

Macon County's Proposal to Construct a Recycling Center/Office Building & Develop a Compost Facility

March 21, 2018



Table of Contents

Land.....	3
Costs for Land	4
Recycling Center/Office Building	5
Costs for Recycling Center/Office Building & Site.....	6
Compost Facility	7
Projecting Volumes of Received Material & End-Products	11
Costs for Compost Facility.....	12
Revenue Potential for Compost Facility	13
Other Land Uses	14
Total Proposed Project.....	15

Overview

Macon County is proposing to construct a recycling center/office building and develop a new compost facility on a 109.85 acre parcel northwest of U.S. Highway 36 and Wyckles Road.

The building construction will allow Macon County Environmental Management Department to consolidate their offices, operations and storage areas to a single site. The recycling center, which includes a covered drive-through lane, will be operated during regular hours for one-stop recycling/safe disposal services on a year-round basis regardless of most weather conditions.

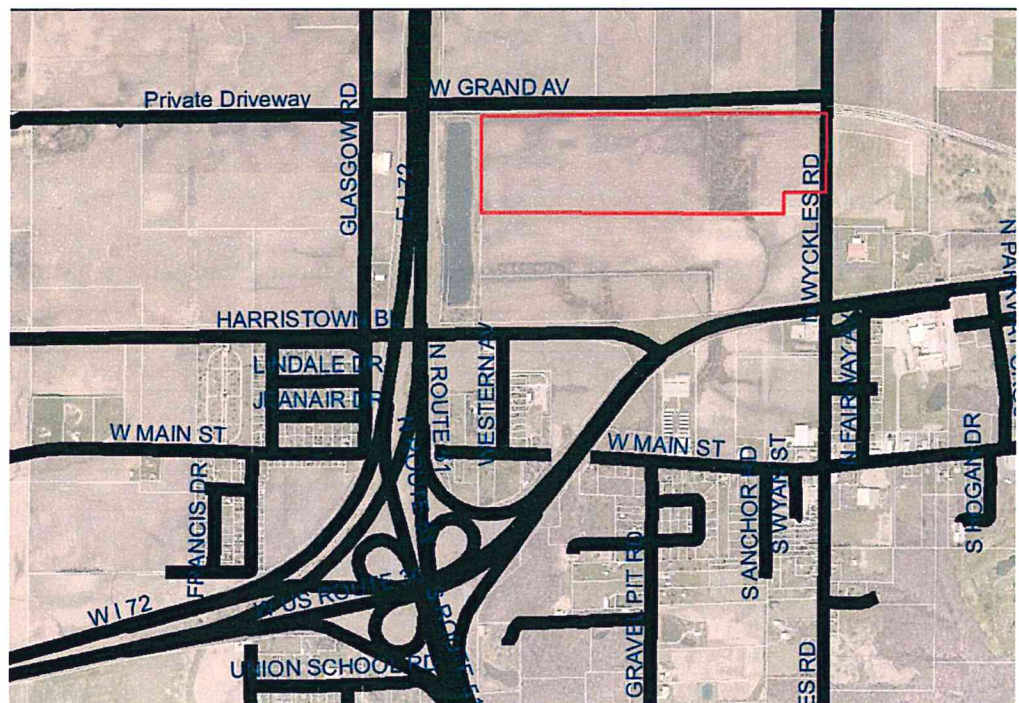
The development of a compost facility will provide a viable, sustainable solution for managing landscape waste while producing beneficial end-products such as compost and mulches.

