Retail from small specialty shops, department stores, and restaurants include over 350 retail merchants with sales of over \$472 million in the County. Retail business supporting the agricultural community include feed suppliers - McDowall Walker, Don's Dairy Supply, River Valley New Holland, and Eklund Farm Equipment.

Manufacturers of all sizes employ over 4,000 people. Goods include components for the aerospace industry, pharmaceuticals, printing, and dairy products. Companies include Amphenol Aerospace, ACCO, Audiosears, Catskill Craftsman, Clark Companies, Friesland Campina DOMO, Kraft Foods, Covidien, Sportsfield Specialties, Saputo, and Unalam.

Throughout the commercial and industrial sectors, support for continued economic vitality of Delaware County is enhanced by an employment sector comprised of governmental, educational, institutional, and not-for-profit organizations, including County and local governments, State University of New York (SUNY) Delhi, New York State Department of Conservation, Delaware County Soil and Water Conservation District, Catskill Watershed Corporation, NYC Department of Environmental Protection, and the Watershed Agricultural Council.

1.11 Administrative and Financial Structure of the Planning Unit

Administration of solid waste services within the Delaware County planning unit is provided by the Delaware County Department of Public Works - Solid Waste Division (DPW-SW). DPW-SW provides expertise, regulatory review and compliance, and engineering support through the Delhi Main Office. Infrastructure directly providing solid waste services is based out of the Solid Waste Management Center (SWMC) at 32230 State Highway 10, Walton NY. The Solid Waste Management Center is owned by Delaware County and operated by DPW-SW and has been the central site for solid waste services since the 1970's.

The solid waste program works as in a "hub and spoke" fashion with the hub of operations being SWMC and spoke operations consisting of planning unit member Town owned and operated transfer stations serviced by the Solid Waste Management Center. Decisions and financial obligations relative to transfer station development and operation are the responsibility of the host Town, with the County providing support services for regulatory compliance, and transportation services for, and access to, services of the SWMC and the extended solid waste program within the County.

⁸ Data and description provided by Delaware County Chamber of Commerce, Delhi NY, website October 2017.

Communities, residents and businesses within Delaware County have direct access to the SWMC and the extended programmatic services.

Financial support for the capital development and operational expenses of the SWMC and the extended solid waste program are provided through a dedicated portion of the County sales tax, supplemented by revenues from commodity sales, tipping fees on select waste streams, and grant funding. The program's freedom from excessive reliance of tipping fee revenues allows Delaware County to extend MSW disposal, composting, and recycling services at ZERO tipping fees for County residents. The stability of sales tax funding further supports long term system development and maintenance. Additional revenues are generated through commodity sales of recyclable products, and limited tipping fees on contaminated soils, construction and demolition debris, asbestos, box springs and mattresses, clean wood, and that portion of WWTP biosolids associated with treatment plant expansions and new construction identified in the NYC MOA⁹.

Delaware County's solid waste program is not dependant on a minimum tonnage of wastes, and the associated tipping fees from those wastes. The County continues to provide a broad array of solid waste services to the planning unit community based upon long term system performance rather than short term cash flow.

⁹ Delaware County Board Resolution 49 of 2011 established the current tipping fee schedule.

CHAPTER 2 - WASTE GENERATION & MATERIALS RECOVERY DATA AND PROJECTIONS

2.1 MSW Projections

Ten (10) year projections of MSW tonnages have been estimated using the NYSDEC waste calculator for MSW. Historic solid waste tonnages in Delaware County suggest a baseline per capita waste generation rate inline with USEPA reported national values of 4.44 lbs/capita/day¹⁰, lower than the NYSDEC default value of 5.14 lbs/capita/day¹¹. Final projection estimates provided include tonnages and material composition are described further in Chapter 7. Identified sources and generators of MSW are described in further detail as follows.

2.1.a Sources and Generators of MSW

2.1.a.1 Residents - Major Population Centers

Delaware County consists of 19 towns and 10 villages. Major population centers include the three largest Villages. Listed in declining order of population are: Village of Sidney (pop. 3900), Village of Walton (pop. 3088) and Village of Delhi (pop. 3087)¹². Combined village populations represent 33% of total County population, of which the three largest villages account for 64% of combined village population, and 21% of combined village and town population.

2.1.a.2 Large Retailers/Commercial Centers

Each of the three largest villages sustain small retail plazas and a combination of light manufacturing, retail, warehouse, and professional businesses.

2.1.a.3 Municipal Buildings

County office buildings, town and village offices are located throughout the planning unit area and are consistent in their waste and recyclable volumes with other offices in the County.

2.1.a.4 Institutions, School Districts & College

With 13 school districts Delaware County features one of the lowest student to teacher ratios in the state and some of the highest graduation rates in the state. Total student body among all school districts for all grades is not quite 6,800 students.

One college, the State University of New York at Delhi, provides continued academic opportunity for 2 year and 4 year degree programs. SUNY Delhi has over 3,200 students¹³, of which 2,700 are based directly out of Delhi and the remainder enrolled for online education or based at other non-local SUNY campuses thru affiliated programming. Consisting of one main campus, within the surrounding Delhi community, the college also maintains an active farm, 18-hole golf course, and teaching automotive maintenance garage.

2.1.a.5 State and Federal Parks and Public Spaces

State parks include:

¹⁰ Advancing Sustainable Materials Management: 2014 Fact Sheet. USEPA, EPA530-R-17-01, November 2016

¹¹ Population and Municipal Solid Waste Composition Calculator (Excel, 450 KB) online: <http://www.dec.ny.gov/chemical/48208.html>

¹² US Census Data 2010

¹³ SUNY Delhi Fast Facts 2017

Oquaga Lake State Park on the border between Delaware County and Broome County consisting of 55-acre Arctic Lake with a sand beach for swimmers. Winter visitors can sled, ice fish, snowshow, and cross-country skiers can explore six miles of trails, and

Bear Spring Mountain Game Management Area (WMA) in Walton/Colchester consisting of 7,186 acres, upland, hiking trails, boat access, parking lot, picnic area, rest rooms, birdwatching, camping, cross-country skiing, snowshoeing, hunting, fishing and trapping.

There are no federal parks in Delaware County.

2.2 Construction & Demolition Debris Projections

Separate 10 year waste projections have been provided for construction and demolition (C&D) debris utilizing the NYSDEC waste calculator for C&D. MSW and C&D generation projections include all sources and dispositions of MSW, including disposal/management sites other than the Solid Waste Management Center. MSW and C&D are easily transported and often time mobile to out of area facilities. As such there is variance between estimates of waste generation and scale records for wastes handled through the Solid Waste Management Center.

2.2.a Significant Construction and Development Activities

There is no significant construction and/or development activities or pressure currently observed. Delaware County has been experiencing slow development decline for many years. This trend is expected to continue in the 10 years of this planning period.

2.3 Industrial Waste

The most difficult waste stream to quantify and project the movement and disposal of is industrial waste. This material has generation rates that are highly variable and driven by the merchant - customer relationship and customer demand. Additionally, the material is often not handled through the Delaware County solid waste program and is handled outside of Delaware County boundaries for material that has alternate use value as an energy source, marketable commodity, or subject to corporate dictates. In Delaware County there are four sources of industrial waste that impact the County's solid waste program. All four of these generators produce organic waste that has high biological loading and high moisture content. Three of the major producers discharge this organic waste into a municipal owned waste water treatment plant (WWTP) with the resulting WWTP biosolids being handled at the Compost Facility within the Delaware County SWMC. The forth producer sends the solid fraction of their organic waste stream to the SWMC where it is currently landfilled, as the material is not amendable to composting due to extreme odor generation. Non -industrial MSW and recyclables generated from industry is managed by the County's solid waste program.

2.4 Biosolids

All biosolids generated in Delaware County are sourced from waste water treatment plants (WWTP). It is anticipated that for the 10 year planning period for this DLSWMP that biosolids will continue to be received and managed at the SWMC at levels that are comparable to current rates. Waste water treatment plant construction and expansion went through a substantial growth period following the signing of the Memorandum of Agreement (MOA) between New York City and the water shed communities including Delaware County. All of the treatment plant upgrades and new construction facilities have been completed. Accordingly, the current volume of biosolids is believed to be stable for the 10 year planning period of this DLSWMP.

2.4.a Waste Water Treatment Plants

Municipal WWTPs currently service communities in Andes, Delhi, Deposit, Fleischmanns, Hancock, Hobart, Margaretville, Sidney, Stamford, and Walton. All of the biosolids, and grit are received at the SWMC for composting and/or landfilling. There is no land application of WWTP biosolids anywhere within Delaware County. Due to land use regulations and restrictions associated with the NYC Watershed Rules and Regulations and the MOA, biosolids generation is higher per capita than either state or national values. The high volume of biosolids

needing safe management options was a primary motivation behind Delaware County’s decision to develop the mixed MSW biosolids composting facility. It is fully anticipated that the volume of biosolids will remain high and needing significant management provided at the SWMC during the 10 year planning period.

2.5 10yr Past History - Performance of Existing Solid Waste Program

Delaware County regularly measures the quantity and types of wastes received and managed through the SWMC and Compost Facility. Since the start of full operations at the Compost Facility in 2006, the County has managed to significantly reduce the quantity of material landfilled. As expressed on a per capita per day basis, combined wastes buried in the landfill have steadily dropped from 4.01 lbs/capita/day in 2006 down to 2.32 lbs/capita/day in 2016. Calculating the per capita daily landfill burial rate consistent with methods used in NYSDEC “Beyond Waste”¹⁴ shows a MSW landfill burial rate for Delaware County in 2016 of 1.52 lbs/capita/day.

DELAWARE COUNTY SOLID WASTE DISPOSAL PERFORMANCE RATES (lb / capita ¹ / day)		Table 2.5
Delaware County Performance 2016 Actual	All Solid Wastes Landfilled from Delaware County SW Program ² (MSW, ICI, net C&D, biosolids, recyclables, MRF & compost residuals, exports)	2.32
	MSW Disposal Performance ³ NYSDEC “Beyond MSW Waste” 2016 actual	1.52
NYS Goals	MSW Disposal Goals NYSDEC “Beyond MSW Waste” Goals Year 2010	4.1
	MSW Disposal Goals NYSDEC “Beyond MSW Waste” Goals Year 2012	3.8
	MSW Disposal Goals NYSDEC “Beyond MSW Waste” Goals Year 2016	2.9
	MSW Disposal Goals NYSDEC “Beyond MSW Waste” Goals Year 2020	1.7
Notes:	¹ Population total 47,980 per Census 2010. ² Disposal rate calculated using all waste sources managed through Delaware County solid waste program that are ultimately landfilled. Note, this includes wastes that are not MSW. ³ NYSDEC “Beyond MSW Waste” defined MSW does not include separate construction and demolition debris, biosolids, or industrial waste. Rate calculated from MSW, MRF & compost residuals tonnages landfilled in 2016.	

¹⁴ NYSDEC “Beyond MSW Waste”, December 2010. Defined MSW does not include separate construction and demolition debris, biosolids, or industrial waste. Rate calculated from MSW, MRF & compost residuals tonnages landfilled in 2016. To evaluate performance of the existing solid waste program, comparisons are made to historical values and projected NYS goals articulated in “Beyond Waste”(2010). As defined in “Beyond Waste” Delaware County is a rural community with a population density of only 33.3 persons per square mile. Additionally, as defined in “Beyond Waste”, municipal solid waste (MSW) municipal solid waste includes materials generated by the residential, commercial and institutional sectors, and does not include construction and demolition debris, biosolids, or industrial waste.

The reduction in reliance upon the landfill is attributable primarily to diversion of materials to the Compost Facility, with supplemental diversion thru expanded conventional recycling, and expanded utilization of alternate cover material produced in-house from C&D debris. Tables 2.5.a and 2.5.b show the ten (10) year history of the Delaware County solid waste program wastes receipts, diversions, land disposal, and exports.

Reflected in these tables are the marketing and infrastructure changes that the County's solid waste program has made to both transform the program from material disposal to material management, and to address changes in market opportunities. Most dramatically the program has seen very significant diversion away from land burial with the full implementation of the compost program; replacement of the legacy materials recovery facility (MRF) with a new single stream/dual stream capable MRF; aggressive utilization of C&D debris for use as alternate cover material on the MSW landfill; limited export of excess bulky waste; and continued efforts to maximize waste-in-place density of MSW with properly sized landfill compaction equipment. These program actions have collectively extended the projected useful life of the Solid Waste Management Center thru 2035 at the current airspace consumption rate for remaining Cell 6 and future Cell 7 capacity volumes.

Specific to the materials recovery efforts, the past 10 years has seen the inclusion of agricultural film plastic, mixed rigid plastics, clothing, textiles and accessories, and direct weight accounting for freon containing appliances. With the opening of the new MRF, glass that had been previously sorted by hand is now handled by an automated glass breaker. The collected glass is now utilized as mixed glass aggregate with a resulting 20% increase in glass recovery tonnages. These program additions and changes are reflected in Table 2.5.a.

Noticeably absent from the existing program is management of leaf and yard waste. This stems from a County program decision from 1992 to exclude leaf and yard waste from the landfill so that precious and expensive landfill airspace can be dedicated to wastes with higher pollution control demands. This exclusion is enforced as facility operating guideline and not thru local law. Due to Delaware County's primarily rural character the need for centralized leaf and yard waste disposal has been and continues to be insignificant. Sufficient area at and nearby the source of yard waste debris exists to adequately manage yard waste thru on-site leaf and grass mulching and composting. In villages where population density necessitate collection of leaf and yard waste, these materials are adequately managed in or near the village limits and need or willingness to transport these materials to the SWMC in Walton is absent. As such, there is no dedicated leaf and yard waste management component within the County's solid waste management plan.

While the past 10 year history can be described as successful, the County has identified additional opportunities within the confines of the existing property boundaries to gain further airspace and the associated programmatic longevity and service stability that provides. The limited expansion of new landfill footprint outside of the 1977 permit limits provides additional facility service life. Engineering estimates project useful capacity of the landfill to be extended out 60+ years subject to a permit modification and variance to be issued by NYSDEC.

Delaware County Solid Waste Management Center Table 2.5.a
Types & Quantities of Materials Diverted from Direct Disposal (scale records)

Material / Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Glass, Flint	151.95	157.54	176.41	159.41	144.99	162.44	140.46	125.23	na	na
Glass, Mixed Colored	23.49	11.65	21.64	32.11	15.49	19.45	27.94	42.37	na	na
Ferrous Metal Cans	133.40	173.08	154.66	163.36	136.83	115.28	131.09	87.48	133.64	113.23
Aluminum Cans	13.94	0.00	17.26	4.15	7.22	21.99	6.10	6.78	17.93	13.50
Plastic, HDPE	106.24	101.66	85.72	131.69	108.54	111.85	112.59	130.66	116.76	82.02
Agricultural Film Plastics	na	na	na	na	na	0.50	0.58	9.18	13.92	20.65
UBCs	13.83	11.04	15.42	8.48	7.32	25.46	25.34	19.92	7.92	13.49
Mixed Rigid HMW Plastic	na	na	na	na	na	1.05	11.37	14.64	37.73	0.00
Plastic, PETE	96.86	64.70	124.57	95.79	81.15	83.58	97.12	52.05	75.68	95.98
Paper, OCC	996.74	892.72	1107.97	1079.34	935.34	854.77	843.74	739.98	923.55	622.89
Paper, ONP	270.11	267.90	178.19	202.50	114.74	10.27	483.43	478.62	436.15	494.69
Magazines & Mixed Paper	527.22	471.77	431.45	400.07	536.89	551.93				
Electronics, CRTs, TVs	48.81	62.64	57.68	57.90	182.96	94.57	163.69	231.67	295.48	271.34
Bulk Metal	1208.49	881.64	871.28	715.34	631.53	529.98	353.81	385.39	603.68	897.03
Antifreeze	2.41	1.08	1.84	2.18	1.89	13.46	1.18	1.23	1.79	2.59
Used Oil	19.82	8.58	8.03	21.73	22.35	28.05	10.64	9.67	10.92	18.01
Lead Acid Batteries	4.33	3.69	3.96	1.69	2.57	1.34	1.56	3.08	5.34	4.33
Household Batteries	3.71	1.86	0.56	2.34	4.93	2.01	2.88	4.03	5.34	2.52
Clothing, Textiles, Access	na	na	na	na	35.00	35.00	35.00	16.00	48.00	29.80
HHW, AGP & CESQG	21.43	34.71	35.91	28.52	63.21	29.40	46.64	25.27	35.70	37.51
Tires	790.62	762.23	862.89	847.32	1171.71	1157.56	589.01	595.30	436.40	616.12
Freon Containing Items	na	na	na	na	na	na	na	na	7.29	16.47
Mixed Glass Aggregate	na	na	na	na	na	na	na	50	507	420
Wood to Compost	na	na	na	na	na	669	63	409	293	215
Net MSW (MSW-Compost Residuals) + MRF Residuals to Compost	9315.00	7493	8601	9322	9511	9669	10722	10318	10694	12078
SUB-TOTAL	13748.40	11401.49	12756.44	13275.92	13,716	14,188	13,870	13754.34	14707.58	16065.33
MSW to Compost & Recycling (Pounds / Capita / Day)	1.57	1.30	1.46	1.52	1.57	1.62	1.58	1.57	1.68	1.83
WWTP Sludge to Compost	4009	6514	5378	5636	5636	6241	5493	4738	3207	3831
SUB-TOTAL	4009	6514	5378	5636	5636	6241	5493	4738	3207	3831
Biosolids to Compost (Pounds / Capita / Day)	0.46	0.74	0.61	0.64	0.64	0.71	0.63	0.54	0.37	0.44
Industrial Liquids	1236	1276	1400	962	148	1038	732	180	0	0
Industrial Solids	1184	1086	296	0	0	0	0	0	0	0
SUB-TOTAL	2420	2362	1696	962	148	1038	732	180	0	0
Commercial / Industrial Diversion to Compost (Pounds / Capita / Day)	0.28	0.27	0.19	0.11	0.02	0.12	0.08	0.02	0.00	0.00
C&D for In-House ADC	4697	4812	1077	1247	2117	4241	6573	4484	8422	2958
SUB-TOTAL	4697	4812	1077	1247	2117	4241	6573	4484	8422	2958
C&D Alternate Use (Pounds / Capita / Day)	0.54	0.55	0.12	0.14	0.24	0.48	0.75	0.51	0.96	0.34
TOTAL DIVERSION (Pounds / Capita / Day)	2.84	2.87	2.39	2.41	2.47	2.94	3.05	2.64	3.01	2.61

Table 2.5.b

DELAWARE COUNTY SOLID WASTE MANAGEMENT CENTER
Types & Quantities of Solid Waste Receipts Managed for Landfill Disposal
(2010 population = 47,980)

Delaware County SWMC	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MSW LANDFILL INPUTS - wet tons										
Mixed MSW + MRF Residuals to Landfill (Residential & ICI)	5771	1141	812	700	592	517	763	1009	1763	3381
Friable Asbestos Waste	<1	6	11	8	<1	1	<1	5	<1	53
Compost Facility Residuals	12689	14511	13403	12682	12493	12335	11282	11686	11310	9926
MSW Landfill Tons	18461	15658	14226	13390	13086	12853	12046	12700	13074	13360
MSW Landfilled (Pounds per Capita per Day)	2.11	1.79	1.62	1.53	1.49	1.47	1.38	1.45	1.49	1.53
BIOSOLIDS LANDFILL INPUTS - wet tons										
WWTP Sludge	3247	1581	462	418	728	899	2925	2512	3429	2383
BIOSOLIDS Landfill Tons	3247	1581	462	418	728	899	2925	2512	3429	2383
BIOSOLIDS Landfilled (Pounds / Capita / Day)	0.37	0.18	0.05	0.05	0.08	0.10	0.33	0.29	0.39	0.27
INDUSTRIAL WASTE LANDFILL INPUTS - wet tons										
Industrial Waste (Inc'l sludges)	0	0	2	0	0	0	0	0	0	0
Commercial Whey	1905	2098	1783	1780	1735	2007	2011	2129	2225	2005
INDUSTRIAL WASTE Landfill Tons	1905	2098	1785	1780	1735	2007	2011	2129	2225	2005
INDUSTRIAL WASTE Landfilled (Pounds per Capita per Day)	0.22	0.24	0.20	0.20	0.20	0.23	0.23	0.24	0.25	0.23
CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL INPUTS - wet tons										
Gross Total C&D Receipts	7279	9419	9068	8607	8038	6478	5345	5252	5542	5952
C&D Buried in C&D Landfill	0	0	0	0	337	337	337	0	0	0
C&D buried in MSW Landfill	2821	0	0	0	0	0	0	0	0	0
C&D Export	791	4555	7057	8731	6370	2617	2765	1688	1765	2542
C&D Gross Receipts (Pounds per Capita per Day)	0.83	1.08	1.04	0.98	0.92	0.74	0.61	0.60	0.63	0.68
C&D Landfill & Exported (Pounds per Capita per Day)	0.41	0.52	0.81	1.00	0.77	0.34	0.35	0.19	0.20	0.29
TOTAL WASTE LANDFILLED at Solid Waste Management Center	26434	19337	16473	15588	15885	16096	17319	17341	18727	17748
TOTAL WASTE LANDFILLED at Solid Waste Management Center (Pounds / Capita / Day)	3.02	2.21	1.88	1.78	1.81	1.84	1.98	1.98	2.14	2.03
TOTAL WASTE LANDFILLED Including Export	27225	23892	23530	24319	22255	18713	20084	19029	20492	20290
TOTAL WASTE LANDFILLED Including Export (Pounds / Capita / Day)	3.11	2.73	2.69	2.78	2.54	2.14	2.29	2.17	2.34	2.32

TOTAL WASTE COMPOSITION (10yr AVERAGE 2007 - 2016)

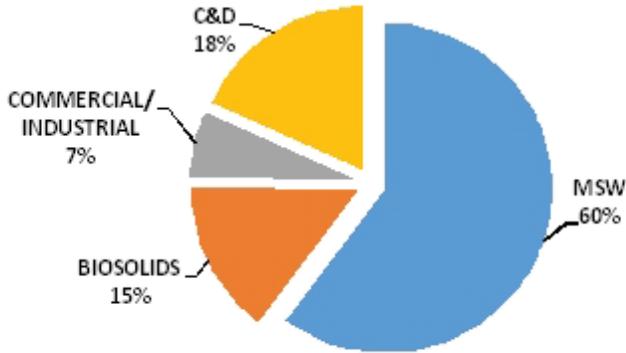


Table 2.5.c

**TOTAL WASTE COMPOSITION
 DELAWARE COUNTY SOLID WASTE CENTER
 10yr ANNUAL MEAN AVERAGE
 (2007 to 2016)**

	TOTAL (tons)	% COMPONENT OF ALL WASTES
MSW	27634	60.3%
BIOSOLIDS	6927	15.1%
COMMERCIAL/INDUSTRIAL	2922	6.4%
C&D	8334	18.2%
TOTAL	45816	

COMPOSITION OF WASTE LANDFILLED (10yr AVERAGE 2007 to 2016)

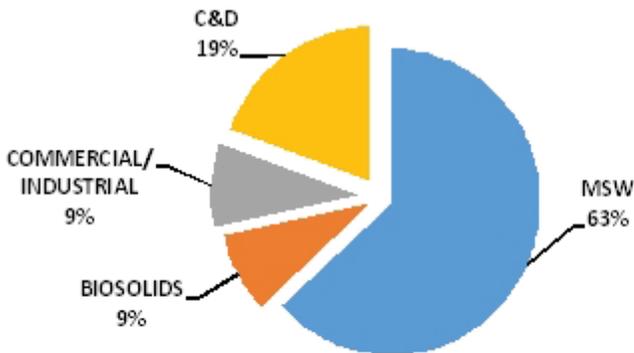


Table 2.5.d

**COMPOSITION OF WASTE LANDFILLED
 DELAWARE COUNTY SOLID WASTE CENTER
 10yr ANNUAL MEAN AVERAGE
 (2007 to 2016)**

	LANDFILL (tons)	% COMPONENT OF LANDFILL WASTES
MSW	13885	63.2%
BIOSOLIDS	1858	8.5%
COMMERCIAL/INDUSTRIAL	1968	9.0%
C&D	4271	19.4%
TOTAL	21982	

COMPOSITION OF WASTE DIVERTED (10yr AVERAGE 2007 to 2016)

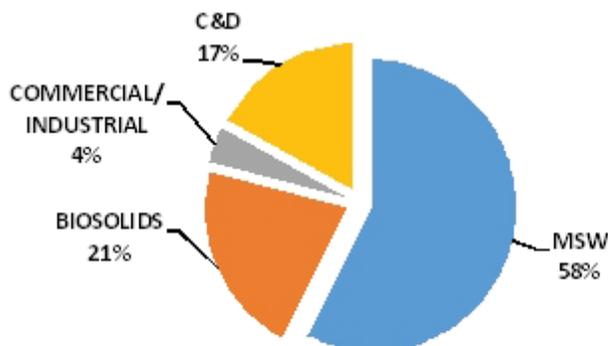


Table 2.5.e

**COMPOSITION OF WASTE DIVERTED
 DELAWARE COUNTY SOLID WASTE CENTER
 10yr ANNUAL MEAN AVERAGE
 (2007 to 2016)**

	DIVERTED (tons)	% COMPONENT OF DIVERTED WASTES
MSW	13748	57.7%
BIOSOLIDS	5068	21.3%
COMMERCIAL/INDUSTRIAL	954	4.0%
C&D	4063	17.0%
TOTAL	23833	

CHAPTER 3 - EXISTING SOLID WASTE MANAGEMENT SYSTEM

3.1 Current Inventory Description

Delaware County solid waste infrastructure and facilities are a combination of public and private ownership. County solid waste program control is focused primarily at the SWMC and town transfer stations. The collection system is not controlled by the County, nor does the County's solid waste program preclude towns and villages from implementing and enforcing their own solid waste regulations at the town and village level by local laws, land use standards, zoning, sub-division regulation, site plan review, or code enforcement.

