

EFFINGHAM COUNTY  
SOLID WASTE MANAGEMENT PLAN



Prepared For:  
Effingham County

June 2021

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## **I. INTRODUCTION**

The Effingham County Solid Waste Management Plan was prepared through an active and cooperative effort of the elected officials and staff of Effingham County, the City of Guyton, the City of Rincon, and the City of Springfield. The Solid Waste Management Plan for Effingham County and its three (3) incorporated municipalities of Guyton, Rincon, and Springfield is a result of the Georgia comprehensive Solid Waste Management Act of 1990. Effingham County and the Cities of Guyton, Rincon, and Springfield first worked to implement a multi-jurisdictional solid waste plan in June of 1993. In August of 1999, the County and Cities amended the plan by adopting a Short-Term Work Plan Update, Implementation Strategy, and a Report of Accomplishments. The plan was then updated to cover the period from 2007 to 2016.

As required by the Solid Waste Management Act, the plan addresses the following core elements: waste disposal stream analysis, waste reduction, collection, disposal, land limitation, education and public involvement, and an implementation schedule. The Plan will specifically address:

1. An adequate collection and disposal capacity;
2. Enumerate the solid waste handling facilities as to size and type; and
3. Identify those sites which are not suitable for solid waste handling facilities based on environmental and land use factors.

### **A. LOCATION**

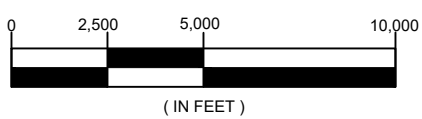
Effingham County is located in southeastern Georgia and is comprised of approximately 483 square miles with a population of 64,296 (2019 Estimate). The County is bordered to the north by Screven County, to the west by Bulloch County, to the south by Bryan and Chatham Counties; and the Savannah River creates the state border to South Carolina to the east. Municipalities within the County include the City of Rincon, City of Guyton, and the City of Springfield. Exhibit A –County Overview Map illustrates that Interstate 16 traverses across the southwestern boundary of Effingham County and that GA Highway 21, GA Highway 17, and GA Highway 119 are the major highways that serve Effingham County.





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**EXHIBIT A**



# County Overview Map Solid Waste Management Plan Effingham County, Georgia



Prepared by  
Alliance Consulting Engineers, Inc.

Project No.: 21118-2051  
April 23, 2021



**B. TOPOGRAPHIC INFORMATION**

The topography of Effingham County is relatively flat, making it well suited to a variety of land uses. The County is bordered by the Savannah River on the East and the Ogeechee River on the west, creating slight sloping of land in these areas near the rivers. The United States Geological Survey (USGS) 7.5 Minute Quadrangle Map of Effingham County in Exhibit B – Topographic Map illustrates that the maximum elevation is approximately 137 feet above mean sea level (msl) in the north central portion of the county and the minimum elevation is approximately five (5) feet above msl in the southern portion of the county along the Savannah River.

**C. POPULATION AND TRENDS**

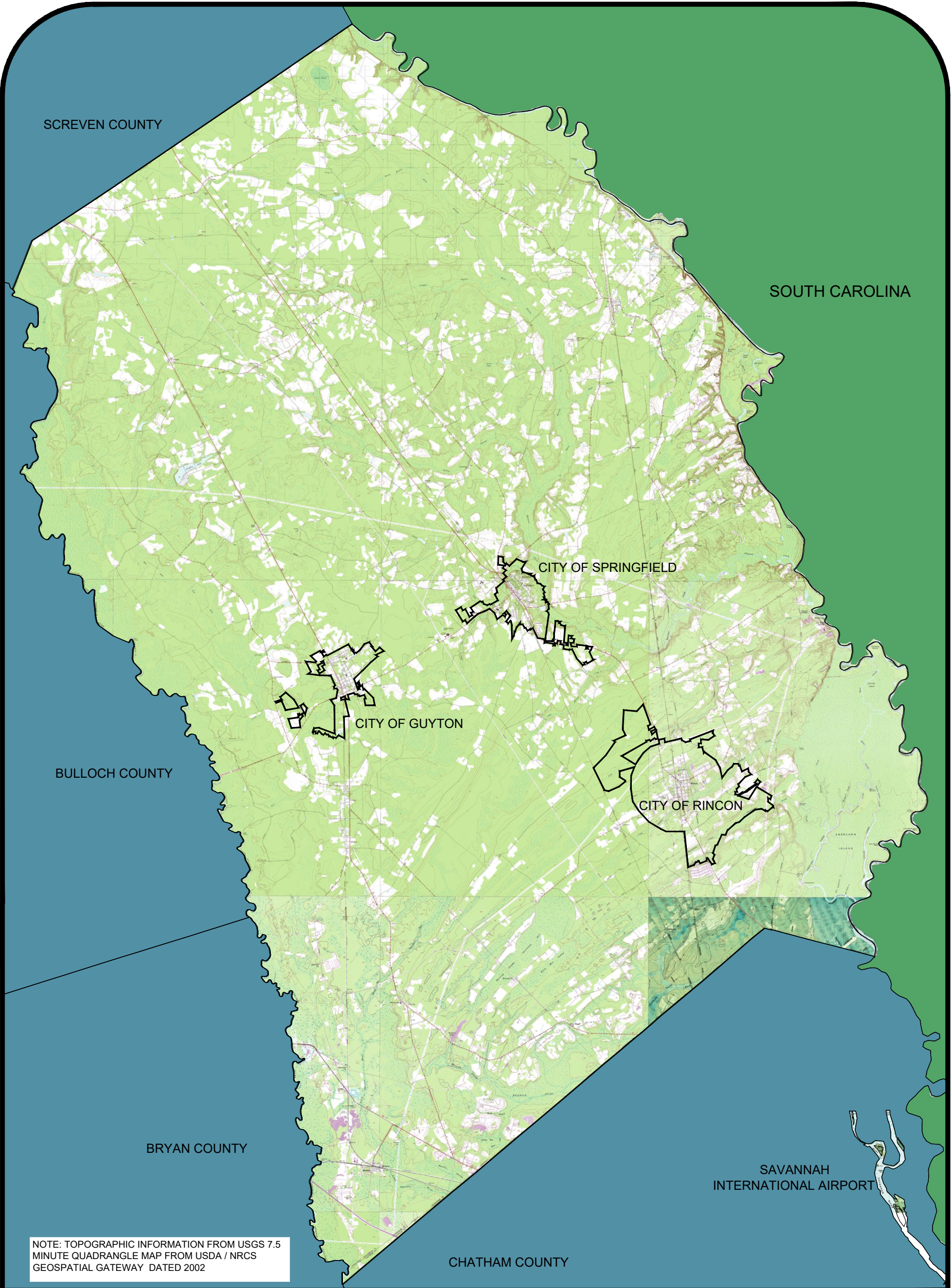
Population and economic growth are major factors affecting solid waste management and the facilities required to meet public demand for disposal and recycling. The US Census Bureau estimated Effingham County's population as 64,296 (July 1, 2019) with a percent population change from April 1, 2010 to July 1, 2019 of approximately 23%. The US Census Bureau estimates there are 21,172 households (2015 – 2019), with 23,996 housing units (July 1, 2019). Effingham County's Population growth is anticipated to be from new residents as Effingham County has very few seasonal workers.

Table 1: Population Change for Effingham County Municipalities			
Place	2010	2019	% Change
City of Rincon	8,916	10,361	16%
City of Guyton	1,684	2,226	32%
City of Springfield	2,852	4,084	43%
Unincorporated Effingham County	38,798	47,625	23%
<b>Total</b>	<b>52,250</b>	<b>64,296</b>	<b>23%</b>

Sources: 1. "Population 1950-2000 Estimates for Counties and Incorporated Places," US Census Bureau  
2. Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2018, US Census Bureau

The US Census Bureau produces July 1<sup>st</sup> population estimates for each year after the last published decennial census, as well as past decades. These population estimates are used to project the population of a given area for future years. It must be noted that these projections of future population are based solely on census data and do not reflect

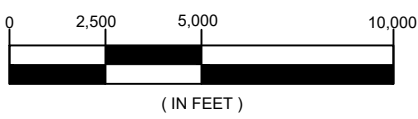




NOTE: TOPOGRAPHIC INFORMATION FROM USGS 7.5 MINUTE QUADRANGLE MAP FROM USDA / NRCS GEOSPATIAL GATEWAY DATED 2002

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**EXHIBIT B**



# Topographic Map Solid Waste Management Plan Effingham County, Georgia



Project No.: 21118-2051  
April 15, 2021

Prepared by  
Alliance Consulting Engineers, Inc.



characteristics such as fertility, mortality, or migration of the actual population within the county. As illustrated in Table 2, according to the Georgia Governor's Office of Planning and Budget, the County's population will increase from 64,296 in 2019 to 86,640 in 2031 (approximately + 35%) and to 105,378 in 2041 (approximately + 64%).