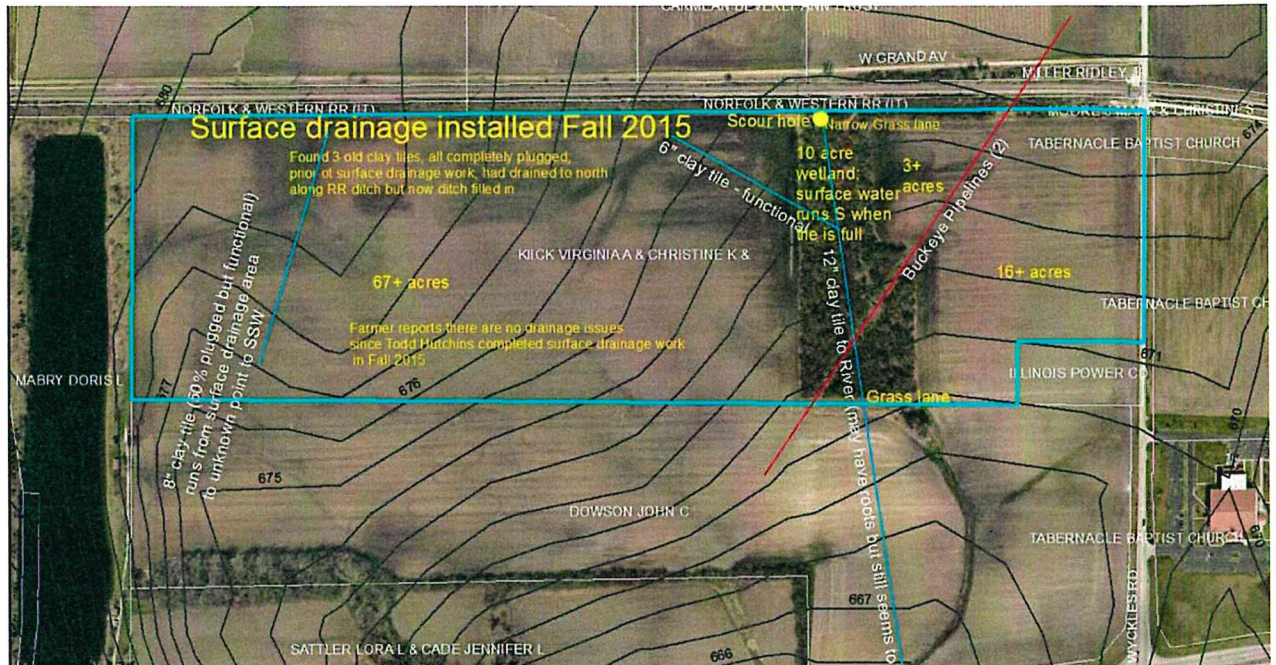
Land

The proposed site was selected based on a list of criteria, which included the following items:

- Convenient access for residential and commercial vehicles.
- A location along the route that is routinely used by local waste/recycling haulers.
- Accessibility to utilities such as water and electricity.
- Capability to comply with locations standards for new compost facilities.
- Sufficient space to manage all of Macon County's landscape waste, even in times of a disaster.
- A slight slope to minimize ponding and prevent soil erosion.
- Adequate space for compatible uses and potential operational expansions.
- Potential to become a show-case site for land stewardship.

The proposed property for the multi-purpose facility is a 109.85 acre parcel west of Wyckles Road between U.S. Route 36 and West Grand Avenue in the Harristown Township.





Costs for Land

The costs of the proposed 109.85 acre parcel are summarized in the table below.

Land Costs		
Land Purchase	\$1,208,350	109.85 acres x \$11,000/acre
Closing Costs	\$4,400	
Initial Investigation	\$14,600	
Total	\$1,227,350	

Recycling Center/Office Building

The proposal includes a site development/building plan to consolidate Macon County Environmental Management Department's offices, operations and storage areas to a single site.