Infrastructure in the form of landfill operation, recycling facilities, composting and transfer services are primarily based at the Delaware County Solid Waste Management Center in partnership with Town owned and operated transfer stations, and supplemented by the private haulers and private sector facilities.

3.2 Delaware County Solid Waste Management Center - 32230 State Highway 10, Walton, NY

The Delaware County Solid Waste Program is administered by the Delaware County Department of Public Works - Solid Waste Division. The center of operations is based out of the Solid Waste Management Center (SWMC) located at 32230 State Highway 10, Walton, NY. Originally developed in the mid 1970's, the SWMC has evolved to include a comprehensive solid waste service.

Infrastructure components consist of municipal solid waste (MSW) landfill cells, construction and demolition debris (C&D) landfill cell and transfer operation, materials recovery facility (MRF), composting facility, landfill gas extraction system, and transportation. The facility is the primary site for management of MSW, C&D, mixed recyclables (dual stream and single stream), tires, clean aggregate, asbestos, select commercial and industrial wastes, contaminated soils, and a limited volume of clean woody debris. See Table 3 for a complete inventory of infrastructure located at SWMC. The facility is permitted and registered by NYSDEC and USEPA as per the following:

Compost Facility No. 13-C-01	DEC ID# 4-1256-00008/00011	Permit Expiration: 24 April 2022
Landfill Facility No. 13-S-18	DEC ID# 4-1256-00008/00007-1	Permit Expiration: 4 June 2019
	LFG Active Extraction and Collection Network	
	Tire Chip Storage Area	
C&D Facility No. 13-D-01	DEC ID# 4-1256-0040/00004-0	Permit Expiration: 1 June 2019
	C&D Transfer Operation	
Waste Transporter Permit	Part 364 Permit# 4A-246	Permit Expiration: 30 June 2018
Air Facility Registration	DEC AIR ID# 4125600008, R0003, R0004, R0005	Permit Expiration: 30 June 2018
Petroleum Bulk Storage	DEC PBS ID# 4-428728	Permit Expiration: 7 January 2018
Materials Recovery Facility	DEC Registration# 13M01	Reg. Expiration: rolling
Electronic Waste Collection Site	DEC Registration# 00042	Reg. Expiration: rolling
Transfer Station Registration	DEC Registration# 13R22	Reg. Expiration: rolling
Biosolids Handling Facility	USEPA - NYU000020	Reg. Expiration: rolling

Table 3

**DELAWARE COUNTY SOLID WASTE MANAGEMENT CENTER
CURRENT INFRASTRUCTURE INVENTORY TABLE**

RECYCLING & COMPOSTING (Infrastructure based at the SWMC)	ON-SITE LANDFILLING (Infrastructure based at the SWMC)	TRANSFER, SUPPORT & EXPORT (Services at the SWMC and Off-Site Locations as Needed)
<p><u>Compost Facility</u> 2005 - present design capacity 35,000 tpy inputs processing organics and select MSW County owned and operated</p>	<p><u>MSW Landfill - Cell 6</u> 2008 - present 3.5 acre design capacity 343,000 cy remaining capacity 36% (as of 6/2017) County owned and operated</p> <p>Cell 6 landfill 0% capacity expected by 7/2020 (as of 6/2017, based upon 40,000cy annual utilization)</p>	<p><u>Town Transfer Station Services</u> 1977 - present provision of transport services for waste and recyclables collected at Town owned transfer stations. Town owned and operated transfer stations located in Andes, Bovina, Colchester, Davenport, Hancock, Harpersfield (also serving Kortright and Stamford), Middletown, and Roxbury. County owned & operated fleet.</p>
<p><u>Materials Recovery Facility</u> 1991 - present new facility in 2015 replaced 1991 facility design capacity 8 tph processing available capacity to double thru-put volume dual stream & single stream compatible County owned, operated with DelARC/RFI</p>	<p><u>MSW Landfill - Cell 5</u> 2001 - 2007 (interim closure) 9.7 acre design capacity 329,000 cy remaining capacity 0% County owned and maintained</p>	<p><u>Waste Transporter Permits (Part 364)</u> Annually permitted vehicles for the transportation of regulated wastes, including tires, contaminated soils, and landfill leachate. County owned and operated fleet</p>
<p><u>Convenience Center</u> 1977 - present dropoff for individual resident users receiving recyclables and wastes County owned and operated</p>	<p><u>MSW Landfill - Cell 4/4e</u> 1993 - 2000 7.9 acre design capacity 400,000 cy remaining capacity 0% County owned and maintained</p>	<p><u>Construction & Demolition Transfer</u> 2006 - present staging area for receipt and export of C&D Services provided under private contract Export of bulky waste to landfills varies with contract terms. Currently Ontario County Landfill, Seneca Meadows Landfill, and Hakes Landfill receive exported wastes</p>
<p><u>Landfill Gas to Electricity Generator</u> 2008 - 2012 design capacity 1MW operating at 40% capacity Privately owned during operation closed due to declining methane volumes</p>	<p><u>MSW Landfill - Cell 3</u> 1987 - 1993 7.1 acre design capacity 420,000 cy remaining capacity 0% County owned and maintained</p>	<p><u>Emergency Debris Management</u> 1996 - present Provide management and ultimate disposal of debris resulting from flooding and other natural disaster events. Waste generated from an event are separated, recycled or managed in accordance with all Federal, State and Local rules and regulations as per the Delaware County Multi-Jurisdictional Hazard Mitigation Plan - 2013 Update.</p>
<p><u>Construction & Demolition Management</u> 2003 - present C&D size reduction and blending source of on-site ADC for MSW landfill excess bulky debris is exported to landfill County owned and operated</p>	<p><u>MSW Landfill - Cell 2</u> 1983 - 1987 4.6 acre design capacity 276,000 cy remaining capacity 0% County owned and maintained</p>	<p><u>Reporting & Compliance Support</u> 1995 - present Prepare and submit NYSDEC required annual reports for Town Transfer Stations. Provide advice and technical support for regulatory and program compliance. Services provided thru the DPW-SW Delhi Main Office.</p>
<p><u>HHW & Universal Waste Handling</u> 1997 - present On site handling for select universal wastes Annual HHW dropoff event Manage HHW, CESQG, and farm pesticides Services provided under private contract</p>	<p><u>MSW Landfill - Cell 1</u> 1977 - 1983 6.5 acre design capacity 380,000 cy remaining capacity 0% County owned and maintained</p>	<p><u>Planning & Community Support</u> 1995 - present Work pro-actively with planning unit Towns and Villages to insure local laws, land use regulations, and private development actions, public outreach efforts do not conflict with solid waste program.</p>
<p><u>Large Stump Processing</u> 2006 - present On site shredding of large tree stumps Services provided under private contract</p>	<p><u>Construction & Demolition Landfill</u> 1991 - present 1.9 acre design capacity 69,950 cy remaining capacity 20% Count owned and operated</p>	<p><u>Private Sector Support</u> 1995 - present Support private sector businesses as requested to maximize solid waste diversion and recovery efforts.</p>

3.3 Town Solid Waste Management Infrastructure

Several towns operate town owned transfer stations. Each facility was developed by the town without financial support from the County. The decision to develop and operate a town transfer station remains a local decision of which the County solid waste program participates but does not direct or decide. Operation of these town transfer stations is the obligation of the town. All of the town transfer stations accept for disposal MSW, limited bulky debris, and recyclables. Some town transfer stations also accept limited quantities of C&D, tires, and woody debris. Each town transfer station has its own hours of operation and access restrictions as specified by the town.

The town transfer stations are serviced by the Delaware County SWMC for their MSW, C&D/ bulky debris, and recyclables. Consistent with County law, only waste and recyclables generated within Delaware County are accepted at the town transfer stations and are monitored and enforced at the town level with additional support and cooperative efforts with the County. The transfer stations have individual permit systems for authorized facility access for community residents.

All of the town transfer stations are NYSDEC registered as per the following facility list:

Andes Town Transfer Station 3760 Co Hwy 1, Andes NY	DEC Facility# 4-12220-1/1-1 DEC Registration# 13-R-20	Reg. Expiration: rolling
Bovina Town Transfer Station New Road, Bovina NY	DEC Facility# 4-1222-1/1-1 DEC Registration# 13-R-22	Reg. Expiration: rolling
Colchester Town Transfer Station 13946 St Hwy 30, Downsville NY	DEC Facility# 4-1224-13/2-1 DEC Registration# 13-R-24	Reg. Expiration: rolling
Davenport Town Transfer Station 7920 Co Hwy 10, Davenport Center NY	DEC Facility# 4-1226-5/1-1 DEC Registration# 13-R-26	Reg. Expiration: rolling
Hancock Town Transfer Station 1488 Green Flats Rd, Hancock NY	DEC Facility# 4-1236-6/1-1 DEC Registration# 13-R-36	Reg. Expiration: rolling
Harpersfield Town Transfer Station 25399 St Hwy 23, Harpersfield NY	DEC Facility# 4-1238-8/1-1 DEC Registration# 13-R-39	Reg. Expiration: rolling
Middletown Town Transfer Station 46530 St Hwy 30, Margaretville NY	DEC Facility# 4-1246-12/1-1 DEC Registration# 13-R-46	Reg. Expiration: rolling
Roxbury Town Transfer Station 11 MacMoore Rd, Roxbury NY	DEC Facility# 4-1248-9/1-1 DEC Registration# 13-R-48	Reg. Expiration: rolling

3.4 Private Sector Solid Waste Related Infrastructure in Delaware County

Private solid waste facilities are required to comply with County solid waste local laws but are not currently subject to permit by the County solid waste program. Solid waste regulations at the town and village level are established and enforced by local law, land use standards, zoning, sub-division regulation, site plan review, or code enforcement. The following is a list of known private sector solid waste facilities in Delaware County:

Deposit Garbage Collection, Gregory Price, 1556 Airport Road, Deposit NY recyclables handling¹⁵

Tim Robinson, land clearing debris, 3777 Freer Hollow Road, Walton NY. Not currently operating as a merchant facility.¹⁶

Mountain Valley Fuel Woods, John Blish, wood processing, 160 Kissimmie Rd., Fleischmanns NY for management of woody debris and clean aggregate

Burton F. Clark C&D Landfill, 41155 State Highway 10, Delhi NY. For limited use by Clark Companies primarily.

Greene Del Sanitation Transfer Station, Robert & Linda Compton, Grand Gorge, for large scale C&D disposal - C&D Processing for Concrete (500 cy/day permit limit), Permit, 100 Greene Del Lane, Roxbury NY DEC ID# 4-1248-00267/00001¹⁷

Waste Recovery Enterprises, Denton Reed, 122 Valley View Rd, Bainbridge NY. Transfer station for MSW, C&D disposal, woody debris management.

Otsego County Transfer Station, 75 Silas Lane, Oneonta NY. Operated under contract by Casella Waste Management. Transfer station for MSW, C&D, recyclables.

Wheeler's Collision Service, Randy Wheeler, vehicle dismantling operation, 32 Oak St, Deposit NY¹⁸

Frank's Garage, vehicle dismantling operation, 1 Mill St, Deposit NY¹⁹

Mike's Auto Parts, vehicle dismantling operation, Michael Oliver, 19079 State Highway 23, Davenport NY²⁰

Otsego Auto Crushers, Wayne Hymers, vehicle dismantling operation, 6071 State Highway 23, Oneonta NY²¹

3.5 Agricultural Operations in Delaware County Managing MSW Organics

On farm management of organics is a common and frequent practice for farm related organic wastes. However, as confirmed by Cornell Cooperative Extension and the Watershed Agricultural Program, there are no known agriculturally based merchant operations for the management of organics from MSW in Delaware County. There is no expectation of development of these services within the 10 year planning window of this DLSWMP.

¹⁵ NYSDEC Website <https://data.ny.gov/Energy-Environment/Recyclables-Handling-Recovery-Facilities-RHRF-Soli/v9cx-y7xx>

¹⁶ NYSDEC Website <https://data.ny.gov/Energy-Environment/Landfill-Solid-Waste-Management-Facilities-Map/afg5-7i6u>

¹⁷ NYSDEC website <https://data.ny.gov/Energy-Environment/Construction-and-Demolition-C-D-Debris-Solid-Waste/hra5-yqwi>

¹⁸ NYSDEC Website <https://data.ny.gov/Energy-Environment/Vehicle-Dismantling-Crushing-Solid-Waste-Management/pzvp-y7tq>

¹⁹ NYSDEC Website <https://data.ny.gov/Energy-Environment/Vehicle-Dismantling-Crushing-Solid-Waste-Management/pzvp-y7tq>

²⁰ NYSDEC Website <https://data.ny.gov/Energy-Environment/Vehicle-Dismantling-Crushing-Solid-Waste-Management/pzvp-y7tq>

²¹ NYSDEC Website <https://data.ny.gov/Energy-Environment/Vehicle-Dismantling-Crushing-Solid-Waste-Management/pzvp-y7tq>

3.6 Collection Methods for MSW, C&D, Industrial Waste, and Biosolids

There is no municipal collection service for the residential or commercial sectors in Delaware County. Collection systems are individually determined by the waste generator. Three (3) collection systems are available in Delaware County for both residential and commercial waste and recycling. Curbside/onsite collection by private haulers through individual subscription service; direct drop-off by the waste generator to the County SWMC; and direct drop-off by the waste generator to a Town owned transfer station with ultimate service to the County SWMC.

There are 19,920 reported households in Delaware County²². Based upon internal review of SWMC scale records, an estimated 60% of these household are serviced by curbside recyclable collection through private hauler subscription. Of the remaining households, approximately 30% utilize Town owned transfer stations for drop-off, and 10% utilize the County SWMC for drop-off.

Of the approximately 4,000 operating commercial firms, industrial enterprises, and other commercial entities in the County, recycling practices among commercial establishments vary widely from business to business²³. Businesses commonly hire a private hauler to transport waste and recyclables to the County SWMC, Town owned transfer station, or private disposal or recycling center independent of the County's solid waste program. The distribution of self delivery and subscription service for the commercial sector is not known at this time.

3.7 Major Collection Routes and Frequency of Collection

The towns of Andes, Bovina, Colchester, Davenport, Hancock, Harpersfield, Kortright, Stamford²⁴, Middletown, and Roxbury have their own transfer station for waste and recyclables generated by town residents and businesses. Town transfer stations serviced by the SWMC at least weekly, and more frequently when volume of material handled demands higher service level. Private subscription service collection routes and frequency vary widely by service provider and customer and are not directly regulated or monitored by the planning unit under the local solid waste management plan.

3.8 Collection Provider Type

Private waste haulers are located throughout the County providing curbside collection services of waste and recyclables on a subscription basis. Private waste haulers that utilize town transfer stations are subject to town specified regulations and guidelines. Private waste haulers that utilize the SWMC are registered for inclusion in the scale software database system. See Appendix for a listing of the largest volume private haulers that currently utilize the Solid Waste Management Center.

3.9 Contractual Hauler Agreements

As the local solid waste management plan does not include any municipally based curbside collection system, nor regulates the private subscription service for curbside collection, there is no County implemented or sanctioned contractual hauler agreements currently or anticipated for the planning unit.

3.10 List of Private Haulers and Hauler Licensing Program

There is no hauler licensing program currently in the planning unit. Town transfer stations currently maintain their own facility access permit system. The SWMC is developing a facility access permit system for implementation within the time frame of this planning period. This access permit system will expand on current requirements for facility users, including private haulers and self-deliveries, to document their service territory and routes to be in

²² Comprehensive Community Needs Assessment and Strategic Plan for Delaware County, New York. Delaware Opportunities Inc, 2015

²³ US Census 2007 Quick facts

²⁴ Harpersfield, Kortright, and Stamford jointly operate a single transfer station that services the three communities.

conformance with local laws regarding no importation of out-of-County waste and compliance with recycling and material handling requirements.

3.11 Public Education and Outreach Activities

Public education and outreach activities are provided through multiple outlets and methods. The County maintains an active website specific to the solid waste and recycling program. The County's website includes current information on solid wastes and recyclables managed through the County's program, facility hours of operation for the Solid Waste Management Center, specific information on customer guidelines, prohibited items, options for household hazardous wastes, compost availability, video tour of the Solid Waste Management Center, historical video on the landfill siting process and the development of the Solid Waste Management Center, and links to other relevant websites.²⁵

Supplementing the web based information, the County works cooperatively with the towns transfer stations in developing facility use guideline flyers for the towns, and other outreach efforts on an ad hoc basis.

The County has worked very closely with Cornell Cooperative Extension and the Watershed Agriculture Council for outreach efforts on specific solid waste topics, including the County's annual household hazardous waste, agricultural pesticide, and CESQG waste collection event referred to as CLEAN SWEEP. These efforts are mutually beneficial and will be continued.

In-house waste reduction, recycling and materials management education and program support is provided on an as-requested basis to local industry, businesses, schools, and community groups.

Hosting visitors to the SWMC and town transfer stations has proven to be highly successful at influencing area residents and businesses of the opportunities, needs, and benefits of proper waste management and material recovery activities. These collective activities will continue as currently administered.

3.12 Volume-based pricing structures (PAYT)

Volume based pricing structures, otherwise known as Pay-As-You-Throw, is a system establishing a pricing preference for smaller volume containers utilized in curbside collection programs. PAYT programs are reported to increase recycling rates due to the monetary savings waste generators realize. The communities comprising Delaware County are diverse and PAYT programs are not universally applicable given the lack of municipally provided or contracted curbside collection efforts. There is no PAYT system currently or anticipated for the planning unit at this time.

3.13 Flow Control Constraints

Flow control refers to a legally authorized requirement that waste be delivered to specified facilities. With the exception of use restrictions on not importing out-of-County waste and facility access for Town transfer stations and the SWMC, there is no County implemented or sanctioned flow control systems currently or anticipated for the planning unit.

3.14 Incentive Strategies

MSW and recyclables generated within Delaware County and delivered to a town transfer station or the SWMC are not subject to a disposal fee. Other select waste items are subject to disposal fees, specifically construction & demolition debris, contaminated soils, asbestos, and certain biosolids. Recyclable items are accepted at no fee to provide economic incentive to recycle for all waste generators, regardless of the collection methods used.

²⁵ www.co.delaware.ny.us/departments/sw/sw.htm

3.15 Institutional Programs for School Districts, Colleges, Hospitals, and Prisons

Recycling efforts at institutions and schools is self selected by the waste generator. Under the local solid waste management plan, materials delivered to the SWMC must be in compliance with local laws - not importing out-of-County waste and adhering to recycling of designated recyclables and material handling guidelines for the facility. The manner in which the waste generator selects to meet this standard is self determined. There is no planning unit sponsored programs specifically targeting institutions, schools, colleges, hospitals, or prisons existing currently or anticipated for the planning unit.

3.16 Industrial Recyclables Recovery Efforts and Strategies

Many industries and commercial establishments have a long history of self marketing their recyclable and waste materials. The County does not intervene into these activities, and these establishments are free to market their own recyclable materials and retain all the financial benefits. These direct recycling efforts represent an institutionalization of recycling activities and provide the inertia to continue significant commercial recycling during economic down times and bolstering recycling activities when economics and commodities market values are high. The County does not require businesses to report information on quantities of recyclables management by industrial and commercial establishments. Large industrial waste generators that directly impact the County's solid waste program are monitored at the SWMC through scale records and transactional database. When managed by private waste hauler, smaller commercial and institutional waste generators are aggregated within the general customer base. Regardless of the system used, the County mandated recyclables and solid waste program guidelines are applied uniformly across the entire County, and are applicable to industrial, commercial, and institutional generators.

3.17 Landfill Gas Capture and Destruction

Previously, the County worked jointly with the Delaware County Electric Cooperative, Inc. (DCEC), in the operation and divided ownership of a landfill gas to electricity (LFGE) project, located at the Delaware County Solid Waste Management Center, on NYS Route 10, in Walton, NY.

The LFGE project consisted of a gas conditioning skid, engine-generator, transformer, distribution poles and wires, and (1) one 1033 kW containerized GE Jenbacher 320 rich burn reciprocating engine generator set. The output voltage from the engine generator set was 480 volts. The output voltage was stepped up to 12.47 kv distribution voltage, using a transformer located within the power island footprint at the SWMC compost facility adjacent to the landfill. A distribution line constructed along the landfill property connects to the transmission system of the local utility (NYSEG) serviced by the Delhi substation. The existing LFG network at the SWMC was expanded with the installation of ten (10) new vertical wells, tying into a new lateral and manifold system. The pre-existing large landfill gas (LFG) utility flare was relocated to a site adjacent to the DCEC power island. The LFGE project operated successfully from 2008 to 2012 when the system was decommissioned. Steadily decreasing LFG quantities have resulted in insufficient methane quantities necessary to provide ongoing and continued operation of the LFGE.

DCEC assets for the LFGE project have been liquidated and the remaining infrastructure turned over to the County. The County retains ownership of the landfill gas recovery network and stationary flare. The active landfill gas extraction system continues to operate with the limited volumes of LFG going to destruction thru the utility flare.

3.18 Beneficial Use of Solid Waste

Materials are routinely evaluated for potential beneficial use. Wastes received at the SWMC and wastes generated off site that may otherwise be destined for landfill disposal are both reviewed for beneficial use under NYSDEC standards.

BENEFICIAL USES:

- a) conversion of scrap tires to tire derived aggregate as a preferred drainage media;
- b) filtration sand used as alternate drainage media;
- c) glass aggregate utilized as select drainage media;
- d) concrete and asphalt waste sized reduced for on-site aggregate use on perimeter roads;
- e) size reduced C&D material blended with inert material for use as alternate cover material on landfill.

3.19 Composting and Organics Recovery

The organics recovery program addresses food scraps, food processing wastes, biosolids, small animal mortalities, food and other MSW organics. Organics are captured thru the County's existing Compost Facility, included in the Solid Waste Management Center (SWMC). Designed and operated as a mixed waste plant, the Compost Facility receives and processes dewatered biosolids from area waste water treatment plants and organics from the MSW waste stream. This facility is unique in NYS, and is one of only a dozen such facilities in the US and Canada.

The compost facility is a two stage composting configuration, with aggressive mechanical screening for both input and finished product, and with oversized retention and storage / curing capacity. The first stage consists of an in-vessel bioreactor rotating drum receiving select MSW and providing for three days aerated and moisture controlled gentle tumbling of material within a biologically active area.

Pre-compost material generated in this first stage routinely achieves temperatures in excess of 131 degrees F (55 degrees C) and thus achieves some pathogen destruction. Temperatures are measured continuously with analogue display probes permanently mounted in the bioreactor drum wall.

Upon discharge from the bioreactor, the MSW pre-compost from this first stage is screened of over sized materials to produce a 1" minus pre-compost bulking agent that is conveyed to the front-end of the second stage maturation area.

In stage two, the MSW pre-compost is combined with dewatered biosolids and conveyed into aerated turned windrows of an IPS/Siemens automated system. Material has a minimum 56 day retention time in the maturation area, being turned every three days, with sufficient water and aeration additions to maintain optimal composting conditions.

Temperatures within the windrows are monitored both manually and automatically. Thermocouples within the concrete windrow walls provide continuous digital readout to the facility's computer control center. An RTD unit mounted on the agitator provides a temperature profile as the windrows are being turned. Further, manual probe readings are recorded daily to insure proper operation and calibration of the automatic temperature monitoring systems. During the first half of 2006, temperatures have routinely risen to and maintained for a minimum of three consecutive days the 131 degree F (55 degrees C) threshold necessary to achieve pathogen destruction consistent with NYSDEC and USEPA regulatory standards.

Following the 56 day maturation period, compost is again screened to remove remaining metal, glass, plastics, sharps, and oversized particles before being conveyed into the storage / curing area. Upon satisfactory analytical test results for metals and pathogen content, compost is considered "finished" at this point and storage and curing is provided for enhanced compost product marketability rather than regulatory compliance.

Inspections by NYSDEC and USEPA have found the operation of the facility to be in compliance with applicable state and federal regulations, and the finished compost product to meet and/or exceed the standards for Class A, Exceptional Quality compost.

3.20 Reuse Centers and Material Exchanges

Both the private sector and the not-for-profit community provide a multitude of locally based centers for material reuse and exchange. The County encourages the creation, use, and expansion of existing outlets, including Church sponsored community closets for clothing and housewares, Delaware Opportunities for appliances and larger items such as cabinets, heating units, and furniture, and the private not-for-profit Western Catskills Community Warehouse in Stamford NY catering to contractors and do-it-yourself individuals for construction items such as siding, roofing material, doors, windows, plumbing and electrical supplies, Catholic Charities of Delaware, Otsego & Schoharie Counties, and numerous community nonprofit based activities. Independent online exchange opportunities such as Craigslist and area newspapers are also available and appropriate in the area.

Reuse centers are most valuable when they are located near population centers and when you can provide

dry, clean, and secure holding areas for the products to insure that these items are in decent shape before they are donated. Having several centers located throughout the community enhances access for community members. The DLSWMP recommends the continued support of these existing venues for material reuse.