Table 2: Effingham County Population Projections (2019 – 2041)	
Year	Population
2019	64,296
2020	65,869
2021	67,443
2022	69,017
2023	70,585
2024	72,158
2025	74,425
2026	76,692
2027	78,944
2028	81,214
2029	83,474
2030	85,054
2031	86,640
2032	88,228
2033	89,823
2034	91,400
2035	93,445
2036	95,485
2037	97,536
2038	99,569
2039	101,608
2040	103,498
2041	105,378

*Source: Governor's Office of Planning and Budget, Series 2020*

Based upon the current population trends in the County, it is expected that the largest area of growth in the County will be in the municipalities located within the County and their surrounding areas. As a result, the County should see an increase in its municipal solid waste stream from these areas. Projected waste stream generation numbers will be discussed in Section II – Waste Disposal Stream Analysis.

**D. LAND USE**

Land use is an important characteristic to be evaluated in the development and implementation of a Solid Waste Management Plan. The concentration of population in different areas throughout the County directly affects the collection and transportation of solid waste and recyclables. Effingham County is located in the Southeastern region of Georgia. The total area, both land and water, is approximately 483 square miles. While the County is experiencing significant urban growth, land use is primarily agricultural and wooded. The Effingham County Zoning Ordinance restricts land use to the uses outlined in the Code of Ordinances for Effingham County, Georgia. Current and future land use are subject to the boundaries and can be used to provide insight on the overall land use of the County. The Effingham County Zoning Map, approved February 7, 2013 indicates the following land use distribution throughout the unincorporated areas of Effingham County:

<b>Table 3: Zoning District Distribution</b>	
<b>Zoning District</b>	<b>Zoning Percentages (%)</b>
Agricultural Residential Districts (AR-1)	86.523
Agricultural Residential Districts (AR-2)	1.933
Single Family Residential Districts (R-1)	2.885
Single-Family Residential District (R-1A)	0.014
Two-Family Residential Districts (R-2)	0.072
Multifamily Residential Districts (R-3)	0.063
Planned Manufactured Home Community Districts (R-4)	0.115
Neighborhood Commercial Districts (B-1)	0.007
General Commercial Districts (B-2)	0.403
Highway Commercial Districts (B-3)	0.149
Industrial Districts (I-1)	4.021
Flood Hazard Districts (FH)	0.002
Conservation Preservation Districts (CP)	2.147
Planned Development (PD)	1.665

*Source: Effingham County Zoning Map dated February 7, 2013*

Effingham County is primarily rural with a majority of the land use being agricultural. Residential Development is concentrated in the incorporated areas in Effingham County, the City of Guyton, the City of Rincon, and the City of Springfield, and in the southern portion of the County near Savannah. As the County continues to grow, the County is able to support a variety of Industrial and Commercial Development.

Effingham County

The County's largest manufacturers include: International Paper, Doncaster's, Inc., Georgia Pacific – Savannah River Mill, Edwards Interiors, Georgia Transformer, Interfor – Meldrim Division, AeroDynamic Aviation, and DRT America. In addition, Effingham County is home to several Logistics and Distribution Companies including: Lineage Logistics, Americold, Shaw Industries, Perdue, and A&R Logistics. Per the US Census Bureau, 2020, approximately 9,421 residents live and work in Effingham County. An additional 2,897 commute into the County, and 20,781 commute outside of the County.

The Effingham County Industrial Development Authority continues to expand and promote industrial development in the County, and currently has five (5) industrial parks listed with availability. Effingham County's proximity to the Port of Savannah, approximately eight (8) miles, Interstate I-95 and I-16, GA Highway 21, proximity to the Savannah-Hilton Head International Airport and Hartsfield-Jackson Atlanta International Airport, and Class I Rail Connections make the County desirable for business growth.

The Cities of Guyton, Rincon, and Springfield include mostly residential development; however, commercial development such as service stations, locally owned grocery stores, medical facilities, restaurants, dollar department stores, banks, and other locally owned small business are also located throughout the incorporated areas of Effingham County. The City of Rincon, the largest incorporated City in the County serves as the retail center of Effingham County. The City of Rincon is home to larger retailers such as Wal-Mart Supercenter, Lowe's Home Improvement, chain grocery stores, furniture stores, warehouses, fast food, and other restaurants, utility companies, and automobile dealerships.

## II. WASTE DISPOSAL STREAM ANALYSIS

The Waste Disposal Stream Analysis is a crucial portion of the Solid Waste Management Plan that will guide Effingham County's decisions regarding current and future Solid Waste Management Service and facility needs. This information will provide a basis for the five (5) Core Elements: Waste Reduction, Collection, Disposal, Land Limitation, and Education and Public Involvement.

### A. CURRENT WASTE INVENTORY

Major waste generators in Effingham County include:

- Municipal Solid Waste: – Unincorporated Effingham County, City of Guyton, Rincon, and Springfield, Grocery and Convenience Stores, Restaurants, local government, banks and businesses offices, all retailers
- Construction and Demolition Waste: – Contractors for residential units and business units
- Industrial Waste: – Industrial Processes or Operations, Distribution Facilities, and Manufacturing Facilities
- Special Waste / Organic Waste: Medical Facilities, Wastewater Treatment Plants, and automobile repair shops, Effingham County Schools, Effingham County Hospitals and Extended care Facilities, Effingham County Prison, and Jail, restaurants

Table 4: Waste Composition at Georgia MSW Landfills	
Type of Waste	Weighted Average %
MSW	66.6
Industrial Waste	14.0
Construction & Demolition	12.3
Sludge / Biosolids	7.1

Source: Georgia Statewide Waste Characterization Study dated June 22, 2005

Municipal Solid Waste makes up the majority of the waste disposed of in Effingham County. Paper and organics make up the largest fractions of the MSW waste stream, followed by plastics. C&D and metals made up the fourth and fifth largest fractions of the waste stream, with glass and inorganics making up the smallest portion of the waste stream, as outlined in Table 5. Corrugated Cardboard, which is accounted for in paper, makes up the largest fraction of disposed waste at 15%, followed by food waste (11.1%).

<b>Table 5: Coastal Georgia MSW Composition</b>	
<b>Material</b>	<b>Percent Composition (%)</b>
Paper	39
Organic	28.2
Plastic	15.9
C&D	6.4
Metal	4.3
Glass	3.5
Inorganic	2.6

*Source: Georgia Statewide Waste Characterization Study dated June 22, 2005*

Municipal Solid Waste is generated by several sources throughout Effingham County. The major generators of Municipal Solid Waste include Residential, Commercial, and Transfer Trailer Waste. The MSW Composition varies slightly across the different types of generators and is detailed in Table 6. The Georgia Statewide Waste Characterization Study indicated that residential MSW was primarily composed of food waste (13.1%) followed by non-recyclable paper (10%) and newspaper (6.8%). Commercial MSW was primarily composed of corrugated cardboard (15.5%) followed by food waste (9.7%) and film plastic (9.5%). Transfer Trailer MSW was primarily composed of corrugated cardboard (24.8%) followed by food waste (11%) and wood (10.5%).

<b>Table 6: Coastal Georgia MSW Composition by Generator</b>			
<b>Material</b>	<b>Residential %</b>	<b>Commercial %</b>	<b>Transfer %</b>
Paper	37	37.7	43.7
Plastic	15	18.6	12.7
Glass	3.3	4.6	2.0
Metal	5.1	5.1	2.2
Organic	33	26.6	24.7
C&D	5.5	2.4	14.2
Inorganic	1.1	5.0	0.5



*Source: Georgia Statewide Waste Characterization Study dated June 22, 2005*

Waste Stream Characterization and tonnages were determined from multiple sources including data from Atlantic Waste Services, Waste Pro USA, Waste Management, Department of Community Affairs, and private businesses. The private vendors who service Effingham County, the Cities of Guyton, Rincon, and Springfield, estimated that they collected approximately 25,689.97 tons from both residents and public facilities who utilize their services with curbside containers. Approximately 3,349.44 tons (11.53%) of recyclables were collected by through curbside collection. Data for private commercial and industrial businesses with private contracts with waste haulers was not made available at the time of this Solid Waste Management Plan.