Consolidation of Offices, Operations & Storage Areas

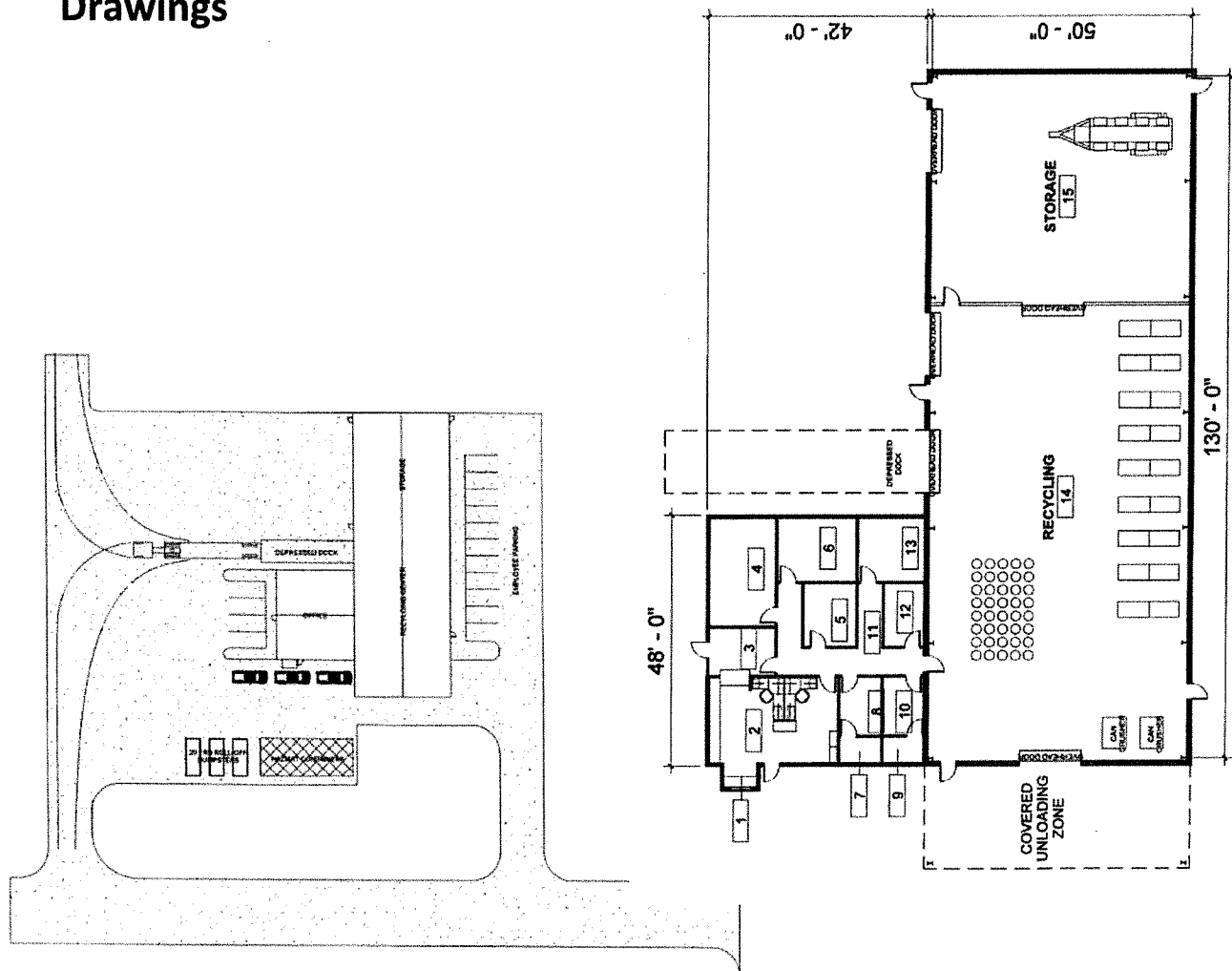
The proposed recycling center/office building will facilitate Macon County Environmental Management's objective to increase **customer service** to residents by providing **one-stop** recycling/safe disposal services on a **year-round** basis during **regular, predictable hours**.

Some of the key features of the proposed site/building include the following items:

1. Sufficient space for the department's offices, operations and storage areas to be housed together at the same site.
2. A drive-through unloading lane with a covered unloading zone.
3. A drive-up window that connects the office with the drive-through lane.
4. A loading dock.
5. Adequate paved surfaces.
6. Convenient traffic flow to/from the site.
7. Adequate space for the future placement of portable buildings for storing household hazardous waste.



Drawings



Costs for Recycling Center/Office Building & Site

The costs for the proposed recycling center/office building and site work are summarized in the table below.

Costs for Recycling Center/Office Building & Site	
Structure	\$1,500,000
Site Development	\$900,000
Signage	\$100,000
Total	\$2,500,000

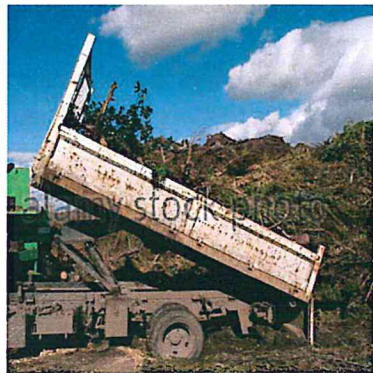
Compost Facility

The proposal includes the development and operation of a new compost facility.

Options for Managing Landscape Waste

Landscape waste is banned from Illinois landfills and may not be burned in municipalities with burn bans, such as the City of Decatur. Practical options for managing landscape waste by landowners, businesses and residents include:

- Disposing/recycling/using the material on the property on which it was generated. However, where burn bans are in effect, burning is not a viable disposal method.
- Hire a contractor who will take custody of the landscape waste and then:
 - Properly dispose of the landscape waste at a permitted compost site.
 - Provide materials for a beneficial use such as firewood or mulch or provide materials that are suitable for agronomic applications.
- Place landscape waste in paper bags or appropriate containers for pick-up by a waste hauler who will then transport the waste to a permitted compost site.
- Self-haul landscape waste to a permitted compost site.



In almost every situation, the availability of a permitted compost facility is key to the proper management of landscape waste. A viable compost site is essential to proper disposal of landscape

waste, especially by those who do not have the legal option of burning landscape waste. Landscape waste haulers, waste haulers and municipalities need a viable compost site for their customers and residents.