3.21 Intermediate Processing of Recyclables

The County operates a Materials Recovery Facility (MRF) at the SWMC. The originally built MRF opened in 1991 was replaced in November 2014. The new MRF is owned by the County and jointly operated with SWMC staff and contract labor through DelARC Resources for Industry. Originally established as a work enclave for adults with developmental disabilities, today the MRF provides steady employment for approximately 15 individuals who manage the inflow of glass, plastic, metal containers, and paper products. The MRF structure consists of a pre-engineered steel frame building, approximately 27,000 sf, containing two twin ram balers, and process equipment to accommodate either single stream or dual stream recyclables. Specifically, the MRF processes corrugated cardboard; 3-7 plastic containers; mixed rigid plastics; aluminum cans, trays & pans; steel cans; mixed glass; used beverage containers; mixed paper; and corrugated cardboard.

In addition to the MRF operation, the SWMC receives and processes for market many materials that are handled on a source separated basis thru the Convenience Area of the SWMC. These additional materials include textiles, clothing, and accessories; used motor oil and oil filters; used antifreeze; household wet cell and dry cell batteries; consumer electronics; scrap metal; appliances, with freon recovery; agricultural film plastic; plastic grocery bags; and tires.

3.22 Markets for Recovered Recyclables, Market Assistance, and Future Market Development

The sale of recyclables continues to be controlled by the high volatility, low value, commodities marketplace. Accordingly, markets are reviewed continually for changes in market acceptance standards and pricing. Dynamic market review provides for maximum recovery of materials and minimal land burial. Cessation of a market, either temporarily or permanently can cause tremendous complications to a program. To protect against this, at least two markets are utilized whenever possible. Non-exclusive agreements with markets has proven to be more reliable and financially beneficial for the County, allowing for multiple vendors and to take advantage of swings in the market place, both positive and negative. Market assistance is provided by state wide trade associations, in particular the New York State Association for Reduction, Reuse, and Recycling regional networking efforts among members. Market expansion since the original solid waste management plan of the 1970's has been very strong. Markets of today are considerably more reliable, expansive, and lucrative, providing real economic benefit for recycling communities.

CHAPTER 4 - ADMINISTRATION, LAWS AND REGULATIONS, AND FINANCIAL STRUCTURES

4.1 Enforcement of Local Laws Addressing Solid Waste and Recycling

Delaware County enforces two local laws that directly address the management of solid waste. Copies of the local laws are included in the appendix of this report.

Local Law No. 5 of 1991 defines solid waste and makes it illegal for waste generated outside of Delaware County to be disposed of in any town or County operated solid waste facility without explicit authorization by the Delaware County Board of Supervisors. This law includes a fine schedule for criminal violation and further authorizes civil proceedings in its enforcement up to an including prohibiting violator access to any town or County owned solid waste facility. Local Law No. 5 of 1991 is titled the "No Out of County Waste Law." The intent and purpose of this law is to insure that Delaware County provides for the management of only those waste generated within Delaware County and this local law remains in full affect and enforcement today.

Local Law No. 2 of 1992 defines waste generators, haulers, collectors, and recyclable materials. It further specifies recyclable materials are prohibited from being disposed of as waste. This local law requires that when plastic bags are used for non-recyclable waste, those bags be made of clear plastic to allow for easy visual confirmation of compliance to the laws requirements. A criminal violation fine schedule is included in the law and allows for additional civil proceedings including banning violators for town and County solid waste facilities. Local Law No. 2 of 1992 is titled the "Recycling Law" and the intent is to insure diversion of waste from landfilling and directing recyclable materials for recovery. The Recycling Law remains in full affect and enforcement today.

Both of the current solid waste local laws may be enforced by law enforcement officer or agency exercising jurisdiction within Delaware County and by any County official acting in his or her official capacity. These laws are enforced locally by the cooperative efforts of the County Sheriff's Office, New York State Department of Environmental Conservation, local law enforcement, and the authorized operators for the town transfer stations and County Solid Waste Management Center. The provision within both laws that allow for banning violators from facility access is a particularly powerful incentive for compliance.

At the town transfer stations, facility users are required to obtain a permit from the town clerk and to verify County residency. At the County Solid Waste Management Center, private waste haulers and large single generators are registered in the scale database system and inbound and outbound loads scaled and recorded. The database includes ownership and vehicle identification information along with contact addresses and telephone numbers. An electronic history of all scaled loads is maintained locally at the Solid Waste Management Center and further archived at the Department of Public Works Main Office in Delhi. Additional information included in the database include waste type, source, destination within the SWMC, gross, tare and net weights, date and time, and an individual unique transaction number. These records are used to monitor activity and measure operational performance. The data is compiled daily and reported to the regulatory community and waste generators.

Recognizing that there are administrative methods to provide for more nuance in enforcement, the County proposes to supplement these local laws with programmatic methods to provide enhanced verification and compliance. The proposed facility access permit system expands on the current registration system to include identification and verification of collection routes, and written certification of adherence to local laws and facility use guidelines. This information will be used to regularly verify compliance with state and local laws, and facility guidelines relative to solid waste and recycling. Facility customers who fail to verify and comply with these requirements will be denied facility access and may be subject to fines.

The two local laws have worked well since their inception and there are no recommendations at this time to modify these current local laws. Implementation of the facility access permit system will be administered to both ensure performance compliance and as part of the County waste screening process required under NYSDEC regulation for solid waste facility operation.

4.2 State and Other Laws Addressing Solid Waste and Recycling

The NYCRR Part 360 regulations, administered by the New York State Department of Environmental Conservation, specifically address the management of solid waste and provide the regulatory framework within which the Delaware County solid waste program is administered. These regulations apply statewide and govern a broad array of waste streams and management methods ranging from MSW landfills to transfer stations, recycling facilities, composting operations, management of construction and demolition debris, wood waste, and fill material, and include permitting requirements for waste transport. Administered statewide, the NYS regulations establish baseline performance standards that must be met or exceeded for sound environmental protections in the management of solid waste. The State regulations require Delaware County to develop a solid waste management roadmap that this DLSWMP addresses and further regulates all of the County and town solid waste facilities.

New York City Department of Environmental Protection watershed protection regulations explicitly restrict the development of new landfills within the geographic limits of the NYC Watershed, with the exception of expansion at the current Solid Waste Management Center (SWMC)²⁶. The continued operation of the SWMC is deemed critical to the long term provision of comprehensive, environmental responsible, and cost competitive solid waste services within the County. Should the SWMC close, the NYC watershed protection regulations would make the development of an alternate landfill location extremely site limited and costly²⁷. The associated added expense would place excessive financial burden on area residents, businesses and the solid waste program, and jeopardize County's ability to sustain and continue our comprehensive solid waste services, and by extension jeopardize the area's economic viability.

4.3 Local Laws or Ordinances That Must Be Adopted

The County does not propose any additional local laws or ordinances to implement the solid waste goals at this time. Current local laws include: Local Law No. 5 of 1991 prohibiting the delivery and disposal of out-of-county waste without prior approval by the County. Local Law No. 2 of 1992, "Recycling Law", provides for the mandatory recycling for any County designated recyclable materials for any individual or business that utilizes the County Solid Waste Management Center (SWMC) or town transfer station. Both of these local laws provide sufficient latitude for the Delaware County DPW - Solid Waste Division to make changes necessary to fulfill the intent of both the local laws and the County Local Solid Waste Management Plan.

4.4 Commercial Haulers and Flow Control

The financial revenues necessary for the solid waste program are provided primarily by a dedicated portion of the County sales tax. These revenues are supplemented with disposal fees on select wastes, service contracts, commodity sales, and financial grant monies from state and federal agencies. The solid waste program is not solely dependent upon disposal fees and the program has been structured around providing services strictly limited to Delaware County generated waste streams. The majority of incoming wastes and recyclables are accepted at no fee to the waste generator. The absence of a tipping fee on municipal solid waste (MSW) eliminates the need for flow control. Conversely, an economic vacuum is created that necessitates the oversight of incoming waste streams to

²⁶ Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and Its Sources. Final Regulations - Effective May 1, 1997 As Amended April 4, 2010

²⁷ Approximately 52% of land mass in the county is located within the NYC watershed. Of this 52%, approximately 1/4 is directly owned or controlled thru easement by NYC. Siting and developing a new landfill within the County to replace the Solid Waste Management Center is extremely unlikely. The investments at the Solid Waste Management Center have been driven in large part by recognizing that the County's location within the NYC watershed dramatically limits landfill siting options and increases costs for alternate site development. Delaware County completed a full scale countywide landfill siting study in 1992. A thorough description of the site selection process, including the final listing of potential sites, participating agencies, site selection criteria and ranking methodology, public participation, and individual site evaluations is presented in Landfill Siting Study, Delaware County New York, Stearns & Wheler Environmental Engineers & Scientists, Volume 1 (1992) and Delaware County Solid Waste Landfill Siting Study, Stearns & Wheler Environmental Engineers & Scientists, Volume 2 (1992-1993). The siting study identified 23 potential landfill. Selection of sites was preceded by a preliminary exclusionary review of unsuitable lands based upon soils, size, location, and contra-indicated factors such as wetlands, flood plains, endangered species, and public water supplies. This "first cut" was followed by an in-depth review utilizing additional exclusionary conditions designated by the elected Board of Supervisors that resulted in a short list of 22 potential landfill sites. Added to the short list 22 was the operating Solid Waste Management Center, for a total of 23 sites identified. For the final evaluation, a criteria based weighted ranking system was used to quantify the individual site characteristics into a common value for overall site appropriateness. In 2017 the fundamental characteristics of a preferred landfill site remain unchanged from the standards of 1992. Soil characteristics, wetlands, slopes, and associated fundamental characteristics of hydrogeologic conditions at each potential landfill site are the same in 2017 as in 1992.

insure that out-of-county waste is not entering the system without prior knowledge and approval.

Currently, solid waste haulers are registered in the database supporting the truck scales at the Solid Waste Management Center (SWMC) and a relationship between the SWMC staff and the commercial haulers provides regular oversight for program compliance. This oversight is supplemented by random inspections of waste and recycling loads necessary to insure continued compliance with County local law and State regulations and departmentally specified facility use requirements. Larger waste generators that self haul are also registered in the truck scale database. Small self haulers are no currently registered and local law and facility guideline enforcement is done with direct observation and verbal questioning of facility customers. During this planning period, this registration will be expanded to a facility access permit system with documentation of waste generator eligibility as to "in-county wastes" only, confirmation of collection routes, and conformance to local laws for no-out-of-County waste and for adherence to the recycling and material handling guidelines for the Solid Waste Management Center. All facility users will be subject to facility access permit requirements.

4.5 Administrative Structure

Delaware County Department of Public Works - Solid Waste Division has the necessary administrative structure in place to implement the Local Solid Waste Management Plan.

The Solid Waste Division is overseen first by the Public Works Committee, consisting of five (5) members of the Delaware County Board of Supervisors. Ultimately, the Solid Waste Division is governed by the County Board of Supervisors. It is the responsibility of the County Board of Supervisors to make policy and to formally adopt and/or approve major policy decisions. Board resolutions are used to authorize the Commissioner of Public Works and/or the Solid Waste Director to take necessary actions to implement Board specified policies, including making the appropriate management decisions, and allocating resources of personnel, equipment, and funding to implement the Local Solid Waste Management Plan.

4.6 Staffing and Organizational Structure

The Director of the Solid Waste Division is directly responsible to the Commissioner of DPW, the Public Works Committee, and the Delaware County Board of Supervisors.

The Solid Waste Management Center (SWMC) is the primary service center for the Solid Waste Division within the Delaware County Department of Public Works. The daily operations of the SWMC are overseen by the on-site Solid Waste Crew Supervisor, who is under the general supervision of the Solid Waste Division Director. The Solid Waste Crew Supervisor has a staff of twelve (12) individuals to perform all operations and maintenance tasks associated with SWMC site operations, MSW and C&D landfilling, transportation and transfer station services, and recycling activities. The Compost Plant Director has a staff of eleven (11) individuals providing operational and maintenance activities in the compost facility. Within the MRF, sorting staff are provided under contract with the DelARC- Resources for Industry. Crew sizes of between 12 and 15 adults to provide for the sorting, processing, and quality control on commingled recyclables.

4.7 Neighboring Jurisdictions and Financial Considerations

The Delaware County SWMC provides centralized services for all of Delaware County. Additionally, the SWMC provides transportation, recycling, disposal, and regulatory support services for the town owned transfer stations operating within the County. These transfer stations are owned by their respective towns, servicing only Delaware County residents, and are included within the umbrella of the County's Local Solid Waste Management Plan.

Private waste transfer stations that service both Delaware County and non-Delaware County waste streams and that send waste to Delaware County Solid Waste Management Center segregate their incoming waste based upon County designation. Only Delaware County sourced wastes are delivered to and accepted at the Solid Waste Management Center from these facilities. Private transfer stations that do not segregate incoming waste by County designation are not allowed disposal access at the Delaware County Solid Waste Management Center without prior approval of the Board of Supervisors. The presence of these private facilities is primarily positive in providing

additional system capacity and flexibility to accommodate waste management needs for the regional area.

Financial support for town transfer stations is a combination of host town tax revenue, and absorbed cost within the County's solid waste budget for the provision of no-fee services to the transfer stations. The County's solid waste program is financed with a dedicated portion of County sales tax revenues, supplemented with revenues from commodity sales and disposal fees on select waste streams²⁸. Stability of solid waste services within Delaware County is not dependent upon revenues generated from disposal of incoming waste and materials. With this revenue structure the County's solid waste program has achieved a level of self sufficiency and autonomy that is independent of neighboring jurisdictions. The County recognizes that privately owned and operated transfer stations, along with neighboring municipal programs benefits the waste generating community at large by providing system flexibility, resiliency, and expanded convenience for area residents; particularly for adjacent, non-County communities that may otherwise seek to use Delaware County solid waste facilities for disposal of out-of-county wastes.

4.8 Anticipated Changes to the Local Planning Unit

The planning unit is dedicated to Delaware County residents and businesses²⁹. There are no plans to expand membership or otherwise merge the solid waste activities with other surrounding communities. Solid waste services will be designed for Delaware County capacity, with limited acceptance of out-of-county material as determined by the County after case-by-case evaluation and only when such material substantially improves solid waste operations.

4.9 Anticipated Changes to the Waste Stream in the Local Planning Unit

Dramatic changes in the waste stream within the local planning unit are not anticipated for this 10 year planning period. Incremental changes are anticipated following the new updating of NYS solid waste regulations and continued changes in product packaging for post-consumer wastes as a reflection of generally available consumer goods. Should there be a significant increase or lose of industry, particularly dairy based industries, any associated impacts to the solid waste program will be addressed in subsequent solid waste planning updates. Detailed waste projections and characterizations are provided in Chapter 2 - WASTE GENERATION & MATERIALS RECOVERY DATA AND PROJECTIONS.

²⁸ Resolution No. 136 of 1990 Title: Dedication of Sales Tax Revenues to Solid Waste Capital Expenditures. Authorized a Delaware County sales tax be adopted, 50% of the revenues to be dedicated to solid waste.

²⁹ The northern half of the Town of Hardenburgh in Ulster County (127 estimated population), is authorized to utilize Delaware County solid waste infrastructure under contractual agreement between the Town and County. This contract is subject to a fee based annual renewal and may be terminated at any time. This long standing arrangement is driven by geography in which Hardenburgh's northern portion is accessible through Delaware County only. The population and waste stream serviced are readily accommodated by existing infrastructure. The arrangement is expected to continue. Hardenburgh is not an official member of the Delaware County solid waste planning unit.

CHAPTER 5 - INTEGRATED SYSTEM SELECTION

The County's solid waste program is fully integrated, currently utilizing multiple approaches to solid waste management, including double composite lined landfill, landfill gas collection system, materials recovery facility, mixed waste compost facility, C&D processing, discretionary C&D export, and transfer fleet for town owned and operated transfer stations. While upgrades to the existing technology are necessary for maintenance and to provide increased capacity, material handling improvements, and limited waste exportation, no significant technology changes from existing approaches are anticipated during the planning period. The County anticipates continuing the current integrated, multi-disciplinary approach to solid waste services.

5.1 - Identify the Integrated Solid Waste Management System Selected

The program selected for this SWMP is a continuation of the current integrated system, with programmatic enhancements necessary to insure long term, reliable, solid waste services. First, the County will continue to emphasize reuse, reduction, and waste toxicity reduction efforts; followed by recycling and composting programs. The remainder of the waste stream will be disposed of using environmentally sound methods.

Greenhouse gas capture and control will continue for landfill gas.

Composting of mixed waste organics, including biosolids and commercial/industrial organics by-products will continue. Maintenance of the compost facility is recognized as a long term need that will continue during the 10 year window of the current planing period. Monitoring the compost facility's performance and condition will be ongoing as needed to recognize in advance the need for significant repair or improvements.

Recycling of multiple materials will continue and be enhanced to capture greater materials from the disposal side of waste management. Capture and diversion of hazardous and semi-hazardous materials will continue in a manner that is environmentally beneficial and also provides needed services to our citizens, such as Conditionally Exempt Small quantity generator (CESQG) wastes, household hazardous waste collection, pharmaceutical drop-off, and sharps disposal thru drop-off days.

Finally, lateral expansion of the permitted landfill footprint must be pursued to provide long term, on-site disposal capacity for non-recoverable portions of the waste stream.

5.2 - Justification of Service Selection

Delaware County will continue to pursue the integrated system described herein because it has a proven track record of success, well received and utilized by our customers, environmentally responsible, cost competitive, and a long term reliable and innovative systems approach.

5.3 - Size/Capacity of Operation

The size and capacity of our recycling and composting facilities currently service the needs of the planning unit's service community. Expansion of area eligible for disposal will be necessary to insure the long term goals of the solid waste program for continued comprehensive, reliable, and self-reliant waste management services.

5.4 - Equipment for Program Implementation

Most of the equipment necessary for the continued fulfillment of the solid waste management plan goals is currently owned. Equipment is regularly maintained by County staff, evaluated for replacement, and replaced as needed. New equipment is purchased as the need demands and/or as program changes necessitate. Additional equipment needs will be evaluated as program changes demands.

5.5 - Alternatives Analysis Tables

<p>5.5.a MSW WASTE REDUCTION PROGRAMS</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ PUBLIC/PRIVATE PARTNERSHIP - Continue support of public and private waste reduction efforts that focus on local donation based reuse and distribution centers for common household goods, clothing, food stuffs, appliances, and building materials. ▶ BIOSOLIDS REDUCTION - Biosolids from waste water treatment plants are expected to remain for the next 10yrs the single largest volume stream component that drives waste handling decisions. Biosolids are composted at the Delaware County Solid Waste Management Center - Compost Facility. Currently at full capacity, the Compost Facility is carbon and bulking agent limited by low MSW input quantities. This condition is expected in worsen with time as MSW quantities drop off in the next 10yrs. Decreasing the moisture content of biosolids will reduce total biosolids quantities through moisture reduction will provide greater operational effectiveness, lessen the demands on the facility, and improve facility resiliency. Emphasis will be given to reducing the total volume and moisture content of biosolids managed at the Solid Waste Management Center. ▶ GLASS REDUCTION - Reduce the volume of glass in the MSW stream through promotion of bottle redemption, and recycling. Glass removal from MSW will result in less glass in finished compost product. Glass is the single greatest contaminant of concern in our compost product. ▶ FILM PLASTIC REDUCTION - Encourage agricultural practices that minimize use of film plastic which are difficult to recover, and encourage residential use of store based bag recycling that have more direct marketing agreements.
<p><u>CRITERIA OF EVALUATION</u></p> <p><u>1) ADMINISTRATIVE/TECHNICAL IMPACTS</u></p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Additional MSW waste reduction efforts are expected to reduce MSW select waste volumes by 5%-20%.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Not size restricted, no infrastructure required by County. Infrastructure requirements will be specific to individual waste generator. Analysis of commercial/industrial waste reduction cost is beyond the scope of this LSWMP.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Waste reduction efforts are expected to have no measurable cost to the residential waste generator. Commercial/industrial waste reduction programs for non-MSW wastes will have varying costs specific to the individual generator and waste material of concern. Analysis of commercial/industrial waste reduction cost analysis is beyond the scope of this LSWMP.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - MSW waste reduction is generally expected to provide for natural resource conservation. Energy production and job creation is not anticipated through this activity.</p> <p><u>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</u></p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> -potential for participation by neighboring Planning Units is believed to focus on common messaging where common waste reduction program guidelines exist.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - there is no known or expected environmental justice impact within Delaware County associated with waste reduction efforts and activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p><u>1) ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p><u>2) EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce select waste volumes by 5%-20%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p><u>Materials Recovery</u> - actions expected to improve material recovery of select waste materials by 5%-20%</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p><u>3) IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p><u>4) IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time. Work cooperatively with county and local officials to insure that county laws and policies do not interfere with waste reduction efforts.</p>

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<p>5.5.b</p> <p>DEVELOPMENT AND IMPLEMENTATION OF REUSE PROGRAMS</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ REUSE CENTERS & PROGRAMS - Continue existing efforts to support of public and private local efforts in material reuse such as appliances, heating systems, and other durable goods. ▶ OVERSIGHT OF LOCAL LAWS - work to insure that county laws and policies do not interfere with local laws, rules, and policies aimed to encourage waste reduction.
<p><u>CRITERIA OF EVALUATION</u></p> <p><u>1) ADMINISTRATIVE/TECHNICAL IMPACTS</u></p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - MSW generation rate is currently estimated at 4.44 lbs/person/day, 14% lower than the state average of 5.15 lbs/person/day. Additional MSW waste reuse efforts are expected to reduce MSW waste volumes by <5%.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Not size restricted, no infrastructure required by County. Infrastructure requirements will be specific to individual waste generator. Analysis of commercial/industrial waste reuse cost analysis is beyond the scope of this LSWMP.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Product reuse activities are expected to have no measurable cost to the waste generator. Commercial/industrial waste reuse programs for non-MSW wastes will have varying costs specific to the individual generator and waste material of concern. Analysis of commercial/industrial waste reuse cost analysis is beyond the scope of this LSWMP.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - MSW waste reuse is generally expected to provide for natural resource conservation. Measurable energy production and /or job creation are not anticipated through this activity.</p> <p><u>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</u></p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is believed to focus on common messaging where common reuse program guidelines exist.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - there is no known or expected environmental justice impact within Delaware County associated with waste reuse efforts and activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p><u>1) ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p><u>2) EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5%</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p><u>3) IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p><u>4) IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time. In support of locally based reuse centers, work cooperatively with county and local officials to insure that county laws and policies do not interfere with waste reuse efforts.</p>

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<p>5.5.c</p> <p>RECYCLABLES RECOVERY PROGRAMS FOR PAPER, METAL, GLASS, PLASTIC, AND TEXTILES</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ MRF - facility was recently expanded to provide handling capacity for 3x original products. Continued operation & maintenance of County MRF. ▶ PLASTICS RECYCLING- Continue existing efforts at the MRF for recovery and marketing of plastic consumer containers. ▶ TEXTILE RECYCLING - Maintain existing network of textile recycling containers in areas throughout Delaware County. ▶ OVERSIGHT OF LOCAL LAWS - work to insure that county laws and policies do not interfere with local laws, rules, and policies.
<p><u>CRITERIA OF EVALUATION</u></p> <p><u>1) ADMINISTRATIVE/TECHNICAL IMPACTS</u></p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Recycling efforts for common curbside items are expected to reduce MSW waste volumes between 5% - 10% over the 10 year planning window of the LSWMP.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - MRF and transfer infrastructure already exists in support of aggregating and processing for the marketplace common curbside recyclable items.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Recycling activities are expected to have no measurable cost to the waste generator. Commercial/industrial waste recycling programs for non-MSW wastes will have varying costs specific to the individual generator and waste material of concern. Analysis of commercial/industrial waste reuse cost analysis is beyond the scope of this LSWMP. Operation and maintenance costs for the County MRF are expected to rise modestly in line with inflation and be readily covered thru current budget projections.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - MSW waste recycling is generally expected to provide for natural resource conservation. Measurable energy production benefits are not anticipated through this activity. Jobs that currently exist in the operation of the MRF facility are expected to remain constant during the 10 year planning window.</p> <p><u>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</u></p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is believed to focus on common messaging where common recycling program guidelines exist.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - there is no known or expected environmental justice impact within Delaware County associated with waste recycling efforts and activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p><u>1) ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p><u>2) EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p><u>Materials Recovery</u> - expected to enhance waste reuse 5% - 10% during planning period</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p><u>3) IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste recycling activities.</p> <p><u>4) IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time. In support of the County MRF, work cooperatively with county and local officials to insure that county laws and policies do not interfere with recycling activities.</p>