## **B. PROJECTED WASTE STREAM**

The purpose of this analysis is to provide projections of the anticipated waste stream for the next ten years to local governments so they can more efficiently plan waste reduction and recycling efforts.

### **1. Land-Clearing Debris**

Land Clearing Debris is not a major source of waste in the waste stream of Effingham County due to the widespread yard waste pickup programs implemented by unincorporated Effingham County and the Cities of Guyton, Rincon, and Springfield. The Georgia Statewide Waste Characterization Study estimated organic materials made up approximately 33% of the residential MSW stream. Based on this, approximately 8,478 tons of Organic Material was disposed of at the Superior Landfill from Effingham County in 2020 using the 2020 Waste Disposal Data. Land Clearing Debris generated in Effingham County is either composted and stored on-site at the composting facility or disposed of at the Superior Landfill. Data for Land Clearing Debris composted is not currently collected.

Of the waste disposed of at the Superior Landfill, a per capita Land Clearing Debris waste generation rate of 275.4 pounds was calculated based on the County's 2020 estimated population of 65,869, the waste stream numbers, and

the 2005 Waste Characterization Study. Table 7 illustrates the Land Clearing Debris projections for the County over the next ten (10) years based on a constant generation rate and an increasing population.

Table 7: Effingham County Yard Waste Generation Projections			
Year	Estimated Population <sup>1</sup>	Per Capita Waste (tons) <sup>2</sup>	Total Yard Waste Projected (Tons)
2021	67,443	0.129	8,680
2022	69,017	0.129	8,883
2023	70,585	0.129	9,085
2024	72,158	0.129	9,287
2025	74,425	0.129	9,579
2026	76,692	0.129	9,871
2027	78,944	0.129	10,161
2028	81,214	0.129	10,453
2029	83,474	0.129	10,744
2030	85,054	0.129	10,947
2031	86,640	0.129	11,151

Source: 1. Governor's Office of Planning and Budget, Series 2020

Source: 2 Georgia Statewide Waste Characterization Study dated June 22, 2005

\*Yard Waste Disposed of in MSW Landfills

## 2. Construction & Demolition (C&D) Debris

Construction and Demolition (C&D) Debris is not a major source of waste in the waste stream of Effingham County. The Georgia Statewide Waste Characterization Study estimated C&D made up approximately 5.5% of the MSW stream and approximately 12.3% of the total waste stream disposed of at MSW Landfills. Based on this, approximately 1,413 tons of C&D Waste was disposed as a part of the MSW Stream.

Of the waste disposed of at the Superior Landfill, a per capita C&D waste generation rate of 42.9 pounds was calculated based on the County's 2020 estimated population of 65,869, the waste stream numbers, and the 2005 Waste Characterization Study. Table 8 illustrates the Land Clearing Debris projections for the County over the next ten (10) years based on a constant generation rate and an increasing population.

**Table 8: Effingham County C&D Waste Generation Projections**

Year	Estimated Population <sup>1</sup>	Per Capita Waste <sup>2</sup>	Total Waste Projected (Tons)
2021	67,443	0.021	1,416
2022	69,017	0.021	1,449
2023	70,585	0.021	1,482
2024	72,158	0.021	1,515
2025	74,425	0.021	1,563
2026	76,692	0.021	1,611
2027	78,944	0.021	1,658
2028	81,214	0.021	1,705
2029	83,474	0.021	1,753
2030	85,054	0.021	1,786
2031	86,640	0.021	1,819

Source: 1. Governor's Office of Planning and Budget, Series 2020

Source: 2 Georgia Statewide Waste Characterization Study dated June 22, 2005

\*C&D Waste Disposed of in MSW Landfills

### **3. Municipal Solid Waste (MSW)**

Approximately 25,689.97 tons of MSW was disposed within Effingham County in 2020 according to Atlantic Waste, Waste Pro, and Waste Management. MSW generated in Effingham County was disposed of at Superior Landfill.

A per capita MSW generation rate of 0.39 pounds was calculated based on the County's estimated population of 65,869 (2020 Estimate) and the waste stream numbers. Table 9 illustrates the MSW projections for the waste disposed as a part of contracts with either the County or the City of Guyton, Rincon, and Springfield over the next twenty (20) years based on a constant generation rate and an increasing population. While projections utilizing only the MSW generated through County and City Contracts is most likely not the entirety of waste generated in Effingham County, waste disposed of by individual commercial and industrial businesses was unavailable to Effingham County at the time of preparing this Solid Waste Management Plan.

Table 9: Effingham County MSW Generation Projections				
Year	Estimated Population <sup>1</sup>	Per Capita Waste <sup>2</sup>	Total Waste Projected (Tons)	Total Waste Volume Projected (CY)
2021	67,443	0.39	26,303	19,727
2022	69,017	0.39	26,917	20,187
2023	70,585	0.39	27,528	20,646
2024	72,158	0.39	28,142	21,106
2025	74,425	0.39	29,026	21,769
2026	76,692	0.39	29,910	22,432
2027	78,944	0.39	30,788	23,091
2028	81,214	0.39	31,673	23,755
2029	83,474	0.39	32,555	24,416
2030	85,054	0.39	33,171	24,878
2031	86,640	0.39	33,790	25,342
2032	88,228	0.39	34,409	25,807
2033	89,823	0.39	35,031	26,273
2034	91,400	0.39	35,646	26,735
2035	93,445	0.39	36,444	27,333
2036	95,485	0.39	37,239	27,929
2037	97,536	0.39	38,039	28,529
2038	99,569	0.39	38,832	29,124
2039	101,608	0.39	39,627	29,720
2040	103,498	0.39	40,364	30,273
2041	105,378	0.39	41,097	30,823

Source: 1. Governor's Office of Planning and Budget, Series 2020

Source: 2 The 2020 Per Capita Waste for Effingham County

### **III. WASTE REDUCTION ELEMENT**

#### **A. INVENTORY AND ASSESSMENT OF EXISTING PROGRAMS**

Effingham County strives to provide a safe, beautiful, and environmentally friendly atmosphere for its citizens. By setting goals, creating policies, developing strategies, and identifying barriers, Effingham County will successfully provide the level of service its citizens deserve. An effective solid waste management system addresses reduction, recycling, educational programs, and dedicated and knowledgeable staff willing to communicate the County's expectations for solid waste management.

##### **1. Source Reduction and Recycling**

Reduction and Recycling is a key component of Effingham County's Solid Waste Management System. The County expects to continue reducing the volume of solid waste that would otherwise be land filled. The County is committed to meeting goals of reducing waste through reduction and recycling. To successfully reduce Effingham County's municipal solid waste and reduce the per capita MSW rate by 25%, the County must encourage commercial and industrial producers, as well as residential customers, to reduce at the source and reuse where possible.

The implementation of curbside collection for recycling throughout unincorporated Effingham County, the City of Rincon, Guyton, and Springfield has enabled the recycling rate to significantly increase since the previous Solid Waste Management Plan in 2007 (4.22%) to the current rate of 11.53% in 2020. Table 10 provides the Recycling Projections for the next ten (10) years based on a constant recycling rate and an increasing population.

**Table 10: Effingham County Recycling Projections**

Year	Estimated Population <sup>1</sup>	Total % Recycled	Total Recycling Projections (Tons)
2007	46,000	4.22	820
2020	65,869	11.53	3,349
2021	67,443	11.53	3,428
2022	69,017	11.53	3,508
2023	70,585	11.53	3,588
2024	72,158	11.53	3,668
2025	74,425	11.53	3,783
2026	76,692	11.53	3,898
2027	78,944	11.53	4,013
2028	81,214	11.53	4,128
2029	83,474	11.53	4,243
2030	85,054	11.53	4,323
2031	86,640	11.53	4,404

Source: 1. Governor's Office of Planning and Budget, Series 2020

Source: 2 The 2020 Per Capita Waste for Effingham County

The types of materials collected by the waste providers for the County are driven by market forces. The County is only able to collect those materials for which recycling markets currently exist. Atlantic Waste Services, Waste Pro USA, and Waste Management currently are able to successfully collect and arrange for recycling of the following materials:

#### **Plastics #1 and #2**

Plastics are collected curbside in unincorporated Effingham County, City of Rincon, City of Guyton, and the City of Springfield twice monthly.