Current Compost Sites

Macon County has two permitted compost sites. However, neither facility appears as though it is able to accommodate the long-term needs of the County and its municipalities. The two current compost sites are:

1. Decatur Composting, Inc. (permitted in 2004) at 3741 N. Bearsdale Road is owned and operated by Don Roderick. Thirty-four acres of the 45.5 acre property is permitted as a compost site. During recent years, Mr. Roderick has reported that he is exclusively receiving material from the City of Decatur Public Works Department and one or two landscape contractors but that no material has been



received from waste haulers. Mr. Roderick recently reported that he was working towards closing the facility. A succession plan for the facility does not appear to be in place.

2. Macon County Compost Facility (permitted in 1990) at 3455 N. Bearsdale Road is owned by Larry Garver but operated by Rex Evans of Murrayville. Eight and half acres of the property is permitted as a compost site. The facility receives material from waste hauling trucks, surrounding municipalities, landscape contractors and individuals. The facility has had a history of substantial periods of non-compliance and is currently under a violation notice. Apparent violations at the facility stem from the facility's practice of stockpiling received material rather than processing it in a timely manner.



Objectives for Establishing a New Compost Site

Macon County's aim is to establish a sustainable composting site by:

- Serving residents, businesses and industries in Macon County and the surrounding area.
- Providing an environmentally-sound solution for managing landscape waste and other select unwanted organic resources.
- Producing high-quality products such as compost and mulches and pro-actively marketing these products as organic resources for home and community gardens, agricultural applications and land improvements.
- Engaging in long-term partnerships with municipalities as well as organizations that are involved in community gardening.
- Developing a show-case site in order to provide learning opportunities about environmental practices, land stewardship and community gardening.



Need for Developing a New Compost Facility

Most viable options for proper disposal of landscape waste are dependent on having a permitted compost facility in close proximity. Currently, the County, its municipalities, landscape contractors, waste haulers, businesses and residents are without a facility that can serve their long-term needs for a landscape waste management facility.

Beyond landscape waste disposal, a well-operated compost site produces high quality products that are beneficial to agricultural producers, gardeners, landscape contractors, land developers and public works departments.

The need for a local, sustainable compost facility is evident. The establishment of a new, permitted compost site is able to fulfill this need.

Customer Type	Need for Landscape Waste Management Services	Need for End-Products
Waste Haulers	Proper disposal of segregated landscape waste that is picked up from their residential and commercial customers.	
Landscape Contractors	Proper disposal of grass, leaves, trimmings and tree waste from their services on the properties of their residential and commercial customers.	Application of products on the properties of their residential and commercial customers.
Municipalities & Public Works Depts. & Park Depts.	Proper disposal of landscape waste from plantings and trees on public property. Disposal of street sweepings. Site for debris management following a disaster such as an ice storm or tornado.	Application of products in plantings, grassy areas and around trees on public properties.
Businesses	Proper disposal of land trimmings, brush and tree waste.	Land application of products. Woodchips for fuel, absorbent, surfacing.
Residents	Proper disposal of yard and garden trimmings, brush and tree waste.	Application of products on the yard, in the garden, over pathways and around trees.
Organizations		Soil amendment in community gardens.
Farmers		Application of compost as a soil amendment on farm fields.
Livestock Producers	Proper disposal of manure/bedding mixtures.	Use of woodchips for bedding and over pathways.

Projecting Volumes of Received Material & End-Products

The table below summarizes the amount and type of materials that were reportedly received and used/sold at each of the County's two compost sites from 2013 to 2016. The amount of material reported as received is most likely underestimated for each site since much of the material was received from compactor trucks and the volume of material from incoming trucks was self-reported by the drivers of the trucks. The amount of material used/sold is most likely a rough estimate and does not reflect the amount of product made for each year since both sites have stockpiles of finished and unfinished material from years past.