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<p>5.5.d</p> <p>ORGANICS RECOVERY PROGRAMS FOR FOOD SCRAPS AND, YARD TRIMMINGS, AND BIOSOLIDS</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ COMPOST FACILITY - continued operation & maintenance of County owned and operated mixed waste biosolids composting facility. Operations include ongoing maintenance and capital repairs to retain facility capacity and reliability. ▶ COMPOST MARKETING - expand the marketing program for varying grades of compost products and secure year round marketing and compost utilization. ▶ WOOD WASTE CAPTURE - maintain equipment and site capacity for woody debris grinding and chipping for supplemental bulking agent for compost operation and to provide limited storm debris management capacity. ▶ BIOSOLIDS REDUCTION - in recognition that incoming MSW volumes are anticipated to generally decrease annually over the 10 yr planning period, emphasis on reduction in the moisture content and overall volume of biosolids compost feedstock within the County is a need. Support to Village WWTP owners and operators to encourage more complete solid digestion and increased water removal of biosolids is needed.
<p><u>CRITERIA OF EVALUATION</u></p> <p><u>1) ADMINISTRATIVE/TECHNICAL IMPACTS</u></p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Delaware County's solid waste program MSW landfill disposal rate in 2016 was 1.52 lbs/capita/day, well below the State's "Beyond Waste" target of 2.9 lbs/capita/day for 2016. Enhanced organics recovery efforts will focus largely on facility operation and maintenance in support of maximum organics diversion from the landfill.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Compost facility and transfer infrastructure already exists in support of processing and marketing Class A, Exceptional Quality compost.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - The County's centralized mixed waste composting facility has been operational for over 10 year and is not expected to measurably impact cost to consumers. Facility maintenance and a capital replacement sinking fund program are currently in place in anticipation of the heightened maintenance needs expected in an aging facility.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - MSW & biosolids composting is generally expected to provide for natural resource conservation. Measurable energy production is limited to heat energy for this facility, currently partially captured to offset building heating costs. Jobs that currently exist in the operation of the compost facility are expected to remain constant during the 10 year planning window.</p> <p><u>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</u></p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is limited by facility capacity, with no net excess capacity anticipated for the 10 year planning period.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - there is no known or expected environmental justice impact within Delaware County associated with composting efforts and activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p><u>1) ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p><u>2) EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5% from current levels.</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5% from current levels.</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p><u>3) IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p><u>4) IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time. Facility access permit program authorizing waste hauler access is currently under review as a means of improving and maintaining incoming waste quality and compliance with County solid waste program guidelines. This initiative is described more thoroughly in later section.</p>

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<p>5.5.e</p> <p>PROGRAMS TO DEVELOP OR IMPROVE LOCAL AND REGIONAL MARKETS FOR RECYCLABLES</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ Continue collaboration with Economic Development Office and Planning Department in support of locally based market development. ▶ Continue work with county and local officials to insure that local laws and policies do not unduly interfere with market development activities. ▶ Success has been made with on-farm composting, mulch and biomass, aggregate recovery, building supply reuse, and container redemption. ▶ Efforts are on-going to expand local compost markets in distribution, pelletization, and year round compost product utilization.
<p><u>CRITERIA OF EVALUATION</u></p> <p><u>1) ADMINISTRATIVE/TECHNICAL IMPACTS</u></p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Local market development is expected to result in increased opportunities for and support of recycling efforts.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Not size restricted, no infrastructure required by County.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Administrative cost is currently imbedded in program budget with no additional administrative or technical impacts known or anticipated. Cost and lifecycle analysis of commercial/industrial local market development are beyond the scope of the LSWMP.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - Market development and enhancement is generally expected to provide for natural resource conservation and job opportunities. Resource and employment impacts of commercial/industrial local market development are beyond the scope of the LSWMP.</p> <p><u>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</u></p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is jurisdictionally defined with participation limited to those neighboring planning units that have overlapping service territories.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - at this time there is no known or expected environmental justice impact within Delaware County associated with market development activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p><u>1) ALTERNATIVE CHOSEN & WHY</u> - local market development has the potential to divert material from the waste stream and as such is supported by the cooperative actions of the County's DPW-Solid Waste Division, Planning Department, and Economic Development Office, in addition to appropriate state and federal agencies. This alternative's action will focus on continuing those cooperative efforts.</p> <p><u>2) EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON</u> - material diversion impacts are inherently dependent upon materials targeted for recovery and market success. Previous successes in market development for utilization of waste derived products has been limited to biomass and aggregate. Geographic location with limited access to significant population centers and/or transportation corridors remains a substantial impediment to sustained marketing success. With the exception of scrap metal, there are no known new locally based markets for recyclables at this time. Accordingly, quantitative and qualitative impacts are not predictable.</p> <p><u>Waste Reduction</u> - Impacts are not predictable .</p> <p><u>Reuse</u> - Impacts are not predictable .</p> <p><u>Materials Recovery</u> - Impacts are not predictable .</p> <p><u>Participation in Recovery Opportunities</u> - Impacts are not predictable .</p> <p><u>Product Stewardship</u> - Impacts are not predictable .</p> <p><u>Economic, administrative or partnership benefits</u> - Impacts are not predictable .</p> <p><u>3) IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p><u>4) IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time.</p>

<p>5.5.f</p> <p>ENFORCEMENT PROGRAMS</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ Continue enforcement of existing local laws and town transfer station permit system. ▶ Continue load inspection program at the Solid Waste Management Center of incoming waste and recyclables. ▶ Enhance program rule enforcement with development of hauler access permitting system and mobile enforcement officer. ▶ Local Law No. 2 of 1992 Recycling Law prohibits disposal of recyclables commingled with waste at the Solid Waste Management Center. ▶ Local Law No. 5 of 1991 Out-Of-County Waste Law prohibits importation of waste for disposal at the Solid Waste Management Center without resolution of the Delaware County Board of Supervisors.
<p><u>CRITERIA OF EVALUATION</u></p> <p><u>1) ADMINISTRATIVE/TECHNICAL IMPACTS</u></p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Enforcement actions are generally expected to reduce the quantity of waste directed for disposal, and increase quantities of recoverable material streams.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Not size restricted, no infrastructure required by County.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Load inspections and enforcement of solid waste program rules at the Solid Waste Management Center are costs currently imbedded in program budget with no additional administrative or technical impacts known or anticipated</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - Enforcement actions are generally believed to have positive impacts on natural resource conservation, energy production, and jobs.</p> <p><u>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</u></p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is jurisdictionally defined with participation limited to those neighboring planning units that have overlapping service territories.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - at this time there is no known or expected environmental justice impact within Delaware County associated with market development activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p><u>1) ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p><u>2) EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON</u> -</p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5%</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p><u>3) IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p><u>4) IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time.</p>

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<p>5.5.g</p> <p>INCENTIVE-BASED PRICING</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ The County’s solid waste program provides no fee disposal for MSW or recyclables as a baseline service to all residents. There is no County PAYT (pay as you throw) system. MSW and recyclables, as a common waste streams generated by all residents of Delaware County, have no tip fees at the Solid Waste Management Center. This programmatic choice, made several decades prior, remains today in support of proper waste management and to minimize perceived need for illegal disposal and littering, and to further minimize financial impacts to towns and villages. Bag fees and PAYT programs are documented to be disadvantageous to lower income families and individuals, creating financial hardship that discourages proper disposal of solid waste. ▶ C&D wastes are considered “luxury” wastes and are subject to tip fees at the Solid Waste Management Center. The tip fee amount is set to both offset the County’s cost of handling and to be neutral in the market place, providing neither undue incentive or disincentive for C&D disposal at the Solid Waste Management Center relative to neighboring disposal facilities. Sufficient financial opportunity exists to support C&D recovery and deconstruction efforts. PAYT incentives do exist through some local private hauler subscription services.
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Negative impacts in the form of increased waste littering is anticipated with implementation of a County wide PAYT system.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - No new infrastructure is required.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - No cost impacts anticipated with retaining existing cost structure.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - No impacts are anticipated.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is not under at this time.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - no negative impact anticipated from proposed activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - No changes recommended during this 10 yr planning horizon.</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - no measurable impact on expected.</p> <p><u>Reuse</u> - no measurable impact on expected.</p> <p><u>Materials Recovery</u> - no measurable impact on expected.</p> <p><u>Participation in Recovery Opportunities</u> - no measurable impact on expected.</p> <p><u>Product Stewardship</u> - no measurable impact on expected.</p> <p><u>Economic, administrative or partnership benefits</u> - no measurable impact on expected.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time.</p>

<p>5.5.h</p> <p>EDUCATION AND OUTREACH</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ Continue educational and outreach efforts in cooperation with local community agencies including: Cornell Cooperative Extension, the Watershed Agriculture Council, and locally centered community groups. ▶ Maintain budget levels for informational media, radio air time, print advertisements, video, and website maintenance. ▶ HAZARDOUS PRODUCTS - Continue encouragement to reduce use of hazardous products will result in cleaner MSW that is safer to manage. ▶ GLASS REDUCTION - Reduce the volume of glass in the MSW stream through promotion of bottle redemption, and recycling. Glass removal from MSW will result in less glass in finished compost product. Glass is the single greatest contaminant of concern in our compost product. ▶ FILM PLASTICS - Encourage agricultural practices that minimize use of film plastic which are difficult to recover, and encourage residential use of store based bag recycling that have more direct marketing agreements.
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Continuation of current educational and outreach efforts are expected to aid in maintaining waste diversion performance.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - No new infrastructure is required.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - No cost impacts.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - No impacts are anticipated.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - public education and outreach information sharing with neighboring planning units as requested to ensure thorough understanding and management of solid waste movement within and across communities.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - there is no known or expected environmental justice impact within Delaware County associated with these activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON</u> -</p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5%</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time..</p>

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<p>5.5.i</p> <p>DATA COLLECTION AND EVALUATION EFFORTS</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ Continue current data collection of materials managed directly at the Solid Waste Management Center and Town Transfer Stations. ▶ Collect supplemental material management data from private waste haulers and large self deliveries through access permit system. ▶ Conduct quarterly and annual data reviews to verify data quality and completeness.
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p style="padding-left: 20px;"><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Management of additional data will create additional work load on administrative staff. Work load is expected to be heavy with initial rollout of access permit system, and then moderate to a quarterly review consistent with quarterly state reporting requirements.</p> <p style="padding-left: 20px;"><u>1ii) Appropriate Type & Size of Facilities or Program</u> - No additional software anticipated beyond existing scale management and database systems.</p> <p style="padding-left: 20px;"><u>1iii) Cost & Lifecycle Analysis</u> - Cost will include administrative labor for database management.</p> <p style="padding-left: 20px;"><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - No impact on natural resources, energy production, and jobs anticipated.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p style="padding-left: 20px;"><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - data information sharing with neighboring planning units as requested to ensure thorough understanding and management of solid waste movement.</p> <p style="padding-left: 20px;"><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p style="padding-left: 20px;"><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p style="padding-left: 20px;"><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - there is no known or expected environmental justice impact within Delaware County associated with these activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p style="padding-left: 20px;"><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p style="padding-left: 20px;"><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p style="padding-left: 20px;"><u>Materials Recovery</u> - actions expected to enhance waste reuse <5%</p> <p style="padding-left: 20px;"><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p style="padding-left: 20px;"><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p style="padding-left: 20px;"><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time.</p>

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<p>5.5.j</p> <p>LOCAL HAULER LICENSING PROGRAMS, INCLUDING AN ASSESSMENT OF LAWS PREVENTING COMMINGLING OF RECYCLABLES WITH WASTE</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ Implementation of Solid Waste Management Center access permit system for private waste haulers and large self haulers hauler, including use access permitting system and mobile enforcement officer expected to provide comparable program benefits as compared to a hauler licensing program. ▶ Continue support of existing local laws and town transfer station permit systems. On-going inspection program to be enhanced for enforcement with hauler permitting requirement in development. ▶ Local Law No. 2 of 1992 Recycling Law prohibits disposal of recyclables commingled with waste at the Solid Waste Management Center. ▶ Local Law No. 5 of 1991 Out-Of-County Waste Law prohibits importation of waste for disposal at the Solid Waste Management Center without resolution of the Delaware County Board of Supervisors. 	
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - The most significant administrative impact will be enforcement of the County's no importation of waste law. Enforcement against importation of waste from outside Delaware County will be enhanced with the development and implementation of a facility access permit program for the Solid Waste Management Center and enforcement of existing permit systems and local laws at the town level.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - No new infrastructure is required.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - No cost impacts anticipated with retaining existing cost structure.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - No impacts are anticipated.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is not under at this time.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - no negative impact anticipated from proposed activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON</u> -</p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5%</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time. Facility access permit program authorizing waste hauler is proposed as a means of maintaining and improving incoming waste quality and compliance with County solid waste program guidelines and State solid waste regulations.</p>	

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<p>5.5.k</p> <p>FLOW CONTROL AND DISTRICTING POTENTIAL</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ Flow control is a legal designation for directing solid waste and/or recyclables to a specified facility or facilities as designated by the Planning Unit. This method is often used to insure adequate incoming waste and recyclable material volumes and the associated revenues from disposal fees and commodity sales. Delaware County encourages waste generators to seek multiple disposal sites other than the County facilities in support of expanded private sector infrastructure. ▶ Formal flow control and waste districting are not under consideration at this time. 	
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Delaware County's solid waste program MSW landfill disposal rate in 2016 was 1.52 lbs/capita/day, well below the State's "Beyond Waste" target of 2.9 lbs/capita/day for 2016. There are no known or expected impacts within Delaware County associated with not implementing flow control at this time.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - there are no known or expected impacts within Delaware County associated with not implementing flow control at this time.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - there are no known or expected impacts within Delaware County associated with not implementing flow control at this time.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - there are no known or expected impacts within Delaware County associated with not implementing flow control at this time.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - there is no known or expected environmental justice impact within Delaware County associated with not implementing flow control at this time.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - not applicable at this time.</p> <p><u>Reuse</u> - not applicable at this time.</p> <p><u>Materials Recovery</u> - not applicable at this time.</p> <p><u>Participation in Recovery Opportunities</u> - not applicable at this time.</p> <p><u>Product Stewardship</u> - not applicable at this time.</p> <p><u>Economic, administrative or partnership benefits</u> -not applicable at this time.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - existing local laws, ordinances, and regulations are sufficient at this time.</p>	

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<p>5.5.1</p> <p>C&D CONSTRUCTION AND DEMOLITION DEBRIS REDUCTION, INCLUDING DECONSTRUCTION, REUSE AND RECOVERY PROGRAMS</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ C&D reuse will be challenged by building codes and public health issues addressing energy conservation and lead contamination concerns respectively. ▶ Support the continuation and expansion of C&D deconstruction efforts currently performed by the private sector. A County sponsored C&D deconstruction program is not under consideration at this time. 	
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Continued diversion of waste materials by the private sector will support waste diversion and retain landfill capacity at the Solid Waste Management Center for MSW.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Existing infrastructure is sufficient at this time with no changes recommended or anticipated.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Continuation of the dedicated sales tax funding stream is fully anticipated to provide sufficient funding for program costs.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - Utilization of private sector waste diversion is believed to have positive impacts on natural resource conservation, energy production, and jobs.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is not under at this time.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - no negative impact anticipated from proposed activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5%</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5%</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - actions expected to reduce direct expenses by <5%.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed waste reduction activities.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time. In support of locally based reuse centers, work cooperatively with county and local officials to insure that county laws and policies do not interfere with waste reuse efforts.</p>	

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<p>5.5.m</p> <p>PRIVATE SECTOR MANAGEMENT & COORDINATION OPPORTUNITIES</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ The County's stated mission in solid waste is to provide locally owned and operated infrastructure. Private sector management and coordination opportunities will continue to center around support of reuse opportunities, C&D deconstruction, and provision of selective waste export on a contractual basis for storm damage and related C&D debris management.
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Continued diversion of waste materials by the private sector, with contractually based export of storm damage and related C&D debris management will support waste diversion and retain landfill capacity at the Solid Waste Management Center for MSW.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Existing infrastructure is sufficient at this time with no changes recommended or anticipated.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Continuation of the dedicated sales tax funding stream is fully anticipated to provide sufficient funding for program costs.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - Utilization of private sector waste diversion is believed to have positive impacts on natural resource conservation, energy production, and jobs.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is not under at this time.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - no negative impact anticipated from proposed activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5% from current levels.</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5% from current levels.</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%.</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected.</p> <p><u>Economic, administrative or partnership benefits</u> - Actions believed to provide economic benefits associated with cost control for long term reliable solid waste management services available to Delaware County residents, businesses, and institutions.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing activities.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time.</p>

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<p>5.5.n</p> <p>MANAGEMENT OF WASTE THROUGH THERMAL TREATMENT TECHNOLOGIES</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ HH pharmaceuticals collected by County Sheriff's Office and County's annual CLEAN SWEEP drop off event are managed thru incineration. ▶ Woody debris is utilized for biomass pellet production by local wholesale producers. ▶ Gasification options for off specification film plastic residue generated from compost facility, residential MSW, and agricultural film plastics will continue to be sought. 	
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Continued thermal destruction of HH pharmaceuticals, support for local private sector biomass production and utilization, and pursuit of gasification systems for film plastic utilization will support waste diversion from landfill burial.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Existing infrastructure is sufficient at this time with no changes recommended or anticipated.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Continuation of the dedicated sales tax funding stream is fully anticipated to provide sufficient funding for program costs.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - Utilization of renewal fuel sources including biomass and waste materials is believed to have positive impacts on natural resource conservation, energy production, and jobs.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is not under at this time.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - no negative impact anticipated from proposed activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5% from current levels.</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5% from current levels.</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%.</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected.</p> <p><u>Economic, administrative or partnership benefits</u> - Actions believed to provide economic benefits associated with cost control for long term reliable solid waste management services available to Delaware County residents, businesses, and institutions.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing activities.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time.</p>	

<p>5.5.o</p> <p>WASTE DISPOSAL OPTIONS</p>	<p><u>SUMMARY OF STATUS & RECOMMENDATION</u></p> <ul style="list-style-type: none"> ▶ Pursue landfill footprint expansion at the existing Solid Waste Management Center. ▶ Retain County owned and County operated landfill, recycling, composting, and transfer services.
<p><u>CRITERIA OF EVALUATION</u></p> <p>1) ADMINISTRATIVE/TECHNICAL IMPACTS</p> <p><u>1i) Waste Stream Impact - Quantitative/Qualitative</u> - Delaware County's solid waste program MSW landfill disposal rate in 2016 was 1.52 lbs/capita/day, well below the State's "Beyond Waste" target of 2.9 lbs/capita/day for 2016. Enhanced organics recovery efforts will focus largely on facility operation and maintenance in support of maximum organics diversion from the landfill.</p> <p><u>1ii) Appropriate Type & Size of Facilities or Program</u> - Expansion of landfill capacity within the existing property boundaries of the Solid Waste Management Center are essential to retaining long term system reliability and resiliency for the entirety of the integrated solid waste services provided by the County's solid waste program.</p> <p><u>1iii) Cost & Lifecycle Analysis</u> - Facility maintenance and a capital replacement sinking fund program are currently in place in anticipation of the near term construction costs associated with landfill liner development concurrent with ongoing facility maintenance costs. Continuation of the dedicated sales tax funding stream is fully anticipated to provide sufficient funding for construction.</p> <p><u>1iv) Impact to Natural Resource Conservation, Energy Production, and Jobs</u> - Continued MSW & biosolids composting concurrent with recycling is expected to provide for natural resource conservation. Jobs that currently exist in the operation of the Solid Waste Management Center are expected to remain constant during the 10 year planning window.</p> <p>2) JURISDICTIONAL IMPACTS ON NEIGHBORING PLANNING UNITS, AND ENVIRONMENTAL JUSTICE WITHIN DELAWARE COUNTY</p> <p><u>2i) Assessment of Participation Interest Potential by Neighboring Planning Units</u> - potential for participation by neighboring Planning Units is not under at this time.</p> <p><u>2ii) Assessment of Alternatives That Might be Available if Other Planning Units Participate</u> - activities are not dependant upon participation of other Planning Units.</p> <p><u>2iii) Comments Received by Neighboring Planning Units</u> - none at this time.</p> <p><u>2iv) Assessment of Environmental Justice Within Delaware County</u> - no negative impact anticipated from proposed activities.</p>	<p><u>ALTERNATIVE SELECTION STATUS</u></p> <p>1) <u>ALTERNATIVE CHOSEN & WHY</u> - see above</p> <p>2) <u>EXPECTED QUANTITATIVE & QUALITATIVE IMPACTS ON -</u></p> <p><u>Waste Reduction</u> - actions expected to reduce waste volumes by <5%</p> <p><u>Reuse</u> - actions expected to enhance reuse <5% from current levels.</p> <p><u>Materials Recovery</u> - actions expected to enhance waste reuse <5% from current levels.</p> <p><u>Participation in Recovery Opportunities</u> - actions expected to enhance participation <5%</p> <p><u>Product Stewardship</u> - no measurable impact on product stewardship expected</p> <p><u>Economic, administrative or partnership benefits</u> - Actions believed to provide economic benefits associated with cost control for long term reliable solid waste management services available to Delaware County residents, businesses, and institutions.</p> <p>3) <u>IDENTIFICATION OF ADMINISTRATIVE, CONTRACTUAL, AND FINANCIAL REQUIREMENTS FOR IMPLEMENTATION</u> - existing administrative, contractual, and financial structure is sufficient to support ongoing and proposed activities.</p> <p>4) <u>IDENTIFICATION OF NEW OR MODIFICATION TO LOCAL LAWS, ORDINANCES OR REGULATIONS TO IMPLEMENT PROGRAMS</u> - no new local laws, ordinances, or regulations identified as necessary at this time.</p>

CHAPTER 6 - IMPLEMENTATION SCHEDULE

The MISSION STATEMENT for the Delaware County Solid Waste Division is to provide Delaware County residents with long term, cost competitive, environmentally responsive, comprehensive solid waste management services. The fundamental challenges for continued solid waste services, consistent with this mission statement are summarized in the three goals and associated objectives:

GOAL 1: MAINTAIN INFRASTRUCTURE FOR LONG TERM CONTINUED RECOVERY OPPORTUNITIES

OBJECTIVE: Provide system maintenance of and improvements to composting and MRF infrastructure and equipment necessary to maintain and improve handling capacity for MSW, organics, biosolids, woody debris, multiple forms of post-consumer products, and other recoverable materials.

Support local wastewater treatment facilities to minimize biosolids production thru enhancing efficient solids and water removal.

GOAL 2: ENHANCE PROGRAM COMPLIANCE AND INTERNAL RESILIENCY

OBJECTIVE: Continue to limit waste receipts to Delaware County residents and businesses, without reliance on out-of-county waste importation. Continue to prohibit disposal of recyclable materials and pursue recovery and marketing of commodities.

Expand Solid Waste Management Center registration system to facility access permit system to enhance program compliance with existing local laws that both prohibit importation of non-approved wastes and land burial of recyclable materials.

Decrease use of waste exportation, and increase reliance on waste minimization, capture, and recovery through expansion of MRF and compost facility. Continue aggressive in-house materials management techniques to minimize landfill airspace consumption and maximize material recovery. Continue focus on internal utilization of resources and minimize dependency upon external services.

GOAL 3: PROVIDE LONG TERM RELIABILITY OF SOLID WASTE MANAGEMENT SERVICES

OBJECTIVE: Pursue regulatory approvals, capital improvements, and program changes necessary to insure continued long term provision of solid waste services for Delaware County residents, with a continued base of operations at the current physical location.

Expand permit eligible area and provide comprehensive guideline for landfill expansion necessary to insure 60+ years capacity for continued self sufficient solid waste operations at the current Walton location.

Reclaim the wastes from the oldest landfill cell to minimize opportunity for environmental degradation associated with these wastes and allow for the re-utilization of the reclaimed area for new landfill development.

Support State and Federal actions toward product stewardship, market development, and continued financial support of local household hazardous collection activities, and recycling grants.

It is important to note that these goals and objectives are a continuation and expansion of the fundamental solid waste program goals articulated in earlier versions of the local solid waste management plan. As a "living document" the Delaware County Solid Waste Management Plan - Update 2018-2027 is written to continue the work of the solid waste program, and it is not intended to replace previously stated goals.