#### **Miscellaneous Paper**

Paper is collected curbside in unincorporated Effingham County, City of Rincon, City of Guyton, and the City of Springfield twice monthly.

#### **Aluminum and Metal Cans**

Aluminum and Metal Cans are collected curbside in unincorporated Effingham County, City of Rincon, City of Guyton, and the City of Springfield twice monthly.

**Cardboard**

Cardboard is collected curbside in unincorporated Effingham County, City of Rincon, City of Guyton, and the City of Springfield twice monthly.

**Glass- Brown, Green, & Clear**

Glass is collected curbside in the City of Springfield twice monthly.

**White Goods**

White Goods are collected at the Effingham County Dry Waste and Recycling Convenience Center. The City of Rincon and the City of Guyton offers its residents a call to schedule program for bulk goods with a fee of \$10 per request.

**Metal (copper, steel, aluminum)**

Metals (not Aluminum or Metal Cans) is collected at the Effingham County Dry Waste and Recycling Convenience.

**Automobile Batteries**

Automobile Batteries are collected at the Effingham County Dry Waste and Recycling Convenience Center.

**Cellular Phones**

Cellular Phones are collected at the Effingham County Dry Waste and Recycling Convenience Center.

**Recyclable Batteries**

Recyclable Batteries are collected at the Effingham County Dry Waste and Recycling Convenience Center.

**Toner and Inkjet Cartridges**

Toner and Inkjet Cartridges are collected at the Effingham County Dry Waste and Recycling Convenience Center.

**Yard Trimmings**

Yard Trimmings and earth like materials are accepted at the Effingham County Dry Waste and Recycling Convenience Center, but are not accepted free of charge. These items are separated when they are collected and stockpiled until they can be ground up into a useable material, such as mulch grade compost. This material is either given to residents, used in county projects, or if the material will not produce a quality product, is hauled to a permitted by rule inert landfill. The

City of Rincon and the City of Guyton offers its residents a call to schedule program for yard trimmings with a fee of \$10 per request through Waste Pro. The City of Springfield offers its residents twice a month curbside yard trimmings collection through Waste Management.

**Cured Asphalt, Brick, Concrete**

Cured asphalt, brick, concrete, and earth like materials are accepted at the Effingham County Dry Waste and Recycling Convenience Center, but are not accepted free of charge. These items are separated when they are collected and stockpiled until they can be ground up into a useable material that can be used by the public works department in road projects.

**Tires**

Tires are accepted at the Effingham County Dry Waste and Recycling Convenience Center and are charged by the size of the tire and whether it is on the rim or not. Tires are hauled by an Environmental Protection Division (EPD) Permitted carrier to a permitted processing facility. The tires are ground into chips are used for fuel and aggregate material for landfills and septic systems.

**Furniture and Useable Materials**

Several Thrift Stores and Antique Shops have drop off sites available for residents in Effingham County and the Cities of Guyton, Rincon, and Springfield.

**Used Oil and Antifreeze**

Advanced Auto Parts stores collects oil, and some auto shops will take oil and antifreeze. These items are collected by a company who recycles it to make cleaning solution.

**B. WASTE REDUCTION NEEDS AND GOALS**

Effingham County will continue to seek methods to reduce the waste stream and achieve a 25% reduction goal through aggressive recycling, re-use, and waste reduction efforts. In order to accomplish this goal, Effingham County has identified the following needs and goals:



**Residential Waste:**

The Waste Stream Analysis conducted in Section II of this report estimated that residential MSW was primarily composed of food waste (13.1%) followed by non-recyclable paper (10%) and newspaper (6.8%). Based on this, the following strategies are proposed to reduce these sources:

1. Partner with the University of Georgia (UGA) County Extension Office to promote their home composting seminar for citizens. Home composting can divert food waste and yard waste from the landfill.
2. Increase education concerning yard trimmings management and promote existing yard waste programs.
3. Identify and utilize existing promotional materials from private waste-haulers to increase enrollment in existing curb-side recycling programs.
4. Partner with Effingham County School District and the Georgia Recycling Coalition to educate students on Recycling and waste reduction.

**Commercial Waste:**

The Waste Stream Analysis conducted in Section II of this report estimated that commercial MSW was primarily composed of corrugated cardboard (15.5%) followed by food waste (9.7%) and film plastic (9.5%). Based on this, the following strategies are proposed to reduce these sources:

5. Adopt procurement policy of preferred buying from companies that are ISO 14001 Certified to ensure reductions in product packaging have been implemented by companies and therefore reducing the County solid waste stream.
6. Encourage Governments, Schools, and businesses to cut waste by source reduction and by recycling.
7. Request that local businesses collect better data concerning waste and recycling tonnages.

#### **IV. COLLECTION ELEMENT**

##### **A. INVENTORY AND ASSESSMENT OF EXISTING PROGRAMS**

Effingham County and the City of Guyton, Rincon, and Springfield utilize three (3) forms of collection, temporary storage, and / or transportation of solid waste: Collection and Recycling Centers, Individual Waste Dumpsters, and Curbside Collection. Exhibit C – Waste Collection Map illustrates the territories for each waste collection provider throughout Effingham County as well as the location of the Dry Waste and Recycling Convenience Center.

##### **1. Effingham County Dry Waste and Recycling Convenience Center**

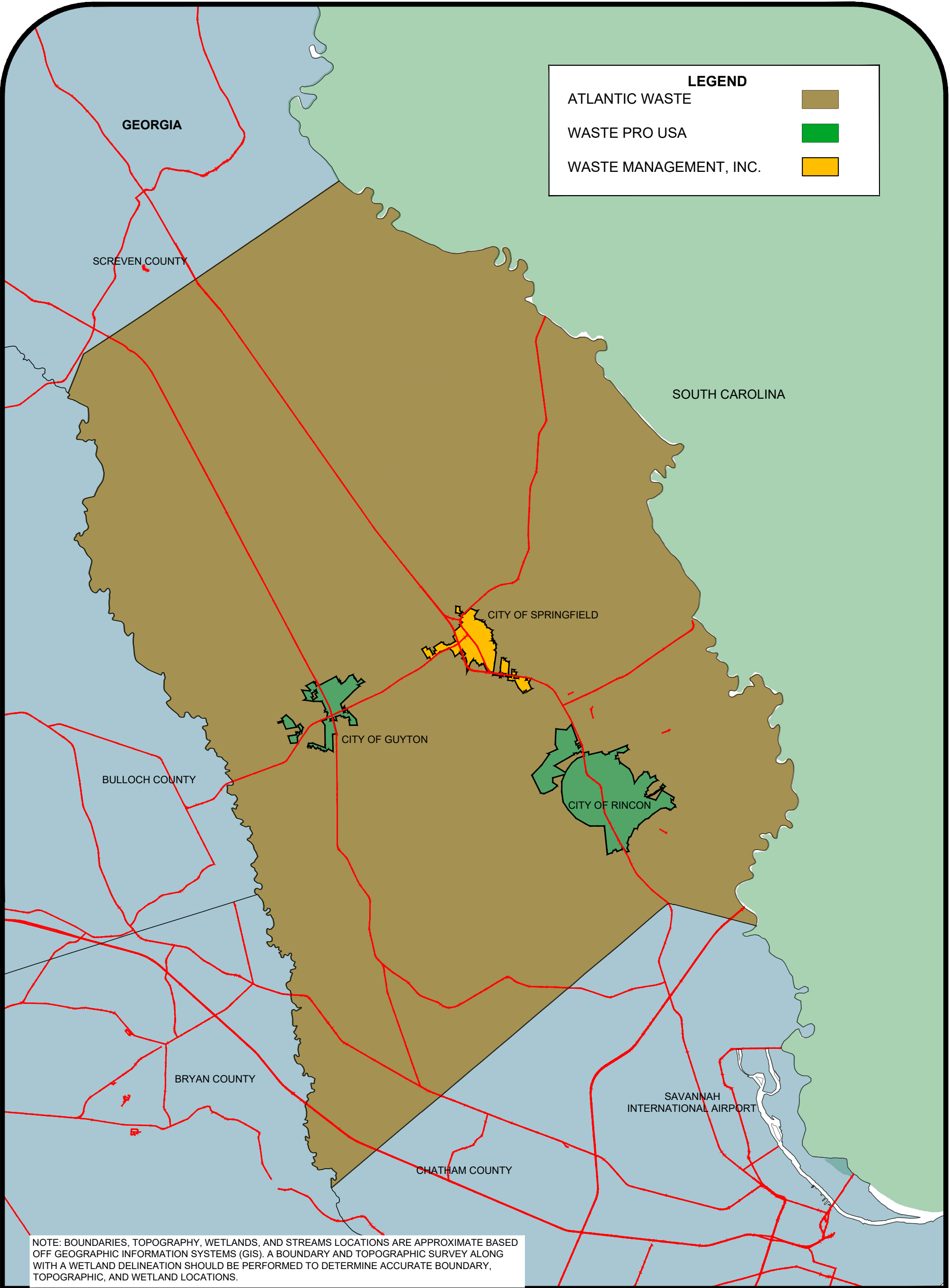
The Effingham County Dry Waste and Recycling Convenience Center is located at 2750 Courthouse Road, Guyton, Georgia. The facility is open Wednesday through Saturday, from 10:00 am to 5:00 pm. Dry waste such as construction and demolition debris, furniture, carpet, textiles, plastics, and anything else that is dry trash and not on the accepted recycled items list is collected and charged a fee. Approximately 2,100 tons of waste was disposed at the Dry Waste and Recycling Convenience Center. Approximately 300 tons of recycling was collected at the Dry Waste and Recycling Convenience Center.