Annual Cubic Yards (CY) of Existing Sites & Projection of CYs for Proposed Site					
Site	Year	CY Grass & Leaves Recvd	CY Brush Recvd	Total CY Compost Used/ Sold	Total CY Chips Used/ Sold
Decatur Compost Inc.	2013	9,900	4,200	7,000	5,000
Macon County Composting Facility	2013	13,176	9,082	6,924	775
TOTAL	2013	23,076	13,282	13,924	5,775
Decatur Compost Inc.	2014	9,600	5,010	6,050	3,000
Macon County Composting Facility	2014	9,706	4,873	4,710	735
TOTAL	2014	19,306	9,883	10,760	3,735
Decatur Compost Inc.	2015	18,000	1,000	10,000	1,000
Macon County Composting Facility	2015	17,186	5,732	6,650	990
TOTAL	2015	35,186	6,732	16,650	1,990
Decatur Compost Inc.	2016	3,600	3,200	1,200	0
Macon County Composting Facility	2016	14,495	5,868	10,835	2,585
TOTAL	2016	18,095	9,068	12,035	2,585
4-Year Average of Totals		23,916	9,741	13,342	3,521
Projected for Proposed Site		24,000	10,000	8,000	5,000

The following table describes how projections of the volumes of material that the proposed facility expects to receive and the volumes of end-products that the facility anticipates marketing were figured.

Projecting Volumes for Proposed Facility		
Category	Projected CYs	Basis for Projection
CY Grass & Leaves Received	24,000	4-year average of total for both existing facilities
CY Brush Received	10,000	4-year average of total for both existing facilities
CY Compost Produced	8,000	Projected CY of Grass & Leaves Received, divided by 3
CY Woodchips Produced	5,000	Projected CY of Brush Received, divided by 2

Costs for Compost Facility

Projected start-up expenses and annual expenses for the proposed facility are summarized in the following two tables.

Costs to Develop Compost Facility		
Category	Includes	Est. Cost
Permitting		\$18,060
Site Development	Grading, pads, roads, signage, pole bldg., storm water mgt., leachate mgt.	\$563,520
Equipment (new)	Loader, tractor, grinder, screener, turner, track hoe, spreader	\$1,432,000
Total		\$2,013,580

Summary of Annual Costs for Compost Facility		
Fixed	Includes	Expense
Personnel	(3) 50% pos. -Admin. Asst., Tech, Marketing Coor.	\$76,206
Materials & Supplies	Phone, supplies, training	\$6,650
Equipment		\$25,000
Insurance		\$6,000
Annual Fixed Costs		\$107,856
Variable	Includes	Expense
Processing Grass/Leaves	Equip. operation incl. operators, maintenance, fuel	\$131,781
Processing Brush/Limbs	Equip. operation incl. operators, maintenance, fuel	\$29,730
Marketing		\$39,000
Annual Variable Costs		\$200,511
Annual Fixed & Variable Costs		\$308,367
Contingency	15% of Annual Fixed Costs & Variable Costs	\$46,255
Annual Equip. Depreciation		\$63,529.52
Total Annual Costs		\$418,152

Revenue Potential for Compost Facility

Based on the anticipated volumes for the proposed facility, it is projected that annual revenue may be generated, provided that a strong end-product market is developed. A summary of projected, potential annual revenue is in the table below.

Projected Annual Revenue for Compost Facility			
Receiving Fees	Rate/CY	Cubic Yds.	Total
Receiving Fees	\$9.00	34,000	\$306,000
15% Shrink/Loss			-\$45,900
Product Sales			
Compost Sales	\$15.00	8,000	\$120,000
Woodchip Sales	\$9.00	5,000	\$45,000
15% Discounts/Shrink			-\$24,750
Total Projected Revenue			\$400,350
Note: No product sales revenue is expected for first 1.5 years of operation.			

Marketing

The Need section of this report discusses the customer base for the services and products of compost facilities. A deliberate marketing strategy will need to be developed for each of the customer types. Partnerships will most likely prove to be invaluable in this endeavor. As an example, perhaps, a partnership with a local farm cooperative services company could be formed for marketing to farmers and livestock producers since they are most familiar with this sector of the customer base. Likewise, perhaps, other partnerships could be formed to market to other sectors.

In the Costs section of this report, \$3.00 per cubic yard was designated for marketing end-products. Additionally, a half-time staff position for marketing was noted.

Other Land Uses

Disaster Debris

In the event of a disaster, such as a tornado or ice storm, the 109 acre site is capable of storing extremely large volumes of woody disaster debris for sorting and processing.

109.85 acres



Compatible Uses

Land uses compatible with the recycling center and compost facility are being explored for the proposed 109 acre site. Possibilities include community gardens, natural areas, recreational areas, an alternative energy generation area such as a solar farm and organic farming grounds.



Total Proposed Project

-Land, Recycling Center/Office Building & Compost Facility

The following table summarizes the total projected costs to develop the multi-purpose facility.

Development Costs for Entire Project	
Land & Associated Costs	\$1,227,350
Recycling Center/Office Building & Site Work	2,500,000
Compost Facility Development	\$2,013,580
Total	\$5,740,930

Buffett

The following illustrates the time process for the project. The items in purple have been completed to date.