Table 6.a Implementation Schedule

Delaware County Solid Waste Management Plan - 10 Year Implementation Schedule

Time Period:

2018 to 2027

Responsible Party DPW - Solid Waste Division	2018 to 2027																					
	2018 winter - spring	2018 summer - fall	2019 winter - spring	2019 summer - fall	2020 winter - spring	2020 summer - fall	2021 winter - spring	2021 summer - fall	2022 winter - spring	2022 summer - fall	2023 winter - spring	2023 summer - fall	2024 winter - spring	2024 summer - fall	2025 winter - spring	2025 summer - fall	2026 winter - spring	2026 summer - fall	2027 winter - spring	2027 summer - fall	2028 winter - spring	
ACTIVITY																						
WASTE REDUCTION PROGRAMS																						
Maintain Public/Private Partnership in Waste Reduction Activities	on going																					
Advocate for Improved Waste Removal from Biosolids	on going																					
Promote Glass Reduction in Education & Outreach	on going																					
Promote Film Plastic Reduction In Education & Outreach	on going																					
REUSE PROGRAMS																						
Support Private and Not-For-Profit Reuse Centers & Programs	on going																					
Review Local Laws for Incompatibility with Reuse Programs	on going																					
Support State and Federal Actions for Product Stewardship	on going																					
RECYCLING PROGRAMS																						
Operation & Maintenance of MRF - Single / Dual Stream Capable	on going																					
Maximize Plastics Recycling & Marketing	on going																					
Advocate for Increase Textile Recycling	on going																					
Review Local Laws for Incompatibility with Recycling Efforts	on going																					
Continue to Collect Recyclables from Town Transfer Stations	on going																					
ORGANICS RECOVERY																						
Compost Facility Maintenance	on going																					
Compost Maintenance 10 Year Replacement Schedule Prioritization																						
Delineate Work Tasks & Project Schedule																						
Planned Extended Maintenance Shut Down																						
Continue to Collect MSW from Town Transfer Stations to Compost	on going																					
Continue to Seek Additional Compost Marketing Opportunities	on going																					
Continue Wood Grinder Operation & Maintenance for Wood Processing	on going																					
Review Local Laws for Incompatibility with Organics Management	on going																					
Advocate for Improved Waste Removal from Biosolids																						

Responsible Party DPW - Solid Waste Division	2018 winter - spring	2018 summer - fall	2019 winter - spring	2019 summer - fall	2020 winter - spring	2020 summer - fall	2021 winter - spring	2021 summer - fall	2022 winter - spring	2022 summer - fall	2023 winter - spring	2023 summer - fall	2024 winter - spring	2024 summer - fall	2025 winter - spring	2025 summer - fall	2026 winter - spring	2026 summer - fall	2027 winter - spring	2027 summer - fall	2028 winter - spring
	LOCAL MARKET DEVELOPMENT																				
New Companies & Markets	on going																				
Local Laws	on going																				
Existing Companies & Markets	on going																				
Expand Compost Markets	on going																				
ENFORCEMENT PROGRAMS																					
Continue Endorsement of Town Transfer Station Permit Systems	on going																				
Continue Waste Load Inspection Program at SWMC	on going																				
Enhance Enforcement with Facility Access Permit System	on going																				
Continue Reliance on Local Law No. 2 of 1992 - Recycling Law	on going																				
Continue Reliance on Local Law No. 5 of 1991 - Out of County Waste Ban	on going																				
INCENTIVE BASED PRICING																					
No Changes Proposed At This Time																					
EDUCATION & OUTREACH																					
Continue Education Outreach with local Agencies & Community Groups	on going																				
Maintain Budget Levels for Outreach Activities	on going																				
Promote Select Waste Reduction Issues - Hazardous Products																					
Promote Select Waste Reduction Issues - Glass Reduction																					
Promote Select Waste Reduction Issues - Film Plastic																					
Provide SWMC Facility Tours - Compost Facility & MRF	on going																				
DATA COLLECTION & EVALUATION																					
Data Collection of Materials Delivered to SWMC - Scale Data	on going																				
Supplemental Material Management Data from Facility Access Permit																					
Quarterly and Annual Data Review for Quality and Completeness	on going																				
FACILITY ACCESS PERMIT IN LIEU OF HAULER LICENSING																					
Draft Application and Administrative Procedures																					
Initial Program Roll Out																					
Adjust & Modify																					
Full Implementation of Facility Access Permit System																					

Responsible Party DPW - Solid Waste Division	2018 winter - spring	2018 summer - fall	2019 winter - spring	2019 summer - fall	2020 winter - spring	2020 summer - fall	2021 winter - spring	2021 summer - fall	2022 winter - spring	2022 summer - fall	2023 winter - spring	2023 summer - fall	2024 winter - spring	2024 summer - fall	2025 winter - spring	2025 summer - fall	2026 winter - spring	2026 summer - fall	2027 winter - spring	2027 summer - fall	2028 winter - spring	
	FLOW CONTROL & DISTRICTING																					
Not Under Consideration At This Time																						
C&D DEMOLITION, REUSE & RECOVERY																						
Encourage C&D Deconstruction Activities by Private Sector	on going																					
PRIVATE SECTOR OPPORTUNITIES																						
Contract Export Services for Select Waste & Storm Debris	on going																					
THERMAL TREATMENT TECHNOLOGIES																						
HH Pharmaceuticals Incineration	on going																					
Continue Annual HHW, CESQG, Farm Hazardous Wastes DropOff Event	on going																					
Support Local Biomass Pellet Industry	on going																					
Seek Gasification/Utilization Options for Select Wastes	on going																					
WASTE DISPOSAL - Landfill Operaton																						
Operate MSW Double Composite Landfill Operation & Maintenance	on going																					
C&D Processing for On-Site ADC Useage	on going																					
Landfill GasActive Extraction and Flare Destruction	on going																					
WASTE DISPOSAL - Landfill Footprint Expansion																						
Submit Permit Application to NYSDEC & Aquifer Variance	on going																					
Engineering Design for Cell Construction & Site Development	on going																					
Re-route on-site access roads necessary for future development		on going																				
Bid documents for new construction		on going																				
Award construction contracts			on going																			
Begin new landfill cell construction				on going																		
New landfill cell operation											on going											
Landfill Reclamation of Oldest Cells													on going									

CHAPTER 7 - WASTE STREAM PROJECTIONS - NYSDEC Waste Calculator 10yr Projections

Itemized waste generation tonnages and diversion levels have been calculated for MSW and C&D using NYSDEC waste calculators. Based upon these calculators, the planning unit’s population projections for the 10 year planning period show a slow and steady population decline, annual waste generation tonnages are flat, and annual diversion rates increase by an estimated 0.5% annually. MSW diversion rate is estimated to rise to 65.7% diversion rate by 2027. C&D diversion rate is estimated to rise to 59% by 2026. See Appendix for the complete set of output tables for waste projections.

Utilizing the NYSDEC waste calculators to generate estimates, the solid waste quantity projections are expected to keep pace with population and waste generation per capita values for the nation. Changes in solid waste characteristics are also expected to match nation wide trends, including the increased lightweighting of products and packaging associated with packaging innovations. Conversely, increases in the quantity and volume of consumer products within the waste stream, both as household trash and as construction & demolition debris. Increased recycling opportunities are expected to keep pace with market growth surrounding product stewardship legislation.

Projected solid waste quantities, based upon historic tonnages and making a small increase for population changes provides a ten year planning period estimate of between 48,000 and 53,000 total tons per year for all wastes and recyclables combined. This tonnage estimate is very much in line with previous actual tonnages and reflects the stable demographics of the County.

7.1 - MSW Waste Projection Tables

Step 1. Planning Unit and Plan Period Selection

Please, select from the drop-down list the name of your **planning unit** and the **planning period** of your **LSWMP**. Be aware that a LSWMP must be developed for a **10-year period**, and that your selection will be replicated on each one of the following tabs.

Planning Unit	Delaware County
Planning Period	2018-2027

Step 2. Waste Generation Rate

In order to project how the amount of waste generated in the planning unit will change over time, data regarding the current amount of waste generated by the planning unit is needed. This can be the total tons of waste generated by the planning unit in the current year (**Tons/yr**), or this can be the estimated daily quantity of waste generated per person in the planning unit (**lb/person/day**). If both the total annual generation and the estimated generation rate per person are unknown, the state average for MSW generation rate can be used along with the planning unit's population to estimate the total amount of waste generated in the planning unit.

For this step, select **one** of the options that describes the known information about the planning unit. Enter the waste generated in Tons (MSW disposed & Recycled Materials) or the waste generation rate in lb/person/day in the **purple cell**. If no data on the waste generated in the planning unit is available, choose the corresponding option from the list. The calculator will estimate the total amount of waste generated based on the state's average generation rate and the planning unit's population.

Delaware County

The amount of waste generated (by all residents, institutions, etc.) in the planning unit will be based on what is known. If the MSW generation amount and the generation rate are unknown, the state average for MSW generation rate will be used.

<input type="radio"/> I know the amount of MSW generated (Tons/year):	Enter average generation rate here:	4.44
<input checked="" type="radio"/> The planning unit Average MSW Generation Rate (lb/person/day) is:		
<input type="radio"/> The amount of MSW Generated and the planning unit Average MSW Generation Rate are unknown.	Leave this cell blank:	

Average MSW Generation Rate from "EPA Advancing Materials Management Fact Sheet 2014" Table 1.

Step 3. Planning Unit Population - Projections & Municipal Solid Waste (MSW) - Projections

This tab will provide you with population projections and MSW generation projections for the planning period you had previously selected. It is recognized that Municipal Solid Waste (MSW) generation is reliant on population changes, hence, it is necessary to project both and identify their correlation.

In the first **purple cell** enter the total tons of MSW that was disposed in the year immediately before your plan period starts. For example: If the plan period is 2016-2026, the MSW disposed data should be from 2015.

Population Projection:
Calculations are determined by a linear regression based on the latest **census population data** and an **annual growth rate percentage** specific to the planning unit. If it is anticipated that the population is going to decrease overtime, the minus sign (-) will be used.

MSW Generation Projection:
The MSW generation rate (Lb/person/day) calculated on the previous tab from the **Waste Generation Rate** will serve as a start point for the planning period. On the calculator, three options are considered to anticipate the MSW generation over time, and one must be selected according to the goals of the planning unit.

First Option:
MSW generation **rate does not change**. Consequently, MSW generation fluctuates with the population of the planning unit. If the population increases, waste generation will rise as well, and vice versa. By selecting this option, the planning unit is in **"status quo"**, meaning that is not making any improvements, and consequently is getting far from reaching the State's goal by 2030.

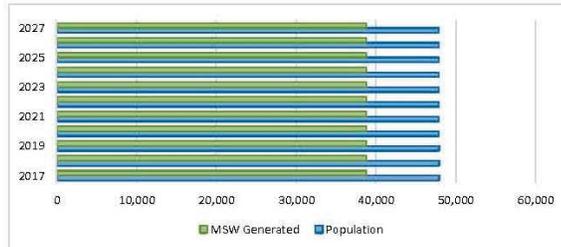
Second Option:
MSW generation **amount** remains the same, regardless of whether or not the planning unit's population changes.

Third Option:
As a result of successfully implementing the Local Solid Waste Management Plan, MSW generation will be reduced by an annual factor of ...
An **Annual Factor of Reduction (%)** should be calculated, defined, and selected by the planning unit. This factor will be the numerical representation of one of the planning unit's **goals** for the planning period. Once calculated, the Annual Factor of Reduction can be chosen from the drop down list provided.

Note:
• The graphic will display the Population and MSW Generation projections over the selected planning period. It has been designed to visualize the contrast of the final outcomes, based on the selections of each planning unit.

Delaware County 2018-2027

Current Data	
2010 Population Census	47,900
2017 Population	47,913
2017 MSW Generated (Tons/yr)	38,824
2017 MSW generation rate (Lb/person/day)	4.44
2017 MSW Disposed (Tons/yr) - 2016eoy SWMC	13,307
2017 MSW Diverted (Tons/yr)	25,517



Annual rate of population growth (%)	-0.02%
--------------------------------------	--------

Population Projection										
2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
47,903	47,894	47,884	47,875	47,865	47,855	47,846	47,836	47,827	47,817	47,808

Forecasting future conditions... What do you expect to happen to the MSW generation rate over the next 10 year period plan?

MSW generation rate does not change. Consequently, MSW generation fluctuates with the population of the planning unit if the population increases, waste generation will rise as well, and vice versa.

MSW generation amount remains the same, regardless of whether or not the planning unit's population fluctuates.

As a result of successfully implementing the Local Solid Waste Management Plan, MSW generation will be reduced by an annual factor of ...

Reduction Factor (per year)

MSW generation rate (Lb/person/day)	4.43
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MSW Generation Projection											
2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
4.43	4.42	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43	(Lb/person/day)
38,749	38,749	38,749	38,749	38,749	38,749	38,749	38,749	38,749	38,749	38,749	Tons/yr

Step 4. Municipal Solid Waste (MSW) Detailed Composition Analysis

The next step is to Identify the Materials Composition of the Waste Stream based on population density, and demographic characteristics of the Planning Unit. This tab will provide the PU with a more detailed estimate of the materials present in the waste stream, which could be crucial when prioritizing the initiatives and programs of the LSWMP. The population density distribution has been calculated based on the 2010 Census data and will be auto populated when a planning unit is selected. The following parameters were used:

- Rural: <325 persons/mi²
- Suburban: >325 and <5,000 persons/mi²
- Urban: >5,000 persons/mi²

Under Density Population Distribution, the user has the option to modify the percentage values for the Sector (Residential and Commercial/Institutional) based on land use and specific characteristics of each planning unit. For example: A rural population in Westchester County could be 64% Residential and 36% Commercial / Institutional, while in Wyoming County might be 50% Residential and 50% Commercial / Institutional.

The results are presented on the last right column under MSW Materials Composition. Be aware of color changes on the cells; whenever a category represents over 15% of the total waste generation, the cell will turn **red** to easily identify key categories of the waste stream. It will also facilitate the selection of initiatives, programs, and infrastructure for the solid waste management system.

Note: If no data exists, use the pre-populated information in the worksheet.

Delaware County 2018-2027

Material	Rural			Suburban			Urban			MSW Materials Composition (%)	
	69.09%			30.91%			0.00%				
	Residential	Comm.Inst.	Combined	Residential	Comm.Inst.	Combined	Residential	Comm.Inst.	Combined		
Density Population Distribution	58.00%	42.00%	100.00%	55.00%	45.00%	100.00%	58.00%	42.00%	100.00%	100.00%	
Newspaper	5.20%	1.90%	3.81%	5.00%	1.90%	3.61%	6.60%	2.00%	4.67%	3.75%	
Corrugated Cardboard	6.60%	13.90%	9.67%	6.60%	13.90%	9.99%	6.90%	13.70%	9.76%	9.73%	
Other Recyclable Paper	Paperboard	3.20%	1.10%	2.32%	3.20%	1.00%	2.27%	3.60%	0.90%	2.47%	2.30%
	Office Paper	0.80%	3.80%	2.06%	0.90%	4.20%	2.39%	1.10%	5.80%	3.07%	2.16%
	Junk Mail	3.00%	0.70%	2.03%	3.20%	0.70%	2.08%	3.50%	0.70%	2.32%	2.06%
	Other Commercial Printing	1.70%	2.30%	1.96%	1.70%	2.40%	2.02%	2.20%	2.60%	2.43%	1.97%
	Magazines	1.10%	0.90%	1.02%	1.00%	0.80%	0.91%	1.10%	1.00%	1.06%	0.98%
	Books	0.50%	0.30%	0.42%	0.50%	0.30%	0.41%	0.60%	0.40%	0.52%	0.41%
	Paper Bags	0.60%	0.20%	0.37%	0.60%	0.20%	0.37%	0.60%	0.20%	0.43%	0.37%
Phone Books	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.20%	0.26%	0.30%	
Poly-Coated	0.20%	0.30%	0.24%	0.20%	0.20%	0.20%	0.20%	0.30%	0.26%	0.23%	
Other Recyclable Paper (Total)	11.30%	9.90%	10.71%	11.60%	10.10%	10.93%	13.40%	12.00%	12.91%	10.78%	
Other Compostable Paper	6.80%	6.80%	6.80%	6.40%	6.40%	6.40%	6.80%	6.80%	6.80%	6.68%	
Total Paper	29.90%	32.50%	30.99%	29.60%	32.30%	30.82%	33.70%	34.50%	34.04%	30.94%	
Ferrous/Aluminum Containers	Ferrous Containers	1.90%	1.00%	1.52%	1.20%	0.70%	0.98%	1.40%	0.70%	1.11%	1.35%
	Aluminum Containers	0.70%	0.40%	0.57%	0.60%	0.30%	0.47%	0.50%	0.40%	0.46%	0.54%
Ferrous/Aluminum Containers (Total)	2.60%	1.40%	2.10%	1.80%	1.00%	1.44%	1.90%	1.10%	1.56%	1.89%	
Other Ferrous Metals	5.20%	5.40%	5.28%	5.00%	5.80%	5.36%	3.30%	3.70%	3.47%	5.31%	
Other Non-Ferrous Metals	Other aluminum	0.20%	0.30%	0.24%	0.20%	0.30%	0.25%	0.20%	0.24%	0.24%	
	Automotive batteries	0.80%	0.50%	0.67%	0.70%	0.40%	0.57%	0.20%	0.20%	0.64%	
	Other non-aluminum	0.50%	0.30%	0.42%	0.30%	0.40%	0.35%	0.40%	0.20%	0.39%	
Other Non-Ferrous Metals (Total)	1.50%	1.10%	1.33%	1.20%	1.10%	1.16%	0.80%	0.70%	0.76%	1.28%	
Total Metals	9.30%	7.90%	8.71%	8.00%	7.90%	7.96%	6.00%	5.50%	5.79%	8.48%	
PET Containers	1.10%	0.80%	0.97%	0.90%	0.80%	0.86%	1.20%	1.00%	1.12%	0.94%	
HDPE Containers	1.10%	0.60%	0.89%	0.90%	0.70%	0.81%	1.00%	0.70%	0.87%	0.87%	
Other Plastic (3-7) Containers	0.20%	0.10%	0.16%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	0.17%	
Film Plastic	5.70%	5.90%	5.78%	5.50%	5.80%	5.64%	5.80%	5.80%	5.80%	5.74%	
Other Plastic	Durables	3.10%	2.20%	3.14%	3.00%	2.20%	3.09%	3.20%	3.20%	3.24%	
	Non-Durables	1.60%	1.80%	1.63%	1.60%	1.80%	1.63%	1.80%	1.90%	1.84%	
	Packaging	1.40%	1.10%	1.27%	1.40%	1.10%	1.27%	1.50%	1.10%	1.23%	
Other Plastic (Total)	6.10%	6.10%	6.10%	6.00%	6.10%	6.05%	6.50%	6.30%	6.42%	6.08%	
Total Plastics	14.20%	13.50%	13.91%	13.50%	13.60%	13.55%	14.70%	14.00%	14.41%	13.79%	
Glass Bottles, Jars and Containers	4.10%	3.80%	3.97%	3.90%	3.80%	3.86%	4.30%	3.80%	4.09%	3.94%	
Other Glass (Flat glass, dishware, light bulbs, etc.)	0.50%	0.40%	0.46%	0.30%	0.40%	0.35%	0.40%	0.40%	0.40%	0.42%	
Total Glass	4.60%	4.20%	4.43%	4.20%	4.20%	4.20%	4.70%	4.20%	4.49%	4.36%	
Food Scraps	12.70%	13.30%	12.95%	12.90%	15.50%	14.07%	17.20%	25.20%	20.56%	13.30%	
Leaves and Grass / Pruning and Trimmings	3.10%	1.10%	2.26%	11.30%	9.10%	10.31%	4.20%	1.50%	3.07%	4.75%	
Total Organics	15.80%	14.40%	15.21%	24.20%	24.60%	24.38%	21.40%	26.70%	23.63%	18.05%	
Clothing Footwear, Towels, Sheets	4.80%	3.00%	3.93%	4.40%	3.20%	3.86%	4.80%	2.50%	3.83%	3.91%	
Carpet	1.40%	1.30%	1.36%	1.70%	1.40%	1.57%	1.70%	0.90%	1.36%	1.42%	
Total Textiles	6.00%	4.30%	5.29%	6.10%	4.60%	5.43%	6.50%	3.40%	5.20%	5.33%	
Total Wood (Pallets, crates, adulterated and non-adulterated wood)	4.10%	9.00%	6.16%	2.90%	4.10%	3.44%	2.00%	3.50%	2.63%	5.32%	
DIY - Construction & Renovation Materials	0.80%	7.60%	7.83%	3.80%	2.70%	3.31%	4.40%	3.80%	4.15%	6.43%	
Diapers	1.90%	1.10%	1.56%	2.10%	1.20%	1.78%	2.30%	1.10%	1.80%	1.60%	
Electronics	1.30%	1.40%	1.34%	1.60%	1.70%	1.65%	1.30%	1.30%	1.30%	1.44%	
Tires	1.80%	1.80%	1.80%	1.70%	1.40%	1.57%	0.50%	0.40%	0.46%	1.73%	
HHW	0.60%	0.00%	0.35%	0.60%	0.00%	0.33%	0.50%	0.00%	0.29%	0.34%	
Soils and Fines	0.60%	0.60%	0.60%	0.10%	0.20%	0.15%	0.10%	0.10%	0.10%	0.46%	
Other Composite Materials - Durable and/or Inert	1.90%	1.70%	1.82%	1.60%	1.50%	1.56%	1.90%	1.50%	1.73%	1.74%	
Total Miscellaneous	16.10%	14.20%	15.30%	11.50%	8.70%	10.24%	11.00%	8.20%	9.82%	13.74%	
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

Step 5. Municipal Solid Waste (MSW) Detailed Composition Analysis

On this tab, the composition of the municipal waste stream will be estimated based on the amount of material generated in the planning unit and the state average of the different waste materials. A pie chart will be generated to clearly show the composition of the waste stream and to identify key categories of the waste stream for the planning unit.

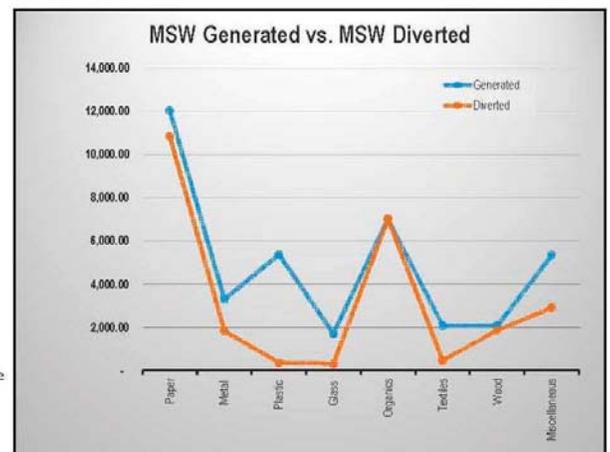
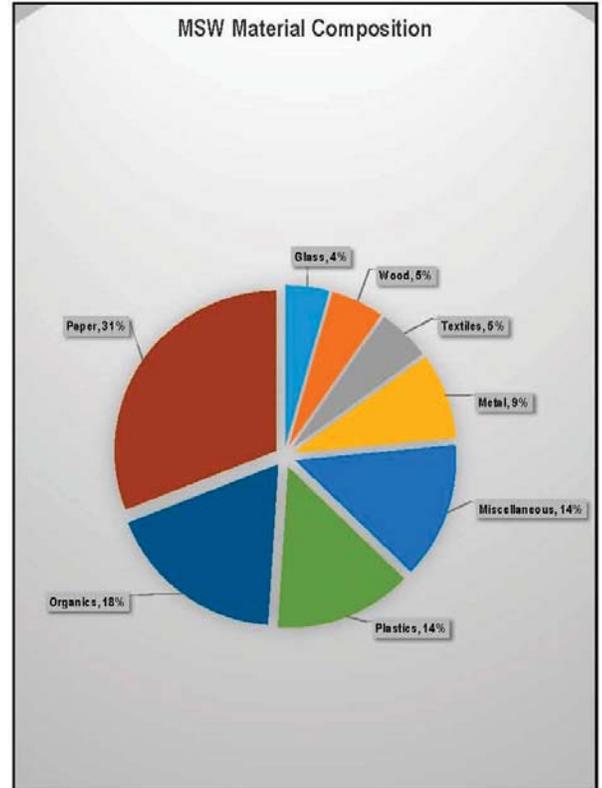
The total tons of MSW diverted per year will be auto populated based on previous data inputs, while the amount tons diverted for each material by category should be populated by the user. **purple** should be used for amounts of diverted waste by type of material, and a total number by category (e.g. paper, metal) should be put in **the green cells**. After inputting the data, a graphic will be generated to show the MSW generation and diversion streams in Tons.

Make sure that the total amounts at the bottom of the page are consistent with the data you already put into the calculator. If the cell is highlighted in **red**, you should revise the amounts of diverted waste by category.

Delaware County

2018-2027

		2017				
		MSW Materials Composition (%)	MSW Generated (Tons)	MSW Diverted (Tons)		
Material		100.0%	38,824	25,517		
Paper	Newspaper	3.7%	1,456	1,210	90%	
	Corrugated Cardboard	9.7%	3,779	3,401	90%	
	Other Recyclable Paper	Paperboard	2.3%	894	804	90%
		Office Paper	2.2%	839	766	90%
		Junk Mail	2.0%	795	718	90%
		Other Commercial Printing	2.0%	765	689	90%
		Magazines	1.0%	382	344	90%
		Books	0.4%	161	145	90%
		Paper Bags	0.4%	144	130	90%
		Phone Books	0.3%	115	105	90%
	Poly-Coated	0.2%	89	80	90%	
	Other Recyclable Paper (Total)	10.8%	4,184	3,766	90%	
	Other Compostable Paper	6.7%	2,592	2,333	90%	
	Total Paper	30.9%	12,011	10,810	sum	
Metal	Ferrous/Aluminum Containers	Ferrous Containers	1.4%	525	158	30%
		Aluminum Containers	0.5%	210	105	50%
	Ferrous/Aluminum Containers (Total)	1.9%	735	262	sum	
	Other Ferrous Metals	5.3%	2,061	1,236	60%	
	Other Non-Ferrous Metals	Other aluminum	0.2%	94	47	50%
		Automotive batteries	0.6%	249	199	80%
	Other non-aluminum	0.4%	153	76	50%	
Other Non-Ferrous Metals (Total)	1.3%	496	323	sum		
Total Metals	8.6%	3,291	1,821	sum		
Plastic	PET Containers	0.9%	364	182	50%	
	HDPE Containers	0.9%	336	191	30%	
	Other Plastic (3-7) Containers	0.2%	66	30	30%	
	Film Plastic	5.7%	2,228	72	1%	
	Other Plastic	Durables	3.1%	1,214	24	2%
		Non-Durables	1.7%	655	7	1%
		Packaging	1.3%	494	5	1%
Other Plastic (Total)	6.1%	2,362	31	sum		
Total Plastics	13.8%	5,356	361	sum		
Glass	Glass Bottles, Jars and Containers	3.9%	1,529	304	20%	
	Other Glass (Flat glass, dishware, light bulbs, etc.)	0.4%	164	0	0%	
Total Glass	4.4%	1,693	304	sum		
Organics	Food Scraps	13.3%	5,163	6,163	100%	
	Leaves and Grass / Pruning and Trimmings	4.7%	1,843	1,843	100%	
Total Organics	18.0%	7,006	7,006	sum		
Textiles	Clothing Footwear, Towels, Sheets	3.9%	1,517	455	30%	
	Carpet	1.4%	552	0	0%	
Total Textiles	5.3%	2,069	455	sum		
Wood	Total Wood (Pallets, crates, adulterated and non-adulterated wood)	5.3%	2,065	1,208	90%	
Miscellaneous	DIY Construction & Renovation Materials	6.4%	2,497	1,240	50%	
	Diapers	1.6%	623	561	90%	
	Electronics	1.4%	557	378	50%	
	Tires	1.7%	671	664	90%	
	HHW	0.3%	133	40	30%	
	Soils and Fines	0.5%	178	161	90%	
	Other Composite Materials - Durable and/or inert	1.7%	674	8	balance	
Total Miscellaneous	13.7%	5,333	2,900	sum		
Total	100.0%	38,824	25,517			



Step 6. Municipal Solid Waste (MSW) Diversion Projections

This tab will be used to create goals for the amount of material the planning unit will divert for each year of the planning period. These goals will be entered as percentages, based on how much of the material generated will be diverted for recycling or beneficial use.
The diversion goal percentages will be entered in the **purple cells** for each material and each year of the planning period.