##### **2. Effingham County Dumpsters**

Atlantic Waste Services collects municipal solid waste from several dumpsters located at Effingham County Facilities. County facilities include the County Prison, Public Works Building, Wastewater Treatment Plant, Jail Museum, County Building, Courthouse, County Jail, and the Effingham County Parks & Recreation Ball Field.

##### **3. Effingham County Curbside Collection**

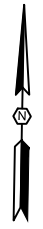
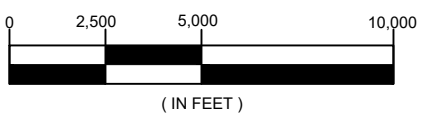
Atlantic Waste Services collects curbside municipal solid waste (96 gallon cart) once a week. Recycling (96 gallon cart) is picked up curbside every other week. The fee is \$16.79 per month which includes one (1) regular roll cart and one (1) recycle cart. Residents pay for these services on their property tax bill as a special tax assessment. The sanitation special tax assessment goes into an



NOTE: BOUNDARIES, TOPOGRAPHY, WETLANDS, AND STREAMS LOCATIONS ARE APPROXIMATE BASED OFF GEOGRAPHIC INFORMATION SYSTEMS (GIS). A BOUNDARY AND TOPOGRAPHIC SURVEY ALONG WITH A WETLAND DELINEATION SHOULD BE PERFORMED TO DETERMINE ACCURATE BOUNDARY, TOPOGRAPHIC, AND WETLAND LOCATIONS.

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**EXHIBIT C**



# Waste Collection Map Solid Waste Management Effingham County, Georgia



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enterprise fund and covers all sanitation expenses including administration, public education, litter abatement, post closure care at the old MSW Landfill, Dry Waste Collection, and Recycling Convenience Center, and all other sanitation operations, equipment, and infrastructure.

**4. City of Rincon Curbside Collection**

Waste Pro collects curbside municipal solid waste (96 gallon cart) once a week. Recycling (96 gallon cart) is picked up curbside every other week. The fee is \$16.83 per month which includes one (1) regular roll cart and one (1) recycle cart. Residents pay for this service on their water and sewer bills monthly. City of Rincon offers its residents a call to schedule program for yard trimmings and bulk items with a fee of \$10 per request through Waste Pro.

**5. City of Guyton Curbside Collection**

Waste Pro collects curbside municipal solid waste (96 gallon cart) once a week. Recycling (96 gallon cart) is picked up curbside every other week. The fee is \$16.83 per month which includes one (1) regular roll cart and one (1) recycle cart. Residents pay for this service on their water and sewer bills monthly. City of Guyton offers its residents a call to schedule program for yard trimmings and bulk items with a fee of \$10 per request through Waste Pro.

**6. City of Springfield Curbside Collection**

Waste Management collects curbside municipal solid waste (96 gallon cart) once a week. Recycling (96 gallon cart) is picked up curbside every other week. Residents pay for this service on their water and sewer bills monthly. The City of Springfield offers its residents twice a month curbside yard trimmings collection through Waste Management.

Enviroworx Operations Management (EOM) Operations provides Public Works Operations services to Effingham County. As a part of these services, EOM provides services for the beautification of public streets and sidewalks including refuse collection. Effingham County and the Cities of Guyton, Rincon, and Springfield each have ordinances that addresses solid waste issues to protect Effingham County's environment by handling all waste properly as well as protecting the health and safety of the residents who live here.

**B. WASTE COLLECTION COST**

Effingham County currently contracts Waste Collection and Disposal with Atlantic Waste. The Solid Waste Collection and Recycling Service Agreement effective February 20, 2018 will expire on June 30, 2022. Annual year renewals are completed through the duration of the contract. The Agreement includes the collection and disposal of residential solid waste, the collection and disposal of yard waste, and the collection and disposal of recyclables. The chart below illustrates the increase in overall County spending in Solid Waste Collection from 2015 to 2021 and projects the spending amount until 2040, utilizing the average rate increase and the Effingham County population projections.

<b>Table 11: Effingham County Solid Waste Collection Spending</b>		
<b>Year</b>	<b>Estimated Population<sup>1</sup></b>	<b>Annual Spending</b>
2015	57,076	\$2,906,755
2016	58,699	\$2,968,280
2017	60,086	\$3,155,542
2018	62,228	\$3,288,716
2019	64,296	\$3,375,135
2020	65,869	\$3,707,201
2021	67,443	\$3,438,778
2022	69,017	\$3,900,495
2023	70,585	\$4,005,665
2024	72,158	\$4,111,926
2025	74,425	\$4,258,712
2026	76,692	\$4,406,645
2027	78,944	\$4,554,867
2028	81,214	\$4,705,287
2029	83,474	\$4,856,295
2030	85,054	\$4,968,750
2031	86,640	\$5,082,407
2032	88,228	\$5,197,039
2033	89,823	\$5,312,950
2034	91,400	\$5,428,664
2035	93,445	\$5,573,159
2036	95,485	\$5,718,460
2037	97,536	\$5,865,533
2038	99,569	\$6,012,641
2039	101,608	\$6,161,233
2040	103,498	\$6,301,882

Source: 1. Governor's Office of Planning and Budget, Series 2020

Atlantic Waste residential waste collection service charge is based on a per month rate, which is subject to an annual adjustment upwards by 2.5%, as outlined in the Agreement. The increases to date have been larger than 2.5%; however, were due to State Legislation Changes. Multiple factors impact the rate increases of waste collection, such as landfill disposal fees, recycling fees, and the distance of the landfill. Table 12 outlines the Residential Waste Service Charge from 2018 to 2021, and then utilizes the 2.5% annual increase outlined in the Agreement to project the future costs. The rate increases projected below are subject to further increases from change in disposal location, change in private landfill disposal fees, change in State legislation, and changes in contract.

<b>Table 12: Effingham County Residential Waste Service Charge (Superior Landfill)</b>	
<b>Year</b>	<b>Residential Base Monthly Fee</b>
2018	\$15.00
2019	\$16.38
2020	\$16.79
2021	\$17.63
2022	\$18.07
2023	\$18.52
2024	\$18.99
2025	\$19.46
2026	\$19.95
2027	\$20.45
2028	\$20.96
2029	\$21.48
2030	\$22.02
2031	\$22.57
2032	\$23.13
2033	\$23.71
2034	\$24.30
2035	\$24.91
2036	\$25.53
2037	\$26.17
2038	\$26.83
2039	\$27.50
2040	\$28.18

Superior Landfill is estimated to have less than ten (10) years of operational life remaining. Effingham County's current Waste Collection and Disposal Contract would send waste to the Broadhurst Environmental Landfill following the closure of Superior

Landfill, or during an event where the Superior Landfill cannot accept waste. Atlantic Waste provided an estimate for the Residential Service Charge should Solid Waste be disposed of at the Broadhurst Environmental Landfill. The rate increases projected below are subject to further increases from change in private landfill disposal fees, change in State legislation, and changes in contract.