Delaware County

2018-2027

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Projected MSW Generation (Tons/yr)	38,749	38,548	38,347	38,148	37,950	37,752	37,556	37,361	37,166	36,973
MSW Diverted (Tons/yr)	24,654	24,619	24,583	24,548	24,513	24,479	24,444	24,409	24,375	24,341

Material	MSW Materials Composition (%)	2017-2027												
		MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Paper	100.0%	38,824	25,517	65.7%	63.6%	63.9%	64.1%	64.4%	64.6%	64.8%	65.1%	65.3%	65.6%	65.8%
Newspaper	3.7%	1,456	1,310	90.0%	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%
Corrugated Cardboard	9.7%	3,779	3,401	90.0%	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%
Other Recyclable Paper (Total)	10.8%	4,184	3,766	90.0%	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%
Other Compostable Paper	6.7%	2,592	2,333	90.0%	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%
Total Paper	30.9%	12,011	10,810	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%	
Metal	1.9%	735	262	35.7%	35.7%	35.9%	36.1%	36.2%	36.4%	36.6%	36.8%	37.0%	37.2%	37.3%
Ferrous/Aluminum Containers (Total)	1.9%	735	262	35.7%	35.7%	35.9%	36.1%	36.2%	36.4%	36.6%	36.8%	37.0%	37.2%	37.3%
Other Ferrous Metals	5.3%	2,061	1,236	60.0%	60.0%	60.3%	60.6%	60.9%	61.2%	61.5%	61.8%	62.1%	62.4%	62.8%
Other Non-Ferrous Metals (Total)	1.3%	496	323	65.0%	65.0%	65.4%	65.7%	66.0%	66.3%	66.7%	67.0%	67.3%	67.7%	68.0%
Total Metals	8.5%	3,291	1,821	55.3%	55.6%	55.9%	56.2%	56.4%	56.7%	57.0%	57.3%	57.6%	57.9%	
Plastic	0.9%	364	182	50.0%	50.0%	50.3%	50.5%	50.8%	51.0%	51.3%	51.5%	51.8%	52.0%	52.3%
PET Containers	0.9%	364	182	50.0%	50.0%	50.3%	50.5%	50.8%	51.0%	51.3%	51.5%	51.8%	52.0%	52.3%
HDPE Containers	0.9%	366	101	30.0%	30.0%	30.2%	30.3%	30.5%	30.6%	30.8%	30.9%	31.1%	31.2%	31.4%
Other Plastic (3-7) Containers	0.2%	66	20	30.0%	30.0%	30.2%	30.3%	30.5%	30.6%	30.8%	30.9%	31.1%	31.2%	31.4%
Film Plastic	5.7%	2,228	22	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Other Plastic (Total)	6.1%	2,362	36	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.6%	1.6%	1.6%	1.6%	
Total Plastics	13.8%	5,356	361	6.7%	6.7%	6.8%	6.8%	6.8%	6.9%	6.9%	6.9%	7.0%	7.0%	7.0%
Glass	3.9%	1,529	306	20.0%	20.0%	20.1%	20.2%	20.3%	20.4%	20.5%	20.6%	20.7%	20.8%	20.9%
Glass Bottles, Jars and Containers	3.9%	1,529	306	20.0%	20.0%	20.1%	20.2%	20.3%	20.4%	20.5%	20.6%	20.7%	20.8%	20.9%
Other Glass (Flat glass, dishware, light bulbs, etc.)	0.4%	164	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Glass	4.4%	1,693	306	18.1%	18.1%	18.1%	18.2%	18.3%	18.4%	18.5%	18.6%	18.7%	18.8%	18.9%
Organic	13.3%	5,163	5,163	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Food Scraps	13.3%	5,163	5,163	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Leaves and Grass / Pruning and Trimmings	4.7%	1,843	1,843	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Organics	18.0%	7,006	7,006	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Textiles	3.9%	1,517	455	30.0%	30.0%	30.2%	30.3%	30.5%	30.6%	30.8%	30.9%	31.1%	31.2%	31.4%
Clothing Footwear, Towels, Sheets	3.9%	1,517	455	30.0%	30.0%	30.2%	30.3%	30.5%	30.6%	30.8%	30.9%	31.1%	31.2%	31.4%
Carpet	1.4%	552	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Textiles	5.3%	2,069	455	22.0%	22.0%	22.1%	22.2%	22.3%	22.4%	22.6%	22.7%	22.8%	22.9%	23.0%
Wood	5.3%	2,065	1,858	90.0%	90.0%	90.5%	91.0%	91.5%	92.0%	92.5%	93.0%	93.5%	94.0%	94.5%
Total Wood (Pallets, crates, adulterated and non-adulterated wood)	5.3%	2,065	1,858	90.0%	90.0%	90.5%	91.0%	91.5%	92.0%	92.5%	93.0%	93.5%	94.0%	94.5%
Miscellaneous	6.4%	2,497	1,249	50.0%	50.0%	50.3%	50.5%	50.8%	51.0%	51.3%	51.5%	51.8%	52.0%	52.3%
DIY Construction & Renovation Materials	6.4%	2,497	1,249	50.0%	50.0%	50.3%	50.5%	50.8%	51.0%	51.3%	51.5%	51.8%	52.0%	52.3%
Diapers	1.6%	623	561	90.0%	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%
Electronics	1.4%	557	279	50.0%	50.0%	50.3%	50.5%	50.8%	51.0%	51.3%	51.5%	51.8%	52.0%	52.3%
Tires	1.7%	671	604	90.0%	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%
HHW	0.3%	133	40	30.0%	30.0%	30.2%	30.3%	30.5%	30.6%	30.8%	30.9%	31.1%	31.2%	31.4%
Soils and Fines	0.6%	178	161	90.0%	90.0%	90.5%	90.9%	91.4%	91.8%	92.3%	92.7%	93.2%	93.7%	94.1%
Other Composite Materials - Durable and/or inert	1.7%	674	8	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Total Miscellaneous	13.7%	5,333	2,900	54.4%	54.4%	54.6%	54.9%	55.2%	55.5%	55.7%	56.0%	56.3%	56.6%	56.9%

Step 7. Municipal Solid Waste (MSW) Generation and Diversion - Detailed Projections

The final result of the Population and Municipal Composition Calculator is presented on the last tab. This tab contains data for the current year regarding waste generated and waste diverted from disposal. This tab also shows the projected waste diversion percentages, and the amount of waste in tons these percentages will divert for recycling. Total amounts of waste diverted will be calculated for each material and each year of the planning period.

Delaware County 2018-2027

Material	2017			2018			2019			2020			2021			2022			2023			2024			2025			2026			2027					
	MSW Materials Composition (%)	MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted					
Material	100.00%	38,924	25,517	65.7%	38,749	24,854	63.8%	38,548	24,819	64%	38,347	24,583	64.1%	38,148	24,548	64.4%	37,958	27,258	71.8%	37,752	24,479	64.8%	37,558	24,444	65.1%	37,361	24,409	65.3%	37,166	24,789	66.5%	36,973	24,341	65.8%		
Paper	Newspaper	3.75%	1,456	1,310	90.0%	1,453	1,308	90.0%	1,445	1,307	90%	1,438	1,297	90.9%	1,430	1,297	91.4%	1,423	1,296	91.8%	1,415	1,296	92.3%	1,408	1,296	92.7%	1,401	1,296	93.2%	1,394	1,295	93.7%	1,386	1,295	94.1%	
	Corrugated Cardboard	9.73%	3,779	3,401	90.0%	3,772	3,395	90.0%	3,762	3,394	90%	3,753	3,393	90.9%	3,743	3,392	91.4%	3,734	3,391	91.8%	3,725	3,391	92.3%	3,716	3,390	92.7%	3,707	3,389	93.2%	3,698	3,388	93.7%	3,689	3,388	94.1%	
	Other Recyclable Paper	Paperboard	2.38%	894	804	90.0%	892	803	90.0%	887	802	90%	883	802	90.9%	878	802	91.4%	873	802	91.8%	869	802	92.3%	864	802	92.7%	860	801	93.2%	855	801	93.7%	851	801	94.1%
		Office Paper	2.16%	839	755	90.0%	837	753	90.0%	833	753	90%	828	753	90.9%	824	753	91.4%	820	753	91.8%	816	753	92.3%	811	752	92.7%	807	752	93.2%	803	752	93.7%	799	752	94.1%
		Junk Mail	2.05%	795	715	90.0%	793	714	90.0%	789	714	90%	785	713	90.9%	781	713	91.4%	777	713	91.8%	773	713	92.3%	769	713	92.7%	765	712	93.2%	761	712	93.7%	757	712	94.1%
		Other Commercial Printing	1.97%	765	689	90.0%	764	688	90.0%	760	687	90%	756	687	90.9%	752	687	91.4%	748	687	91.8%	744	687	92.3%	740	687	92.7%	737	686	93.2%	733	686	93.7%	729	686	94.1%
		Magazines	0.88%	332	344	90.0%	331	343	90.0%	329	343	90%	327	343	90.9%	325	343	91.4%	323	343	91.8%	321	343	92.3%	319	342	92.7%	317	342	93.2%	315	342	93.7%	314	342	94.1%
		Books	0.41%	161	145	90.0%	160	144	90.0%	160	144	90%	159	144	90.9%	158	144	91.4%	157	144	91.8%	156	144	92.3%	155	144	92.7%	154	144	93.2%	154	144	93.7%	153	144	94.1%
		Paper Bags	0.37%	144	120	90.0%	144	129	90.0%	143	129	90%	142	129	90.9%	142	129	91.4%	141	129	91.8%	140	129	92.3%	139	129	92.7%	139	129	93.2%	138	129	93.7%	137	129	94.1%
	Phone Books	0.30%	116	105	90.0%	116	105	90.0%	116	105	90%	115	105	90.9%	114	105	91.4%	114	105	91.8%	113	105	92.3%	113	104	92.7%	112	104	93.2%	111	104	93.7%	111	104	94.1%	
Poly-Coated	0.23%	89	80	90.0%	89	80	90.0%	88	80	90%	88	80	90.9%	87	80	91.4%	87	80	91.8%	86	80	92.3%	86	80	92.7%	86	80	93.2%	85	80	93.7%	85	80	94.1%		
Other Recyclable Paper (Total)	10.78%	4,184	3,766	90.0%	4,176	3,759	90.0%	4,165	3,758	90.0%	4,153	3,757	90.9%	4,142	3,756	91.4%	4,131	3,755	91.8%	4,120	3,754	92.3%	4,109	3,753	92.7%	4,098	3,752	93.2%	4,087	3,751	93.7%	4,076	3,750	94.1%		
Other Compostable Paper	6.68%	2,592	2,333	90.0%	2,587	2,328	90.0%	2,574	2,323	90%	2,560	2,327	90.9%	2,547	2,327	91.4%	2,534	2,326	91.8%	2,520	2,326	92.3%	2,507	2,325	92.7%	2,494	2,325	93.2%	2,481	2,324	93.7%	2,468	2,324	94.1%		
Total Paper	38.94%	12,011	10,810	90.0%	11,988	10,789	90.0%	11,965	10,747	90%	11,844	10,784	90.9%	11,812	10,742	91.4%	11,741	10,779	91.8%	11,670	10,777	92.3%	11,619	10,775	92.7%	11,568	10,772	93.2%	11,498	10,770	93.7%	11,439	10,767	94.1%		
Metal	Ferrous/Aluminum Containers	Ferrous Containers	1.35%	525	158	30.0%	524	134	25.5%	522	134	25.8%	519	134	25.8%	516	134	25.9%	513	134	26.0%	511	134	26.2%	508	134	26.3%	506	134	26.4%	503	134	26.6%	500	134	26.7%
		Aluminum Containers	0.54%	210	105	50.0%	209	21	10.2%	208	21	10%	207	21	10.3%	206	21	10.3%	205	21	10.4%	204	21	10.4%	203	21	10.6%	202	21	10.6%	201	21	10.6%	200	21	10.7%
	Ferrous/Aluminum Containers (Total)	1.89%	735	263	35.7%	734	262	35.7%	730	262	36%	726	262	36.1%	722	262	36.2%	718	262	36.4%	715	262	36.6%	711	262	36.8%	707	262	37.0%	704	261	37.3%	700	261	37.3%	
	Other Ferrous Metals	5.31%	2,061	1,236	60.0%	2,057	1,234	60.0%	2,046	1,234	60%	2,035	1,233	60.9%	2,024	1,233	60.9%	2,014	1,233	61.2%	2,004	1,233	61.5%	1,993	1,232	61.8%	1,983	1,232	62.1%	1,973	1,232	62.4%	1,962	1,231	62.8%	
	Other Non-Ferrous Metals	Other aluminum	0.24%	94	47	50.0%	94	47	50.0%	94	47	50%	93	47	50.9%	93	47	50.9%	92	47	51.0%	92	47	51.3%	91	47	51.5%	91	47	51.8%	90	47	52.0%	90	47	52.3%
		Automotive batteries	0.64%	249	199	80.0%	248	198	80.0%	247	198	80%	246	198	80.9%	244	198	81.2%	243	198	81.6%	242	198	82.0%	240	198	82.4%	239	198	82.8%	238	198	83.3%	237	198	83.7%
	Other non-aluminum	0.39%	153	76	50.0%	153	76	50.0%	152	76	50%	151	76	50.9%	150	76	50.9%	149	76	51.0%	149	76	51.3%	148	76	51.5%	147	76	51.8%	146	76	52.0%	146	76	52.3%	
	Other Non-Ferrous Metals (Total)	1.28%	496	323	65.0%	496	322	65.0%	492	322	65%	490	322	65.7%	487	322	66.0%	485	322	66.3%	482	322	66.7%	480	322	67.0%	477	321	67.3%	475	321	67.7%	472	321	68.0%	
	Total Metals	8.49%	3,291	1,821	55.3%	3,245	1,818	55.3%	3,208	1,817	56%	3,171	1,817	56.2%	3,134	1,817	56.2%	3,111	1,816	56.4%	3,101	1,816	56.7%	3,114	1,815	57.0%	3,167	1,815	57.3%	3,151	1,815	57.6%	3,135	1,814	57.9%	
	PET Containers	0.94%	364	182	50.0%	363	182	50.0%	361	182	50%	359	181	50.5%	358	181	50.9%	356	181	51.0%	354	181	51.3%	352	181	51.6%	350	181	51.8%	348	181	52.0%	347	181	52.3%	
HDPE Containers	0.87%	336	101	30.0%	335	101	30.0%	334	101	30%	332	101	30.3%	330	101	30.5%	328	101	30.8%	327	100	30.8%	325	100	30.9%	323	100	31.1%	322	100	31.2%	320	100	31.4%		
Other Plastic (3-7) Containers	0.17%	66	20	30.0%	66	20	30.0%	66	20	30%	66	20	30.3%	65	20	30.5%	65	20	30.6%	65	20	30.8%	64	20	30.9%	64	20	31.1%	64	20	31.2%	63	20	31.4%		
Film Plastic	Durables	5.74%	2,228	22	1.0%	2,223	22	1.0%	2,212	22	1%	2,200	22	1.0%	2,189	22	1.0%	2,178	1,333	61.2%	2,168	22	1.0%	2,155	22	1.0%	2,144	22	1.0%	2,133	22	1.0%	2,122	22	1.0%	
	Non-Durables	1.13%	1,214	24	2.0%	1,211	24	2.0%	1,205	24	2%	1,199	24	2.0%	1,192	24	2.0%	1,186	605	51.0%	1,180	24	2.1%	1,174	24	2.1%	1,168	24	2.1%	1,162	24	2.1%	1,156	24	2.1%	
	Packaging	1.69%	656	7	1.0%	653	7	1.0%	650	7	1%	646	7	1.0%	643	7	1.0%	640	622	81.6%	636	7	1.0%	633	7	1.0%	630	7	1.0%	627	7	1.0%	623	7	1.0%	
Other Plastic (Total)	8.08%	2,362	36	1.5%	2,357	36	1.5%	2,345	36	2%	2,333	36	1.5%	2,321	36	1.5%	2,308	1,532	66.3%	2,296	36															

7.1 - C&D Waste Projection Tables

Step 1. Planning Unit and Planning Period Selection

Please, select from the drop-down-list the name of your **planning unit** and the **planning period** of your **LSWMP**. Be aware that a LSWMP must be developed for a **10-year period**, and that your selection will be replicated on each one of the following tabs.

Planning Unit	Delaware County
Planning Period	2017-2027

Step 2. Construction & Demolition (C&D) Debris Material Composition Analysis

In order to identify the Materials Composition of the C&D Debris waste stream, it is necessary to define the sources of the waste first. Construction and demolition (C&D) Debris consists of waste that is generated during renovation, demolition or new construction of residential and non residential properties. It also includes the new construction and/or renovation of municipal infrastructure, such as roadways, park facilities, bike trails, bridges, etc. The user should estimate these values and enter them in the **purple cells**. The results are presented on the last right column under C&D Debris Waste Stream Composition. Be aware of color changes on the cells; whenever a category represents over 15% of the total generation, the cell will turn **red** to easily identify key categories on the waste stream. It will also aid with the selection of isolated initiatives, programs, and infrastructure for the solid waste management system.

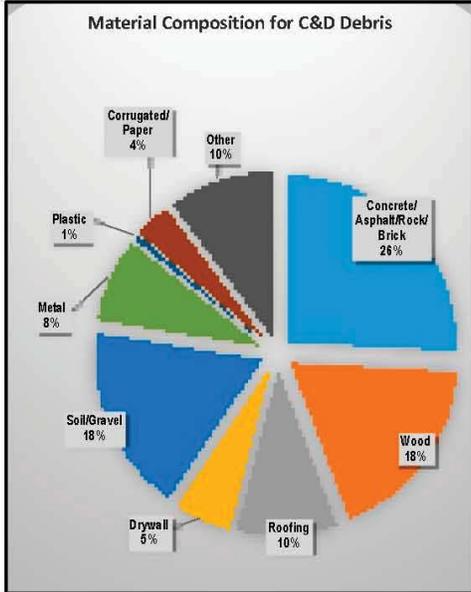
Note:
• The graphic displays the planning unit's C&D Debris generation data by material categories. It has been designed to help visualize the more representative categories of the waste stream.

Delaware County

2017-2027

		Generation source									
		Residential				Non-Residential (commercial-institutional)				Other Municipal Infrastructure	
		45.00%				30.00%				25.00%	
		New Construction	Renovation	Demolition	Combined Residential	New Construction	Renovation	Demolition	Combined Non-Residential	Renovation	
	20.00%	35.00%	45.00%	100.00%	20.00%	65.00%	15.00%	100.00%	100.00%		
Materials	Concrete/Asphalt/Rock/Brick	9.80%	16.10%	21.50%	17.27%	30.70%	19.10%	23.10%	22.02%	46.00%	
	Wood	29.90%	19.10%	25.70%	24.23%	22.70%	12.40%	24.20%	16.23%	10.50%	
	Roofing	6.00%	22.00%	6.10%	11.65%	2.10%	21.20%	5.10%	14.97%	0.00%	
	Drywall	15.60%	7.90%	5.10%	8.18%	4.60%	6.40%	4.30%	5.73%	0.00%	
	Soil/Gravel	11.30%	7.10%	18.50%	13.07%	13.10%	6.50%	15.60%	9.19%	38.00%	
	Metal	5.30%	11.30%	5.20%	7.36%	12.00%	15.50%	11.10%	14.14%	2.40%	
	Plastic	1.50%	0.70%	0.30%	0.68%	0.50%	0.70%	0.30%	0.60%	0.30%	
	Corrugated cardboard/Paper	9.30%	2.90%	3.10%	4.27%	7.10%	4.60%	4.20%	5.04%	0.30%	
	Other	11.30%	12.90%	14.50%	13.30%	7.20%	13.60%	12.10%	12.10%	2.50%	
	Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

C&D Debris Materials Composition (%)
100.00%
25.00%
19.40%
9.73%
5.40%
18.14%
8.15%
0.56%
3.51%
10.24%
100.00%



Step 3. Construction & Demolition (C&D) Debris Generation Projections

This step will estimate the amount of waste generated for each material based on the total amount of waste generated in that year. In the **purple cells** enter the amount of waste generated in the Planning Unit. It will be a known amount for the first year, **2016** and an estimate of what will be generated for each year of the planning period, **2017-2027**

Delaware County

2017-2027

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Materials	C&D Debris Materials Composition (%)	C&D Debris Generated (Tons)											
	Concrete/Asphalt/Rock/Brick	25.9%	3,519.3	3,501.7	3,484.2	3,466.8	3,449.5	3,432.2	3,415.1	3,398.0	3,381.0	3,364.1	3,347.3
	Wood	18.4%	2,502.1	2,489.5	2,477.1	2,464.7	2,452.4	2,440.1	2,427.9	2,415.8	2,403.7	2,391.7	2,379.7
	Roofing	9.7%	1,323.2	1,316.6	1,310.0	1,303.5	1,297.0	1,290.5	1,284.0	1,277.6	1,271.2	1,264.9	1,258.6
	Drywall	5.4%	734.2	730.5	726.9	723.2	719.6	716.0	712.4	708.9	705.3	701.8	698.3
	Soil/Gravel	18.1%	2,466.6	2,454.3	2,442.0	2,429.8	2,417.7	2,405.6	2,393.6	2,381.6	2,369.7	2,357.8	2,346.0
	Metal	8.2%	1,108.6	1,103.1	1,097.6	1,092.1	1,086.6	1,081.2	1,075.8	1,070.4	1,065.1	1,059.7	1,054.4
	Plastic	0.6%	76.3	75.9	75.5	75.2	74.8	74.4	74.0	73.7	73.3	72.9	72.6
	Corrugated cardboard/Paper	3.5%	477.2	474.8	472.4	470.0	467.7	465.3	463.0	460.7	458.4	456.1	453.8
	Other	10.2%	1,392.4	1,385.5	1,378.5	1,371.7	1,364.8	1,358.0	1,351.2	1,344.4	1,337.7	1,331.0	1,324.4
	Total	100.0%	13,600.0	13,532.0	13,464.3	13,397.0	13,330.0	13,263.4	13,197.1	13,131.1	13,065.4	13,000.1	12,935.1

NOTES:

- 0.5% annual estimated decline in C&D generation
- C&D generation tons for SWMC + nonSWMC activity
- C&D generation estimated at 35% of MSW generation

Historic records indicate C&D disposal accounts for 17% to 27% of combined C&D+MSW total
Recent records indicate C&D disposal accounts for 20% of combined C&D+MSW total

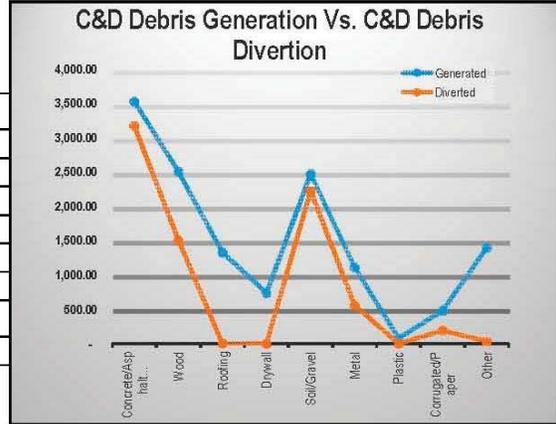
Step 4. Construction & Demolition (C&D) Debris Diversion Projections

Based on the total amount of C&D debris generated in the Planning Unit, which was entered in Step 3, this step will be used to calculate the % of this material that is diverted from the C&D debris waste stream. For this step, enter the amount of waste diverted for each material in the purple cells.