<b>Table 13: Effingham County Residential Waste Service Charge (Broadhurst Landfill)</b>	
<b>Year</b>	<b>Residential Base Monthly Fee</b>
2021	\$19.13
2022	\$19.61
2023	\$20.10
2024	\$20.60
2025	\$21.12
2026	\$21.64
2027	\$22.18
2028	\$22.74
2029	\$23.31
2030	\$23.89
2031	\$24.49
2032	\$25.10
2033	\$25.73
2034	\$26.37
2035	\$27.03
2036	\$27.71
2037	\$28.40
2038	\$29.11
2039	\$29.84
2040	\$30.58

Alternatively, should a Municipal Solid Waste Disposal Facility operated by a private enterprise locate within Effingham County, waste generated within Effingham County would likely be disposed of at that landfill. Atlantic Waste provided an estimate for the Residential Service Charge should Solid Waste be disposed of at a future landfill located within Effingham County. The rates projected below are subject to further increases from change in private landfill disposal fees, change in State legislation, and changes in contract.

Table 14: Effingham County Residential Waste Service Charge (Effingham County Landfill)	
Year	Residential Base Monthly Fee
2021	\$16.13
2022	\$16.53
2023	\$16.95
2024	\$17.37
2025	\$17.80
2026	\$18.25
2027	\$18.71
2028	\$19.17
2029	\$19.65
2030	\$20.14
2031	\$20.65
2032	\$21.16
2033	\$21.69
2034	\$22.24
2035	\$22.79
2036	\$23.36
2037	\$23.95
2038	\$24.54
2039	\$25.16
2040	\$25.79

In addition to the cost savings associated with a local landfill operated within Effingham County, *Georgia Code Title 12, Chapter 8, Article 2, Part 1 – General Provisions 12-8-39 Cost Reimbursement Fees; surcharges* authorizes and requires the host local government to impose a surcharge of \$2.50 per ton or volume equivalent from Municipal Solid Waste Disposal Facilities operated by private enterprise, effective July 1, 2019. Host local governments may negotiate for and obtain by contract surcharges higher than those set forth in the regulation. At least 50 percent of the surcharges collected shall be expended for the following purposes:

- To offset the impact of the facility;
- Public Education efforts for solid waste management, hazardous waste management, and litter control;
- The cost of solid waste management;
- Administration of the local or regional Solid Waste Management Plan;
- Repair of damage to roads and highways associated with the facility;
- Enhancement of litter control programs;



- Groundwater and air monitoring and protection associated with the location of the facility;
- Remediation and monitoring of closed or abandoned facilities within the jurisdiction of the host local government;
- Infrastructure improvements associated with the facility;
- Allocation of such funds in any fiscal year to reserve fund designated for use for the above purposes in future fiscal years; and
- For the acquisition of property and interests in property adjacent to or in reasonable proximity to the facility upon a determination by the host local government that such acquisition will serve beautification, environmental, buffering, or recreational purposes such as will ameliorate the impact of the facilities

The Host Fee is collected on a per ton basis; therefore, the size, capacity, and permitted disposal rate of the future landfill will greatly impact the surcharge collected by Effingham County. Table 15 provides a list of several facilities within Georgia of differing disposal capacity that serve as potential examples of the potential size and annual disposal capacity of a new landfill within Effingham County.

<b>Table 15: Approximate Host Fee based on Landfill Disposal Rate</b>		
<b>Sample Landfill</b>	<b>2020 Annual Disposal Rate (Tons)</b>	<b>Host Fee (\$2.50 / Ton)</b>
Superior Landfill	616,561	\$1,541,402
Broadhurst Environmental Landfill	392,893	\$982,231
Candler Co – Phase 2 MSWL <sup>1</sup>	1,446,525	\$3,616,313
Chesser Island Road Landfill <sup>2</sup>	6,820	\$17,051
Average Landfill Disposal <sup>3</sup>	302,946	\$757,365
Newton Co – Forest Tower Landfill <sup>4</sup>	128,865	\$322,163
Mode (Most Frequent Value) <sup>5</sup>	10,000	\$25,000

1 – Landfill with Maximum MSW Disposal Rate, Georgia Environmental Protection Division – 2020 Quarterly Tonnage Data

2 – Landfill with Minimum MSW Disposal Rate, Georgia Environmental Protection Division – 2020 Quarterly Tonnage Data

3 – Average of the +/- 43 MSW Landfill Disposal Rates, Georgia Environmental Protection Division – 2020 Quarterly Tonnage Data

4 – Landfill with Median MSW Disposal Rate, Georgia Environmental Protection Division – 2020 Quarterly Tonnage Data

5 – Mode of the MSW Disposal Rate, rounded to the nearest 10,000 Tons, Georgia Environmental Protection Division – 2020 Quarterly Tonnage Data

**C. CONTINGENCY**

Should the current collection practices for municipal solid waste be interrupted for any reason or if future conditions warrant a change in the use of the collection vendors currently used by the Effingham County jurisdictions, this plan will be amended accordingly. Potential use of the publicly owned transfer station in Screven County and Bulloch County are considered possible contingency options for collection. Several dumpster services are available in this service area. The County and cities both have property, including the Dry Waste Collection and Recycling Convenience Center, which is centrally located in the county that could be used for residential waste drop-off sites in emergencies.

**D. COLLECTION NEEDS AND GOALS**

Effingham County and the Cities of Guyton, Rincon, and Springfield will need to expand the waste collection programs to meet the wants and needs of the community. As the county continues to grow, the demand from new residents wanting more advanced large waste, yard waste, specialty waste, and recycling programs will increase. In order to accomplish this goal, Effingham County has identified the following needs and goals:

1. Based on the Waste Stream Analysis conducted in Section II, food waste, organic waste, and paper products including corrugated cardboard comprise the majority of MSW throughout the County. Ensuring adequate collection and recycling availability for these wastes should be the priority.
2. Use public feedback to identify areas and waste streams that do not have adequate collection programs and expand existing programs as needed.
3. Coordinate with Atlantic Waste, Waste Pro USA, and Waste Management to offer annual events for recycling of special materials such as electronics and household hazardous wastes.
4. Become Member of the Municipal Measurement Program (MMP), a free program for local governments to measure performance of current waste and recycling programs.
5. Participate in Keep America Beautiful Great American Cleanup event to pick-up litter around some of Effingham County's most culturally important areas (Historic Areas, Scenic Highways, Public Parks etc.)

**V. DISPOSAL ELEMENT**

This section of the Plan discusses the disposal facilities located in Effingham County in addition to the disposal facilities currently utilized by Effingham County. This section also demonstrates assurance of disposal capacity throughout the planning period as required by the Minimum Planning Standards and Procedures. Exhibit D – Waste Disposal Map, illustrates the facilities currently utilized by Effingham County for disposal.

**A. INVENTORY AND ASSESSMENT OF EXISTING PROGRAMS****Facilities Located in Effingham County****1. Effingham County Sanitary Landfill**

The Effingham County Sanitary Landfill is a closed MSW Landfill EPD Permit Number 051-005D (SL) which ceased operations on March 21, 1998. The MSW Landfill is currently in the groundwater and methane monitoring phase of its Post Closure Plan. Due to some groundwater contamination, assessment two monitoring has taken place as well as some methane remediation. The Site is monitored closely by county staff, engineers, and EPD.

**2. Effingham County Inert Landfill**

One inert landfill operates in Effingham County. It is owned by L&J Enterprises in Springfield, GA and is a private inert landfill. Effingham County has a permit by rule for an inert landfill but has never buried anything on the site and has since decided not to. The county intends to have the permit by rule amended to now show an inert landfill on this property.