Delaware County **2017-2027**

Materials	C&D Debris Materials Composition (%)	2016		% C&D Diverted	
		C&D Debris Generated (Tons)	C&D Debris Diverted (Tons)		
Concrete/Asphalt/Rock/Brick	25.9%	3,519	3,167	90.0%	90.0%
Wood	18.4%	2,502	1,501	60.0%	60.0%
Roofing	9.7%	1,323	0	0.0%	0.0%
Drywall	5.4%	734	0	0.0%	0.0%
Soil/Gravel	18.1%	2,467	2,220	90.0%	90.0%
Metal	8.2%	1,109	554	50.0%	50.0%
Plastic	0.6%	76	0	0.0%	0.0%
Corrugated cardboard/Paper	3.5%	477	191	40.0%	40.0%
Other	10.2%	1,392	34	2.4%	balance
Total	100.0%	13,600.0	7,668	56.4%	

5,932



NOTES

C&D generation estimated at 35% of MSW generation, consistent with EPA & NYC published estimates

Step 5. Construction and Demolition (C&D) Debris Generation and Diversion Projections

This tab will be used to create goals for the amount of C&D debris the planning unit will divert for each year of the planning period. These goals will be entered as percentages, based on how much of the material generated that will be diverted for recycling or beneficial use. The diversion goal percentages will be entered in the purple cells for each material and each year of the planning period.

Delaware County

2017-2027

Materials	C&D Debris Materials Composition (%)	2016			2017			2018			2019			2020			2021			2022			2023			2024			2025			2026		
		C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted	C&D Debris Generated (Tons)	C&D Debris Diverted	% C&D Diverted			
Concrete/Asphalt /Rock/Brick	25.9%	3,519.3	3,167.4	90.0%	3,501.7	3,151.6	90.0%	3,484.2	3,151.5	90.5%	3,466.8	3,151.4	90.9%	3,449.5	3,151.3	91.4%	3,432.2	3,151.3	91.8%	3,415.1	3,151.2	92.3%	3,398.0	3,151.1	92.7%	3,381.0	3,151.0	93.2%	3,364.1	3,150.9	93.7%	3,347.3	3,150.9	94.1%
Wood	18.4%	2,502.1	1,501.2	60.0%	2,489.5	1,493.7	60.0%	2,477.1	1,493.7	60.3%	2,464.7	1,493.7	60.6%	2,452.4	1,493.6	60.9%	2,440.1	1,493.6	61.2%	2,427.9	1,493.5	61.5%	2,415.8	1,493.5	61.8%	2,403.7	1,493.5	62.1%	2,391.7	1,493.4	62.4%	2,379.7	1,493.4	62.8%
Roofing	9.7%	1,323.2	0.0	0.0%	1,316.6	0.0	0.0%	1,310.0	0.0	0.0%	1,303.5	0.0	0.0%	1,297.0	0.0	0.0%	1,290.5	0.0	0.0%	1,284.0	0.0	0.0%	1,277.6	0.0	0.0%	1,271.2	0.0	0.0%	1,264.9	0.0	0.0%	1,258.6	0.0	0.0%
Drywall	5.4%	734.2	0.0	0.0%	730.5	0.0	0.0%	726.9	0.0	0.0%	723.2	0.0	0.0%	719.6	0.0	0.0%	716.0	0.0	0.0%	712.4	0.0	0.0%	708.9	0.0	0.0%	705.3	0.0	0.0%	701.8	0.0	0.0%	698.3	0.0	0.0%
Soil/Gravel	18.1%	2,466.6	2,220.0	90.0%	2,454.3	2,208.9	90.0%	2,442.0	2,208.8	90.5%	2,429.8	2,208.8	90.9%	2,417.7	2,208.7	91.4%	2,405.6	2,208.6	91.8%	2,393.6	2,208.6	92.3%	2,381.6	2,208.5	92.7%	2,369.7	2,208.5	93.2%	2,357.8	2,208.4	93.7%	2,346.0	2,208.4	94.1%
Metal	8.2%	1,108.6	554.3	50.0%	1,103.1	551.5	50.0%	1,097.6	551.5	50.3%	1,092.1	551.5	50.5%	1,086.6	551.5	50.8%	1,081.2	551.5	51.0%	1,075.8	551.5	51.3%	1,070.4	551.5	51.5%	1,065.1	551.5	51.8%	1,059.7	551.4	52.0%	1,054.4	551.4	52.3%
Plastic	0.6%	78.3	0.0	0.0%	75.9	0.0	0.0%	75.5	0.0	0.0%	75.2	0.0	0.0%	74.8	0.0	0.0%	74.4	0.0	0.0%	74.0	0.0	0.0%	73.7	0.0	0.0%	73.3	0.0	0.0%	72.9	0.0	0.0%	72.6	0.0	0.0%
Corrugated /Paper	3.5%	477.2	190.9	40.0%	474.8	189.9	40.0%	472.4	189.9	40.2%	470.0	189.9	40.4%	467.7	189.9	40.6%	465.3	189.9	40.8%	463.0	189.9	41.0%	460.7	189.9	41.2%	458.4	189.9	41.4%	456.1	189.9	41.6%	453.8	189.9	41.8%
Other	10.2%	1,382.4	34.0	2.4%	1,385.5	33.8	2.4%	1,378.5	33.8	2.5%	1,371.7	33.8	2.5%	1,364.8	33.8	2.5%	1,358.0	33.8	2.5%	1,351.2	33.8	2.5%	1,344.4	33.8	2.5%	1,337.7	33.8	2.5%	1,331.0	33.8	2.5%	1,324.4	33.8	2.6%
Total	100.0%	13,800.0	7,667.8	56.4%	13,532.0	7,629.5	56.4%	13,464.3	7,629.3	56.7%	13,397.0	7,629.1	56.9%	13,330.0	7,628.9	57.2%	13,263.4	7,628.7	57.5%	13,197.1	7,628.5	57.8%	13,131.1	7,628.3	58.1%	13,065.4	7,628.1	58.4%	13,000.1	7,627.9	58.7%	12,935.1	7,627.7	59.0%
Net Disposed			5,932			5,903			5,835			5,768			5,701			5,635			5,569			5,503			5,437			5,372			5,307	

CHAPTER 8 -PUBLIC COMMENT OPPORTUNITIES

8.1 Public Input Opportunities

The County encourages comment on the Draft Local Solid Waste Management Plan (DLSWMP) and a 30 day comment period will be initiated with the publication of this document.

An open house facility tour will be held **November 18, 2017** to allow the public to view the facility and meet with operational staff. Guided informational tours will be provided.

8.1.1 Internet Access

The DLSWMP will be posted on the internet for viewing upon publication for public comment. The website address is: www.co.delaware.ny.us

8.1.2. Public Notification

A notice referencing the County's website and the DLSWMP posting will be forwarded to all Town Supervisors, Village Mayors, local solid waste haulers, County Planning Board, NYSDEC officials, and NYCDEP officials. Additionally, a legal notice will be posted in area newspapers indicating the DLSWMP may be viewed through our website and that hard copies are available upon request. Hard copies will be sent to all public libraries in Delaware County.

8.1.3. Time Period for Public Comment

A 30 day comment period will be initiated with the publication of this document, anticipated in early November 2017. Comments received from the public will be addressed in the Final LSWMP.

APPENDIX

- APPENDIX A - List of Haulers to SWMC
- APPENDIX B - Landfill Siting Study Site Ranking 1992 and 2017
- APPENDIX C - Map of Town Transfer Stations and Solid Waste Management Center
- APPENDIX D - Compost Facility Schematic
- APPENDIX E - Material Recovery Facility Schematic
- APPENDIX F - Proposed Long Term Landfill Development Plan for Solid Waste Management Center
- APPENDIX G - No Importation of Out of County Waste Local Law No. 5 of 1991
- APPENDIX H - Recycling Law Local Law No. 2 of 1992
- APPENDIX I - Mission Statement
- APPENDIX J - Delaware County SWMC Guidelines Flyer & Recycling Insert 2015

APPENDIX A - List of Haulers to SWMC

ID	HAULER	ADDRESS				TER RITORY		
APINC	A&P DISPOSAL	PO BOX 152	UNADILLA	NY 13449	(607)869-2415	PATRICIA DEFOREST	SIDNEY	
BLOOM	BLOOMVILLE DISPOSAL	PO BOX 752	BLOOMVILLE	NY 13739	(607)638-1160	GEORGE HAYNES	STAMFORD	
DCAS	DELCOAG SERVICE	2103 ELK CREEK RD	DELHI	NY 13753	(607)746-3211	DAVE MUELLER(607-44919)	DELHI	
DELTON	DELTON SANITATION	PO BOX 246	OGDENST	UJALTON	NY 13756	(607)865-7350	SCOTT BENSON(865-6859)SHDP	UJALTON
KATEN	KATEN ED	2320 C.TY. HJY 18	DEPOSIT	NY 13754	(607)467-5725		DEPOSIT	
KIRBY	KIRBY	PEAWS BROOK	DELHI	NY 13753	(607)746-2509	MIKE(746-3664)	DELHI	
LAING	LAING	RR 1 BOX 261L	BAINBRIDGE	NY 13733	(607)895-6365	PAUL LAING& CAROLINE	SIDNEY	
MIKES	MIKES HAULING	RD 1 BOX 168	24203 STATE HIGHWAY 97	HANDOCK	NY 13763	(607)637-3464	BRIAN/ANDREA	HANDOCK
SHOU	SHOU, BRUCE	2618 C.TY HIGHWAY 14	FRANKLIN	NY 13775	(607)829-6303		FRANKLIN	
TCR	TRI COUNTY REFUSE		SIDNEY CENTER	NY -	(607)869-2069		SIDNEY CENTER	
TJEBBIE	TJEBBIE, JOHN	69 LIBERTY ST	UJALTON	NY			UJALTON	
VETS	CASELLA	49 LOUVER RIVER ST	ONEONTA	NY 13820	(800)292-0297	CASELLA FAX(432-1879)	DELHI	
UJARNER	UJARNER HARRY	HC 86 BOX 19	BEEBEHILL	DEPOSIT	NY 13754	(607)467-3129	HARRY	DEPOSIT
UJRE	UJASTEREDCOVERY	122 WALLEY RD	SIDNEY	NY -	(607)663-5616	DENNY REED	SIDNEY	
UJRIGHTS	UJRIGHTS DISPOSAL	RD 1 BOX 365	DEPOSIT	NY 13754	(607)467-2737	STEVE URGHT	DEPOSIT	

NOTE There are approximately 900 registered users for the Delaware County Solid Waste Management Center.
 The private haulers listed above represent the significant majority of waste & recyclable deliveries.

APPENDIX B - Landfill Siting Study Site Ranking 1992 and 2017

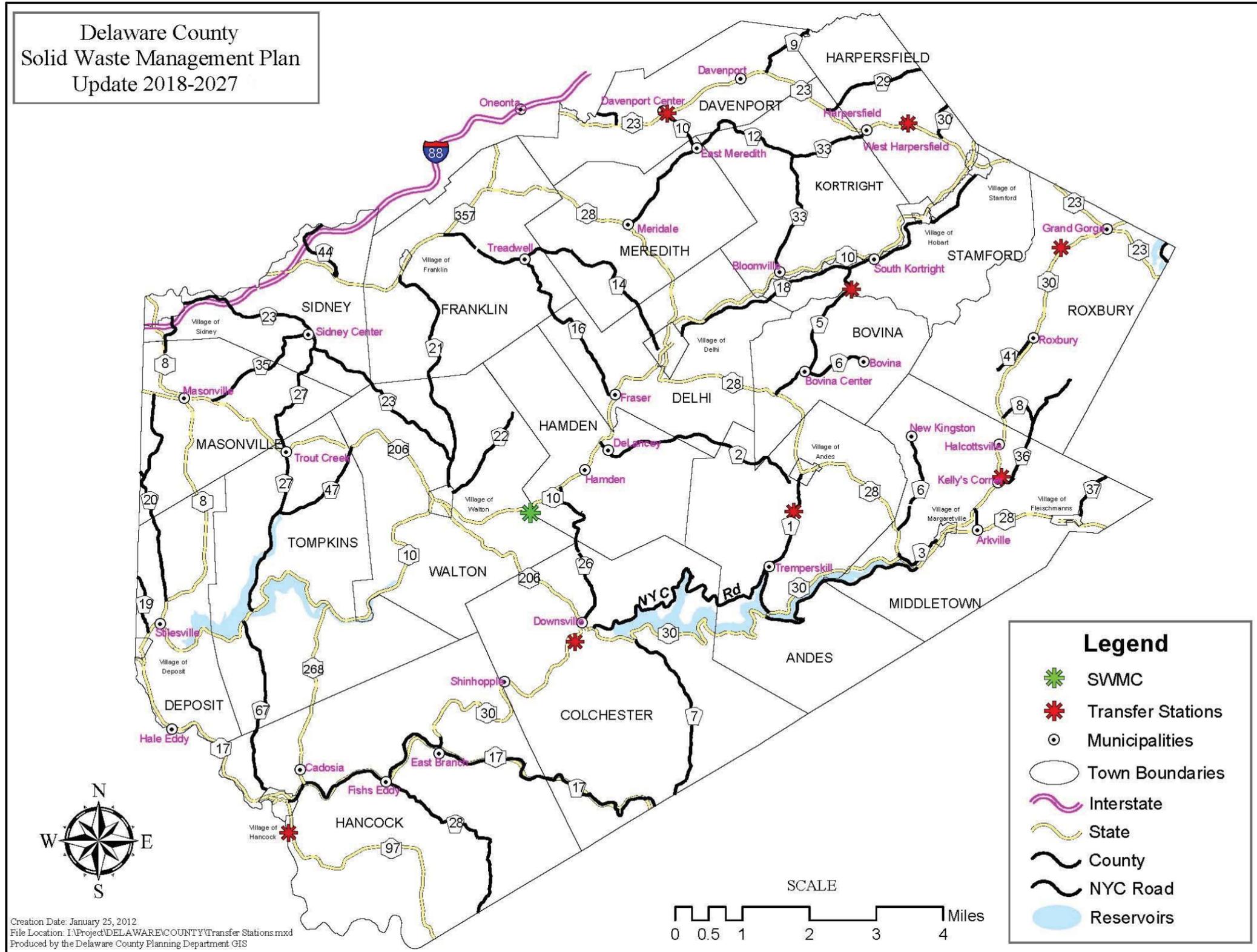
This summary table includes the final site list and rankings from the 1992 Delaware County Landfill Siting Study, along with current day information relative to the original identified sites that may influence the availability and cost of development for each site today.

DELAWARE COUNTY LANDFILL SITING STUDY - 1992 SITE SUMMARY TABLE							
Site Rank	Site Name	Rank Score	Agricultural District (1992)	Watershed	Acres (1992)	Number of Impacted Properties (2017)	Agricultural District (AD) Agricultural Easement (AE) Conservation Easement (CE) NYC Purchased (NYC) (Status in 2017)
1	DEL-5	136	Y	NYC/Susq	530.13	19 properties	AD
2	DEL-4	133	Y	NYC	284.18	7 properties	AD
3	SWMC	128	N	NYC	237.09	SWMC 197ac³⁰	none
4	DEL-6	125	Y	Susq	338.28	15 properties	AD
5	ONE-1	119	Y	Susq	560.27	14 properties	AD
6	ONE-7	119	Y	Susq	321.07	19 properties	AD
7	FRA-2	117	N	NYC	257.45	12 properties	AD
8	UNA-3	117	N	Susq	292.32	11 properties	none
9	ONE-6	114	Y	Susq	197.68	14 properties	AD
10	BLO-2	110	Y	NYC	509.33	9 properties	AD, CE
11	DEL-7	110	Y	Susq	488.31	14 properties	AD
12	FRA-6	109	Y	Susq	343.26	16 properties	AD
13	ONE-3	109	Y	Susq	351.11	17 properties	AD
14	TRO-2	109	N	NYC	259.37	8 properties	AD
15	TRE-4	108	Y	Susq	265.31	11 properties	AD
16	FRA-3	106	N	NYC/Susq	415.58	12 properties	AD, NYC
17	BLO-3	104	N	NYC	349.84	26 properties	none
18	ONE-2	100	Y	Susq	124.32	9 properties	AD
19	ONE-5	100	Y	Susq	255.96	24 properties	AD
20	TRE-5	99	Y	Susq	307.18	6 properties	AD
21	BLO-1	98	Y	NYC	304.17	7 properties	AD
22	FRA-10	95	N	Susq	379.36	15 properties	AD
23	DEL-3	89	Y	NYC	259.45	9 properties	AD, AE
Note: "NYC" refers to NYC Watershed. "Susq" refers to Susquehanna Watershed.							

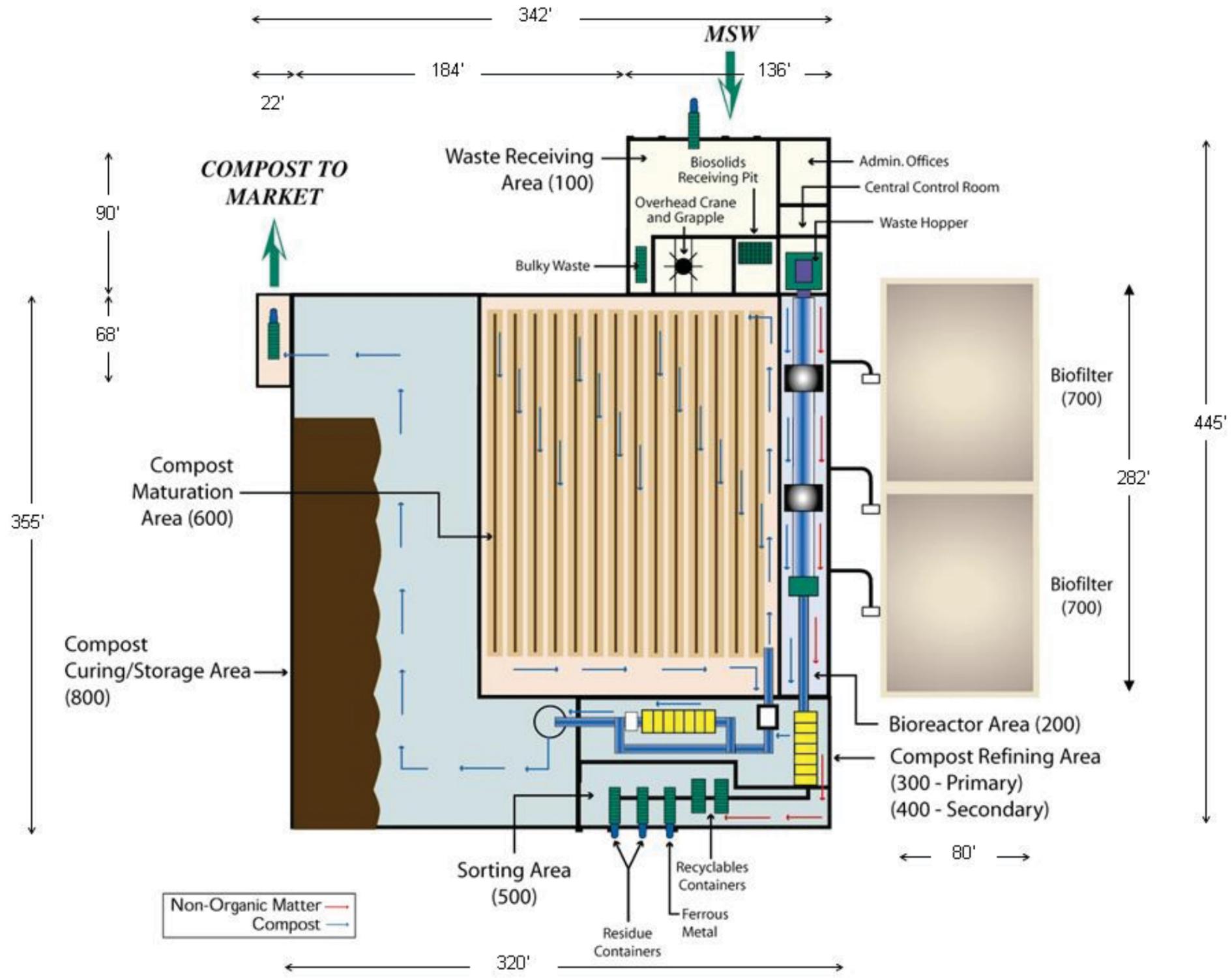
³⁰ The site of the existing Solid Waste Management Center (SWMC) is ranked number three from the original landfill siting study. Of the 237.09 acres originally identified, 197 acres are owned by Delaware County and comprised the entirety of current land holdings for the SWMC.

DELAWARE COUNTY LANDFILL SITING STUDY - 1992 Site Selection Process	
FIRST CUT - first 100 possible sites	
Phase 1 - Exclusions NYSDEC regulations specify conditions where new landfill facilities cannot be placed, except under very unusual conditions. Lands categorized as excluded were eliminated in Phase 1. NYCRR Part 360-1-14 and 360-2-12c	<ul style="list-style-type: none"> • Principal Aquifers • Wetlands and Water Bodies • Floodplains • Endangered Species • Public Parks and Forest Preserves • Airports • Agricultural Lands • Public Water Supplies • Steep Slopes
Phase 2 - Preliminary Suitability - Transportation Waste generation projections were used to identify the center of waste generation. Recognizing that transportation costs are substantial in provision of waste management services, limiting distances were established.	<ul style="list-style-type: none"> • 15 mile radius from center of waste generation • 1 mile from a major road
Phase 3 - Preliminary Suitability - Soils Areas identified with satisfactory quantities and types of soils to sustain landfill stability and minimize infiltration potential.	<ul style="list-style-type: none"> • "Till shadow" areas offering greatest soil depths • Minimum site size 30 acres octagonal, >30 acres rectangular sites • Volunteer sites
SECOND CUT - short list of 22 possible sites	
Phase 4a - Site Evaluations County Exclusions NYCRR Part 360 consideration factors	<ul style="list-style-type: none"> • Population Density • Proximity to Surface Water • Community Water Supplies • Average Slope of Potential Fill Area • Wetlands
FINAL RANKINGS - 22 identified sites plus Solid Waste Management Center - 23 total sites evaluated	
Phase 4b - Site Evaluations Ranking scale criteria and weighting system utilized to calculate final site score. Score = rank X weights	<ul style="list-style-type: none"> • The sites were individually evaluated and ranked according to a weighted scale of fifteen (15) criteria.
RANKING SCALE CRITERIA - Phase 4b	
<ol style="list-style-type: none"> 1. Population Density (lower population density surrounding potential site preferred) 2. Availability of Existing Transportation Facility (access to State owned road preferred over County or Town road) 3. Road Safety to Nearest State Road (roads rated for safety features such as limited site distance, sharp curves, dangerous intersections) 4. Access Road Feasibility (shorter distance required for facility access from public roadway preferred) 5. Proximity to Sensitive Receptors (absence of schools, churches, hospitals, summer camps preferred) 6. Proximity to Utility Lines (presence of electric service lines and utilities preferred) 7. Land Use Regulations (compatibility with local land use restrictions preferred) 8. Visibility of Site (sites not readily visible to public places and roadways preferred) 9. Proximity to Natural & Cultural Resources (minimal number of impacted resource including public parks, critical environmental areas, cemeteries, historic districts preferred) 10. Active Farm Lands (absence of active farm land preferred) 11. Proximity to Water Supplies (remote distance from public and private water supplies preferred) 12. Distance from Center of Waste Generation (shorter distances preferred) 13. Availability of Site (public ownership or tax delinquency preferred over private land ownership) 14. Size of Potential Fill Area (minimum 30 acre site size, with preference to larger acreage available for development) 15. Availability of Cover Soils (on-site or near by significant cover material sources preferred) 	

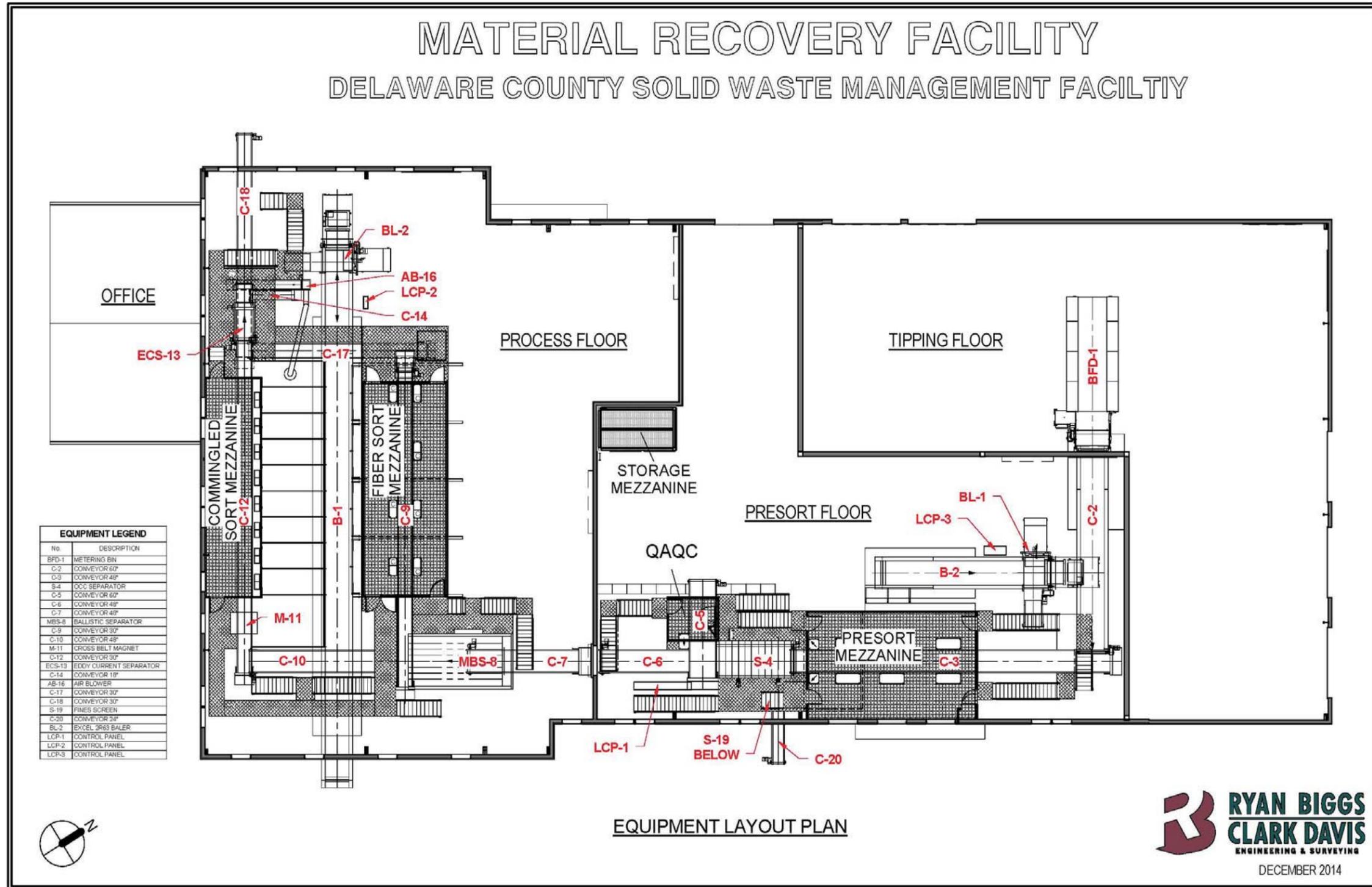
APPENDIX C - Map of Town Transfer Stations and Solid Waste Management Center



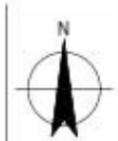
APPENDIX D - Compost Facility Schematic



APPENDIX E - Material Recovery Facility Schematic



APPENDIX F - Proposed Long Term Landfill Development Plan for Solid Waste Management Center



DELAWARE COUNTY DPW
 LANDFILL EXPANSION PERMIT MODIFICATION
**PROPOSED DEVELOPMENT
 PLAN**

Job Number 111-44194
 Revision -
 Date SEPT 2017
Figure 03

One Remington Park Drive, Cazenovia NY 13035 USA T 1 315 679 5500 F 1 315 679 5501 E cazmail@ghd.com W www.ghd.com

Plot Date: 18 September 2017 - 9:32 AM Cad File No: G:\111\11144194\Delaware Co LP Permit Mod\CADD Drawings\Figures\Figure 03 - Proposed Development Plan.dwg

APPENDIX G - No Importation of Out of County Waste Local Law No. 5 of 1991

(Use this form to file a local law with the Secretary of State.)