**3. Merco Services, Inc. Transfer Station Operation**

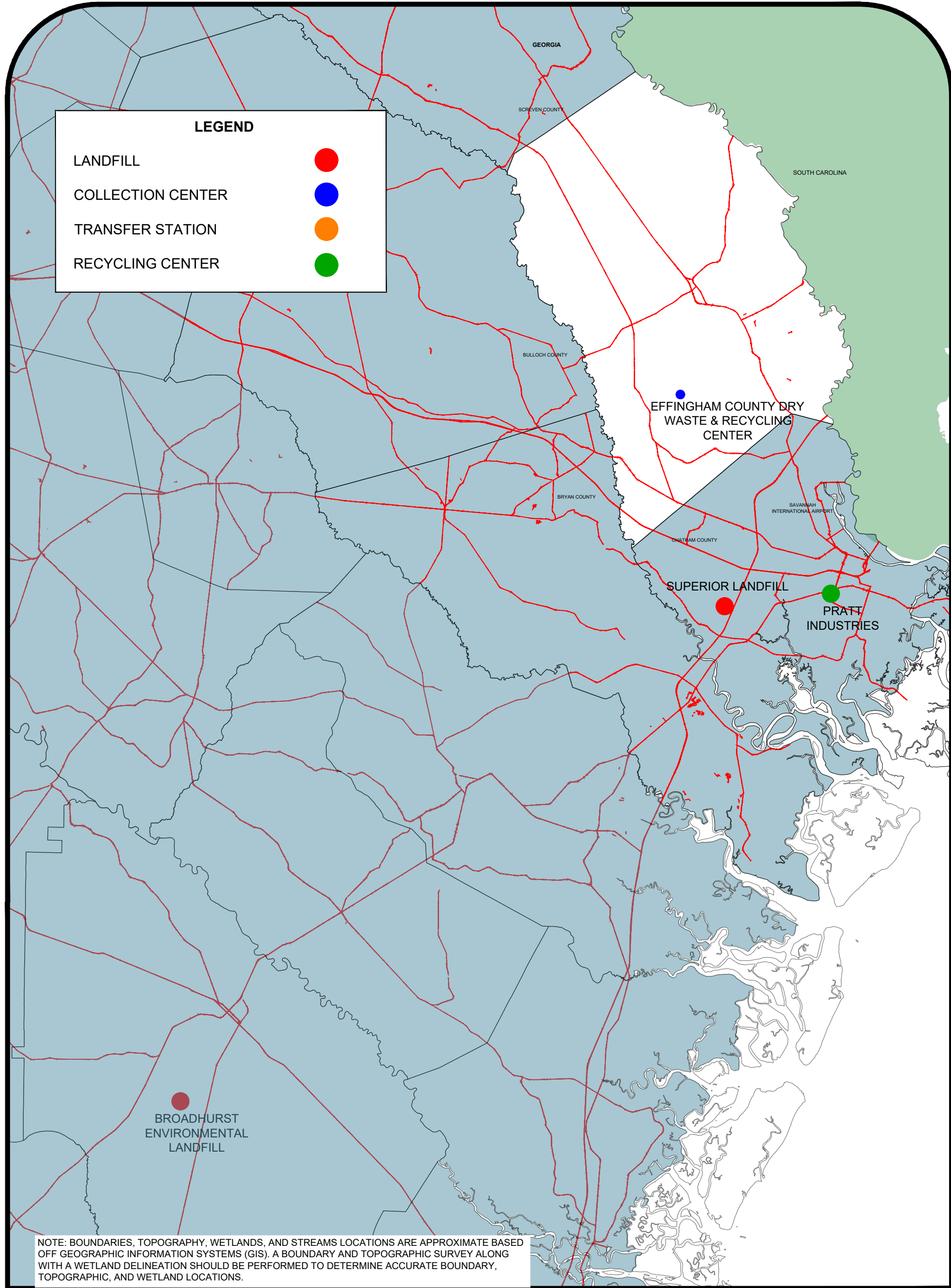
The Merco Services, Inc. Transfer Station EPD Permit PBR-051-04TS is located at 1504 Stillwell Road, Springfield, Georgia.

**4. Sullivan Environmental Services, Inc.**

The Sullivan Environmental Services Transfer Station EPD Permit PBR-051-09TS is located at 580 Longwood Drive, Richmond Hill, Georgia.

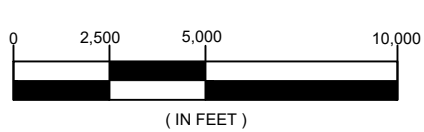
**5. Thermal Treatment Facility**

There are no thermal treatment facilities in Effingham County.



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**EXHIBIT D**



# Waste Disposal Map Solid Waste Management Effingham County, Georgia



Project No.: 21118-2051  
April 15, 2021

Prepared by  
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**Facilities Utilized by Effingham County Waste Contractors**

**1. Superior Landfill**

The Superior Landfill is a Municipal Solid Waste (MSW) Landfill EPD Permit Number: 025-070D (MSWL) located at 3001 Little Neck Road, Savannah, Georgia. The Landfill is owned and operated by Waste Management. The Superior Landfill was reported to have approximately 9,415,264 Cubic Yards (CY) of remaining capacity in 2018. The remaining capacity was reported to provide approximately twelve (12) years of operational life, or until October 9, 2030 in 2018. Atlantic Waste, Waste Pro, and Waste Management utilize Superior Landfill and plan to continue using this facility as long as it is permitted and economically feasible. A letter from Waste Management assuring disposal capacity for ten (10) years is included in Appendix A.

**2. Broadhurst Environmental Landfill**

The Broadhurst Environmental Landfill is a Municipal Solid Waste (MSW) Landfill EPD Permit Number: 151-014D (SL) located at 4800 Broadhurst Road West, Screven, Georgia. The Landfill is owned and operated by Republic Services of Georgia, Limited Partnership. The Broadhurst Landfill was reported to have approximately 45,971,775 CY of remaining capacity in 2018. The reported remaining capacity is estimated to provide approximately 86 years of operational life. Atlantic Waste, Waste Pro, and Waste Management have contracts with the Broadhurst Environmental Landfill.

**3. Savannah Regional Industrial Landfill**

The Savannah Regional Industrial Landfill is an Industrial Landfill EPD Permit Number: 025-072D (L) (I) located at 84 Clifton Boulevard, Savannah, Georgia. The Landfill is owned and operated by Republic Services of Georgia, Limited Partnership. The Savannah Regional Industrial Landfill was reported to have approximately 178,991 CY of remaining capacity in 2018. The reported remaining capacity is estimated to provide approximately four (4) years of operational life.

**B. 10-YEAR ADEQUACY LETTER**

Based on the Projected Waste Stream calculated in Section II, Effingham County is anticipated to generate approximately 296,012 tons of over the next ten (10) years. The majority of waste collected in Effingham County is currently disposed of at the Superior Landfill. The Superior Landfill has provided a capacity assurance letter assuring adequate disposal capacity for its citizens for the next ten (10) years.

**C. CONTINGENCY**

Should the current disposal practices for municipal solid waste be interrupted for any reason or if future conditions warrant a change in the use of the disposal vendors currently used by the Effingham County jurisdictions, use of the publicly owned transfer station in Screven County and Bulloch County, use of Savannah Energy Systems Waste to Energy facility, Broadhurst Landfill, or some other alternatives are considered possible contingency options for disposal. These facilities can be reached within a reasonable travel distance.

**D. DISPOSAL NEEDS AND GOALS**

Effingham County and its municipalities' primary goal is to make sure that private contractors can provide an adequate disposal capacity to meet the needs of residents and local businesses. In order to accomplish this goal, Effingham County has identified the following needs and goals:

1. Continue post closure care at the Effingham County Sanitary Landfill.
2. Keep the Emergency Operation Plan and Debris Management Plan current and in place in the event of a disaster.
3. Identify alternative Municipal Solid Waste Landfill for disposal.
4. Establish additional contracts for waste disposal.