Text of law should be given as amended. Do not include matter being eliminated and do not use italics or underlining to indicate new matter.

County
~~City~~ of DELAWARE
~~Town~~
~~Village~~

Local Law No. 5 of the year 1991

A local law MAKING IT UNLAWFUL TO DUMP OUT OF COUNTY WASTE AT A
(Insert Title)
DELAWARE COUNTY SOLID WASTE DISPOSAL FACILITY

Be it enacted by the Board of Supervisors of the
(Name of Legislative Body)

County
~~City~~ of DELAWARE
~~Town~~
~~Village~~ as follows:

SECTION I: DEFINITIONS - DEFINITION OF SOLID WASTE: The term "waste" shall include, but shall not be limited to the following:

BULKY WASTE - Large items of refuse including, and limited to, furniture, auto parts, stumps and appliances such as washers, refrigerators, TV sets, water heaters, etc.

COMMERCIAL WASTE - Includes solid waste generated by stores, offices, and other activities that do not actually manufacture a product or process raw materials.

CONSTRUCTION AND DEMOLITION WASTE - Includes the waste building materials and rubble resulting from construction, remodeling, repair, and demolition operations on houses, commercial buildings, pavements and other structures.

GARBAGE - Any putrescible solid and semi-solid animal or vegetable wastes resulting from the production, handling, preparation, cooking, serving or consumption of food or food materials.

INDUSTRIAL WASTE - Includes residue, sludges, oils, solvents, spent chemicals, acids, and similar wastes that result from industrial processes and manufacturing.

REFUSE - Any putrescible or nonputrescible solid waste, except human excreta, but including garbage, rubbish, ashes, street cleanings, commercial, industrial, and institutional wastes and construction wastes resulting from the operation of a contractor.

RUBBISH - Any nonputrescible solid waste, excluding ashes, such as cardboard, paper, plastic, metal or glass food containers, rags, waste metal, yard clippings, small pieces of wood, excelsior, rubber, leather, and crockery and other waste materials.

(If additional space is needed, attach pages the same size as this sheet, and number each.)

(1)

SCAVENGER WASTE - Water-carried human or animal wastes from septic tanks or cesspools.

SLUDGE - A semi-liquid sediment resulting from industrial, municipal, institutional or commercial processes.

SOLID WASTE - Any garbage, refuse, rubbish, bulky waste, other waste, or any combination thereof with insufficient liquid content to be free flowing.

TOXIC WASTE - Any element or compound which when discharged on land, into the air, or into or upon waters or ground water, presents an imminent and substantial danger to public health or welfare and aquatic organisms, including, but not limited to, fish, shellfish and terrestrial life.

TRASH - All solid wastes not prohibited in the general rules and regulations.

YARD WASTES - Solid material such as grass, leaves, branches, vegetation, etc., normally resulting from yards.

SECTION II: It shall be unlawful for any person, association, partnership, or corporation to deposit waste at any town or County owned solid waste disposal facility or at the Delaware County Solid Waste Management Center from sources outside of the County of Delaware. Only waste generated from within the County of Delaware shall be deposited at said facilities, unless specifically authorized by the Board of Supervisors.

SECTION III: Any violation of this law shall be deemed an offense and shall be punishable by a fine not to exceed \$500.00 for each and every offense.

SECTION IV: In addition to the fine specified in Section III, any person, association, partnership, or corporation, found to have deposited waste at a town or County owned solid waste disposal facility or at the Delaware County Solid Waste Management Center, which has been generated outside of the County of Delaware, unless specifically authorized by the Board of Supervisors, may be barred and prohibited from further use of said facilities.

SECTION V: Nothing herein contained shall be construed to prevent the County of Delaware from initiating a civil proceeding to enjoin a violation of this law or any of the rules and regulations for the operation of any town or County owned solid waste disposal facility or the Delaware County Solid Waste Management Center.

SECTION VI: This Local Law shall take effect immediately.

APPENDIX H - Recycling Law Local Law No. 2 of 1992

Text of law should be given as amended. Do not include matter being eliminated and do not use italics or underlining to indicate new matter.

County
~~City~~ of DELAWARE
~~Town~~
~~Village~~

Local Law No. 2 of the year 19 92.

A local law AMENDING LOCAL LAW NO. 1 OF 1992
(Insert Title)

Be it enacted by the Board of Supervisors of the
(Name of Legislative Body)

County
City of Delaware as follows:
Town
Village TITLE: RECYCLING LAW

Be it enacted by the Delaware County Board of Supervisors, as follows:

SECTION 1.0 TITLE

1.1 This law shall be known as the "Recycling Law".

SECTION 2.0 DECLARATION OF PURPOSE

2.1 The Public Works Committee of the Delaware County Board of Supervisors recognizes the importance of recycling as a cost effective and environmentally sound method of solid waste management. It shall be the purpose of this law to encourage maximum recycling practices on the part of each and every household, business, and institution within Delaware County. It shall further be the purpose of the Delaware County Recycling Law to establish, implement and enforce minimum recycling related practices and procedures to be applicable to all waste generators disposing of solid waste within the County of Delaware.

SECTION 3.0 AUTHORITY

3.1 This local law is hereby enacted pursuant to the authority granted by section 10 and section 120-aa of the New York State Municipal Home Rule Law.

(If additional space is needed, attach pages the same size as this sheet, and number each.)

(1)

DOS-239 (Rev. 7/90)

SECTION 4.0 DEFINITIONS

4.1 RECYCLABLE MATERIALS: Those materials designated by the Commissioner of the Delaware County Department of Public Works for inclusion in the mandatory recycling or recycling separation law, initially including the following:

4.1.1 CORRUGATED CARDBOARD: Corrugated cardboard boxes, containers and packaging which are cleaned of contamination by food wastes, adhesives, metals or plastics and which have been flattened for transport. This does not include press board or craft paper.

4.1.2 GLASS: Clear, green and amber glass jars, bottles and containers that have been rinsed and caps removed. This term excludes ceramic, window glass, auto glass, mirror and kitchenware.

4.1.3 METAL FOOD CANS: Metal food cans, jars and containers which are rinsed. This term excludes aerosol cans, paint cans and metal containers that contained hazardous liquids.

4.1.4 NEWSPAPERS: Common machine finished paper made chiefly from wood pulp used for printing newspapers. Must be dry and free of contaminants. This term excludes glossy finished papers, including inserts, and magazines.

4.1.5 HDPE PLASTIC: High Density Polyethylene plastic milk jugs and detergent bottles which are empty, rinsed and caps removed. This term excludes all film, vinyl, rigid and foam plastic materials.

4.1.6 PET PLASTIC: Polyethylene Terephthalate plastic beverage containers which are empty, rinsed and caps removed.

4.1.7 OTHER RECYCLABLES: Any additional items designated by the Commissioner of the Delaware County Department of Public Works as provided for in section 6.2.

4.1.8 TIRES: Rubber tires from automobiles, trucks, farm machinery and any other motorized vehicle.

4.1.9 WHITE GOODS: Major household appliances including refrigerators, washing machines, dryers, stoves, dishwashers, water heater tanks and similar items.

4.2 MATERIALS RECOVERY FACILITY: A public facility approved by the Commissioner of the Delaware County Department of Public Works for receiving and processing recyclable materials into marketable commodities.

4.3 DROP OFF CENTER: A publicly operated facility approved

by the Commissioner of the Delaware County Department of Public Works where a person can deliver their recyclable materials.

4.4 SEPARATION: The segregation of disposable materials into recyclable materials and non-recyclable garbage at the site of the waste generator.

4.5 WASTE GENERATOR: Any person/persons or legal entity which produces waste requiring off-site disposal.

4.6 PRIVATE WASTE HAULER: Any person or business who contracts or otherwise arranges with the waste generator to collect and transport recyclable and non-recyclable waste materials for disposal.

SECTION 5.0 GENERAL PROVISIONS

5.1 Every WASTE GENERATOR including governmental entities in Delaware County shall separate RECYCLABLE MATERIALS from other non-recyclable waste and shall further separate recyclable material by the type of material as defined or designated under Section 4.1.

5.2 RESIDENTIAL HOUSEHOLDS shall make RECYCLABLE MATERIAL, separate by type of item available for collection by a RECYCLABLE COLLECTOR separate from non-recyclable waste on a schedule established by the recyclables collector. Or shall deliver or cause to be delivered SEPARATE RECYCLABLE MATERIAL to a DROP OFF CENTER or MATERIALS RECOVERY FACILITY.

5.3 It shall be a violation for a WASTE GENERATOR or a RECYCLABLE COLLECTOR to attempt to dispose of RECYCLABLE MATERIALS as waste or to fail to separate recyclable material by type under section 4.1 as defined or designated.

5.4 If plastic bags are used for non-recyclable waste, these plastic bags must be clear plastic. This provision is not applicable to waste generators that do not collect waste in plastic bags.

SECTION 6.0 ADMINISTRATION

6.1 The administration of this law shall be the responsibility of the Commissioner of the Delaware County Department of Public Works who shall take such action as is appropriate and consistent with the intent and provisions of this law.

6.2 The Commissioner of the Delaware County Department of Public Works is empowered to designate and define in writing additional recyclable materials as "other recyclables" for purposes of Section 4.1.7. Such written designation and definitions shall be filed in the office of the Clerk of the Delaware County Board of Supervisors. The Commissioner may from time to time issue a list of recyclables and otherwise inform the public concerning the

recycling program.

6.3 The Commissioner of the Delaware County Department of Public Works shall have authority to approve and/or disapprove one or more "Materials Recovery Facility" and/or "Drop Off Center" as defined in Section 4 of this law. The Commissioner shall from time to time issue a written list of said approved facilities, a copy of which shall be filed in the office of the Clerk of the Delaware County Board of Supervisors and available for public inspection.

6.4 The Board of Supervisors may by resolution establish a schedule of fees for the disposal of waste items including recyclables.

SECTION 7.0 ENFORCEMENT

7.1 Enforcement of the provisions of this law shall be by any law enforcement officer or agency exercising jurisdiction within Delaware County and by any County official acting in his or her official capacity.

7.2 In addition to any fines or penalties provided for herein, the County may utilize any other remedy including injunction available from a court of proper jurisdiction.

SECTION 8.0 CRIMINAL PENALTIES

8.1 Failure of a WASTE GENERATOR to comply with the provisions of this law shall be designated as a violation and shall be punishable by a fine of Fifteen Dollars (\$15.00) for the first offense; Thirty Dollars (\$30.00) for the second offense within twelve (12) months; Fifty Dollars (\$50.00) for the third offense within twelve months, and One Hundred Dollars (\$100.00) for each subsequent offense within twelve months.

8.2 Failure of a PRIVATE WASTE HAULER OR DROP OFF CENTER to comply with this law shall be a designated violation and shall be punishable by a fine of Two Hundred Fifty Dollars (\$250.00) for the first offense; Five Hundred Dollars (\$500.00) for the second offense within twelve (12) months and One Thousand Dollars (\$1,000.00) for each subsequent offense within twelve (12) months.

8.3 One hundred percent (100%) of the criminal fines collected in the enforcement of this law shall be retained by the enforcing municipality for which the sentencing Court sits and shall be used as follows: fifty percent (50%) to support the enforcement of this law and fifty percent (50%) to support County recycling education programs.

SECTION 9.0 CIVIL PENALTIES

9.1 In addition to the criminal fines imposed under sections 8.1 and 8.2 above, the offender shall pay a civil penalty in an additional amount equal to the additional cost of disposal.

9.2 The County shall have the right to pursue civil penalty or other remedies regardless of whether a criminal proceeding is, has been or is to be commenced.

9.3 Should an offender not make payment of a fine or penalty within thirty (30) days of imposition, said offender shall be banned from the use of any Delaware County Solid Waste Facility until payment is made.

9.4 All civil penalties shall be payable directly to the Delaware County Treasurer and utilized by the Commissioner of Delaware County Department of Public Works for recycling purposes.

SECTION 10 SAVINGS CLAUSE

If any part of this local law is found to be illegal by a court of competent jurisdiction, the remaining parts hereof shall remain in full force and effect.

SECTION 11 EFFECTIVE DATE

11.1 This Recycling Law shall become effective on June 15, 1992.

COMMITTEE APPROVAL
BY: <i>C. LaFever</i>
DATE: <i>12/17/96</i>
BY PHONE: <input type="checkbox"/>
BY PERSON: <input checked="" type="checkbox"/>
PREFILED: <input checked="" type="checkbox"/>
NOT PREFILED: <input type="checkbox"/>

LOCAL LAW INTRO NO.

**TITLE: A LOCAL LAW TO AMEND SECTION 5.3 OF
LOCAL LAW NO. 2 OF 1992 - RECYCLING LAW**

BE IT ENACTED, by the Board of Supervisors of the County of Delaware as follows:

WHEREAS, Local Law No. 2 of 1992 established rules for the Recycling Law of Delaware County; and

WHEREAS, it is necessary to clarify the responsible role performed by the Private Waste Hauler.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF THE COUNTY OF DELAWARE as follows:

Section 5.3 of Local Law No. 2 of 1992 shall read, (Underlined material is added)

5.3 It shall be a violation for a WASTE GENERATOR, PRIVATE WASTE HAULER or a RECYCLABLE COLLECTOR to attempt to dispose of RECYCLABLE MATERIALS as waste or to fail to separate recyclable material by type under section 4.1 as defined or designated.

APPENDIX I - Mission Statement

RESOLUTION NO. 67

**TITLE: MISSION STATEMENT
MATERIALS RECOVERY FACILITY
DEPARTMENT OF PUBLIC WORKS**

WHEREAS, the Delaware County Solid Waste Management Plan was originally developed in 1974 as a site for solid waste services to all residents of Delaware County; and

WHEREAS, the Delaware County Department of Public Works – Solid Waste Division has developed capacity and services at the Solid Waste Management Center for a broad range of solid waste services managed by, for and largely within Delaware County borders; and

WHEREAS, a recognition of the Board of Supervisors' long standing position that County residents are best served by the locally available and locally managed solid waste services; and

WHEREAS, a clearly defined and stated Mission Statement will assist in long term guidance necessary to insure the continued provision of services to area residents.

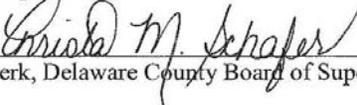
NOW, THEREFORE, BE IT RESOLVED that the Delaware County Board of Supervisors, adopt the following Mission Statement as guiding principles for the Delaware County Department of Public Works Solid Waste Division in the operation and planning for the Delaware County Solid Waste Management Center

MISSION STATEMENT: To provide locally-controlled, long-term, comprehensive, cost-competitive, and environmentally-sound solid waste disposal, recycling, composting and recovery services for all of Delaware County.

State of New York
County of Delaware

I, Christa M. Schafer, Clerk of the Board of Supervisors of Delaware County, do hereby certify that the above is a true and correct copy of a resolution adopted by said Board on the 24th day of April 2013 and the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Board at Delhi, New York, this 24th day of April 2013.


Clerk, Delaware County Board of Supervisors

APPENDIX J - Delaware County SWMC Guidelines Flyer & Recycling Insert 2015

WHAT WE DO

RECYCLING CENTER

Full service Materials Recovery Facility for your METAL, PLASTIC & GLASS CONTAINERS, CARDBOARD, and MIXED PAPER. Your recyclables are sold to manufacturers both domestic and international to fully close the recycling loop.



COMPOST FACILITY

We blend common garbage, grass clippings, leaves, and commercial wastes to capture valuable organic matter and minimize reliance on the landfill. Landscape compost is available for sale from our facility. Ask at the scale house for information.

LANDFILL DISPOSAL

Safe and environmentally sound disposal services for asbestos, C&D debris, contaminated soils, industrial wastes, and residuals.



CLEAN SWEEP

Dispose of household hazardous wastes - fluorescent bulbs, mercury thermostats, pool & spa chemicals, pesticides, automotive fluids, oil paints and more - at CLEAN SWEEP.

**DELAWARE COUNTY
SOLID WASTE
MANAGEMENT CENTER**

We encourage Delaware County residents, businesses, and institutions to take full advantage of these **ADDITIONAL FREE RECYCLING opportunities...**

- Antifreeze
- Appliances
- Automotive Batteries
- Clothing & Textiles
- Electronics
- Freon Containing Appliances
- Household Batteries
- Metal Scrap
- Motor Oil & Oil Filters
- Tires & Inner Tubes
- Christmas Trees (seasonal)

Questions?

SWMC Main Directory (607)865-5805
Scale House Information (607)865-5805 x216
DPW Delhi Office (607)832-5800

www.co.delaware.ny.us



Delaware County
**SOLID WASTE
MANAGEMENT CENTER**

Compost Facility * Recycling Center * Landfill Disposal



32230 State Hwy 10, Walton

Hours:

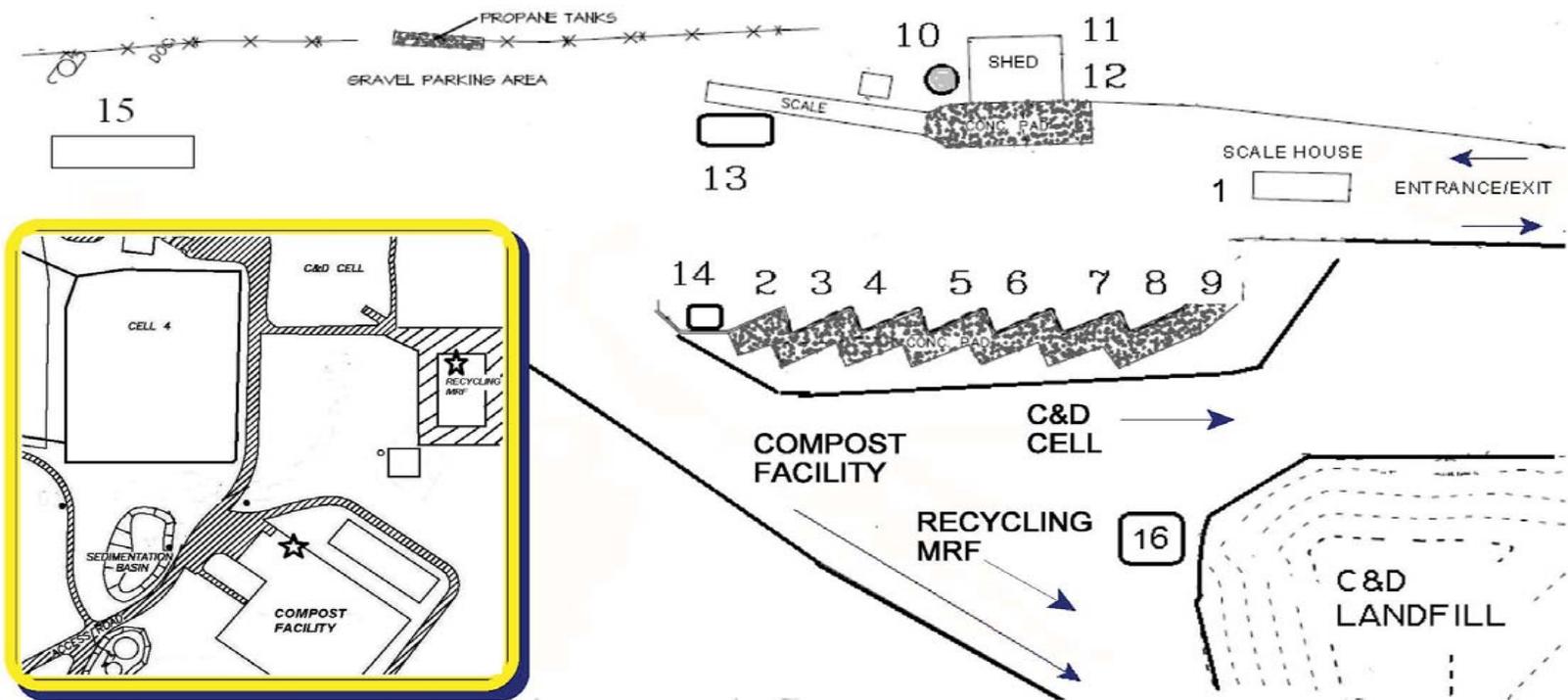
**7:30am to 2:30pm
Tuesday - Saturday**

Closed Sunday, Monday & Holidays

HOLIDAY CLOSURES

New Year's Day July 4th
Veteran's Day Thanksgiving
Christmas Day

SWMC CONVENIENCE AREA MAP



- | | | | |
|----------------------------|-------------------------------------|----------------------------|----------------------|
| 1. Scale House Entrance | 5. Cardboard | 9. Furniture & Mattresses | 13. Mixed Paper |
| 2. Clean Wood | 6. Metal, Plastic, Glass Containers | 10. Waste Oil & Antifreeze | 14. Clothing |
| 3. C&D Debris | 7. Bulk Scrap Metal | 11. Batteries | 15. Freon Appliances |
| 4. Garbage, Grass & Leaves | 8. Christmas Trees (seasonal) | 12. Electronics | 16. Tires |

FOOD SCRAPS, GRASS CLIPPINGS & LEAVES ARE COMPOSTED WITH YOUR HOUSEHOLD GARBAGE
 (NO BRUSH, LIMBS OR TREES)

Delaware County Curbside Bin Recycling

Recycle Outside the Bin
SOLID WASTE MANAGEMENT CENTER
Walton, NY

METAL, PLASTIC & GLASS CONTAINERS



CARDBOARD



PAPER



YES !!

METAL, PLASTIC & GLASS CONTAINERS

Metal Food & Beverage Containers, Aluminum Cans, Pans & Trays, Plastic #1 - #7 Bottles, Jugs, & Containers, Glass Bottles, Jars & Containers

CARDBOARD

Corrugated Clean Cardboard, 36" or smaller

MIXED PAPER

Newspaper, Magazines, Junk Mail, Office Paper, Computer Paper, Copier Paper, Phone Books



APPLIANCES & SCRAP METAL

White Goods Appliances are Recycled with Bulk Scrap Metal. Check With Your Retailer For Recycling Your Old Appliance.



BATTERIES

Household Batteries, Car and Motorcycle Batteries. Check with Your Retailer For A Rebate on Your Battery.



CLOTHING

Clean and Dry Clothing and Shoes Consider Donating to Used Item Outlet.



ELECTRONICS

CD Players, Cell Phones, Computers, DVD Players, Keyboards, Laptops, Mice, Monitors, Peripherals, Printers, Stereos, Televisions



TIRES & INNER TUBES

Off rim, 24" or smaller. Quantity limits apply. No off road tires

Keep recyclables rinsed **CLEAN, EMPTY, and LOOSE**
NO plastic bags, NO strings or wire, NO styrofoam
Please keep shredded paper separate from other recyclables.

Ask your hauler for pick-up instructions

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