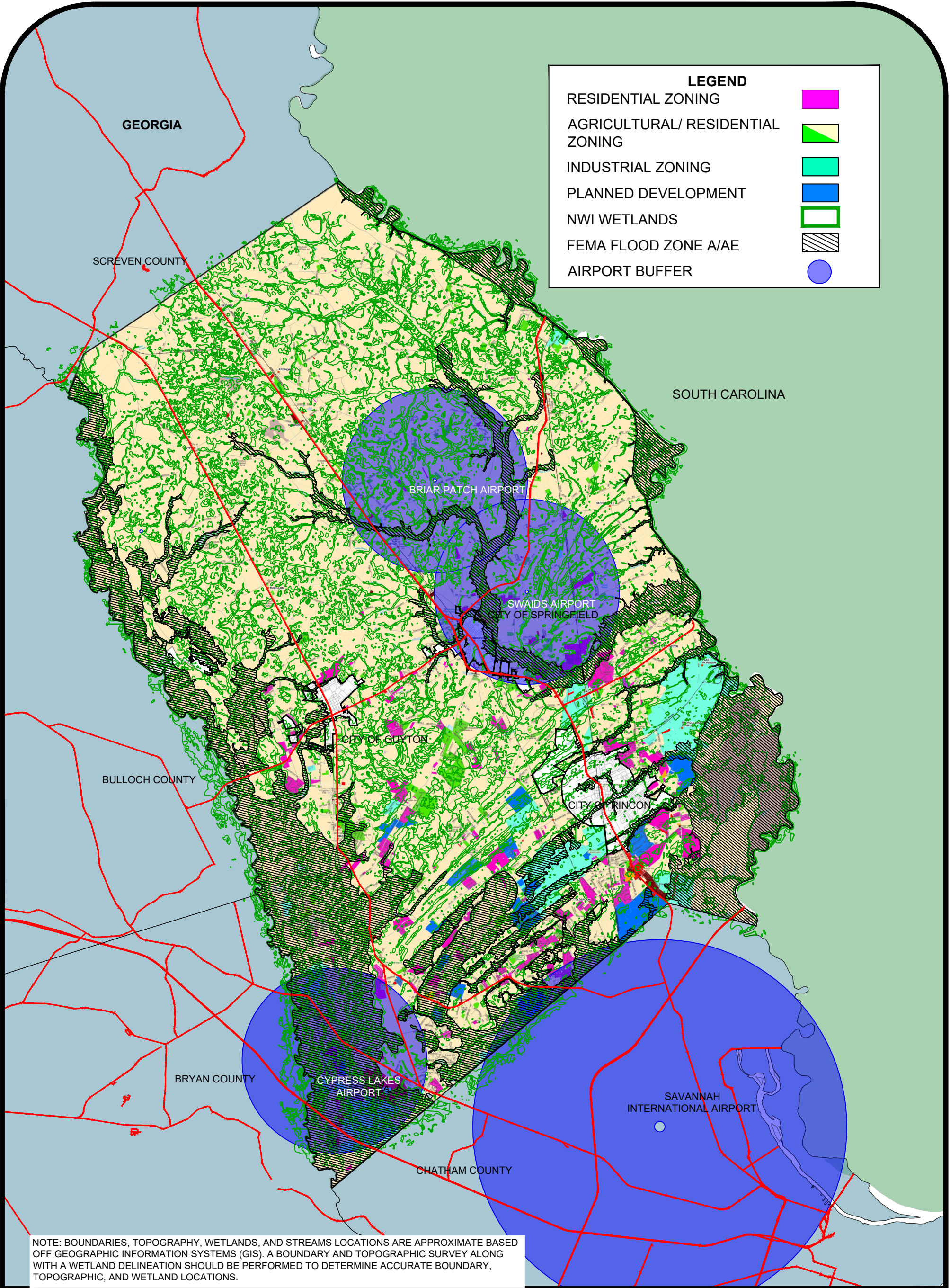
**VI. LAND LIMITATION ELEMENT****A. LEGAL AUTHORITY**

The Georgia Department of Natural Resources Environmental Protection Division Chapter 391-3-4 Solid Waste Management Rules, effective July 28, 2005 addresses regulations and requirements related to the planning, development, and operation of solid waste management facilities in Georgia. The Effingham County Solid Waste Management Plan was prepared following the guidelines specified through the Rule, as a guidance document for solid waste management in Effingham County. SB 157 eliminates solid waste management planning review and approval requirements by Regional Commissions and the Georgia Department of Community Affairs (DCA). However, counties are still required to prepare and adopt a solid waste management plan that at a minimum: demonstrates adequate solid waste collection capability and disposal capacity for 10 years, identifies the type and size of solid waste handling facilities within their county, and identifies the sites which are not suitable for solid waste handling facilities based upon environmental and land use factors. Outside of the Code of Ordinances, the Solid Waste Management Plan is the only planning document that has specific legal authorization to govern the siting and operation of a solid waste handling facility. The State may not issue any permits, grants, or loans for any municipal solid waste disposal facility or any solid waste handling equipment or recycling equipment that is not consistent with the Solid Waste Management Plan.

**B. SITING CRITERIA**

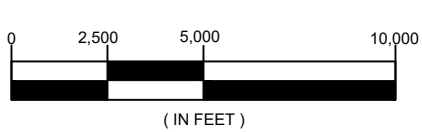
All solid waste facilities and equipment are planned, designed, and operated as an integral function of the Effingham County Solid Waste Management Plan. All facilities and equipment must be selected to ensure maximum efficiency for operation, proper location for use by county residents, transportation cost is minimized, and public safety are met. The County will strive to make decisions as economical as possible without compromising the integrity of a safe and sound solid waste management system for its residents. Any proposed solid waste management facility, either public or private, must be designed and constructed with the goals and objectives set forth in the Solid Waste Management Plan.





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**EXHIBIT E**



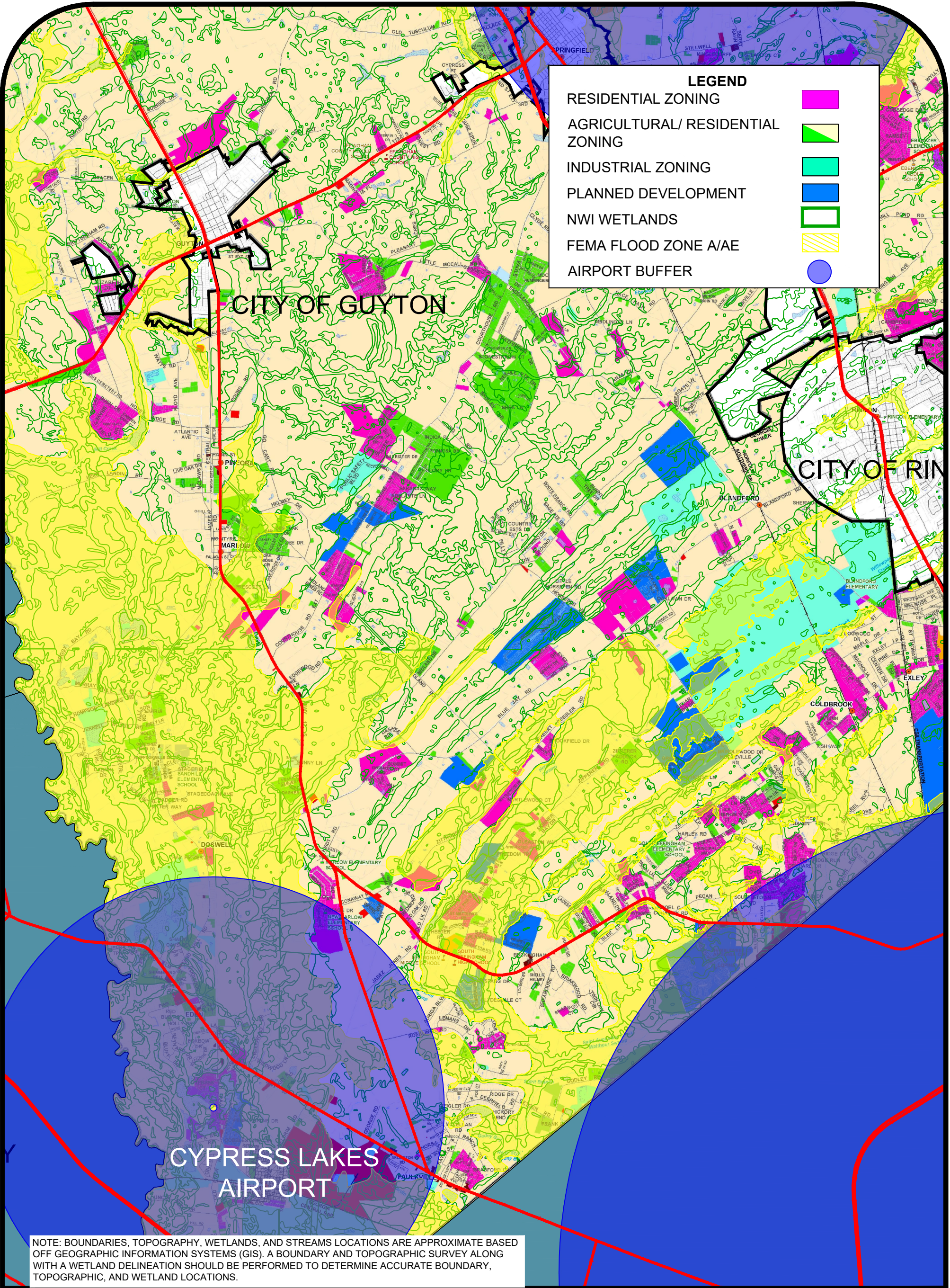
# Land Limitation Map Solid Waste Management Effingham County, Georgia



Project No.: 21118-2051  
April 5, 2021

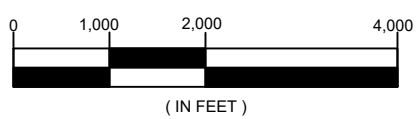
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**EXHIBIT F**



# Land Limitation Map

## South Effingham County

## Solid Waste Management

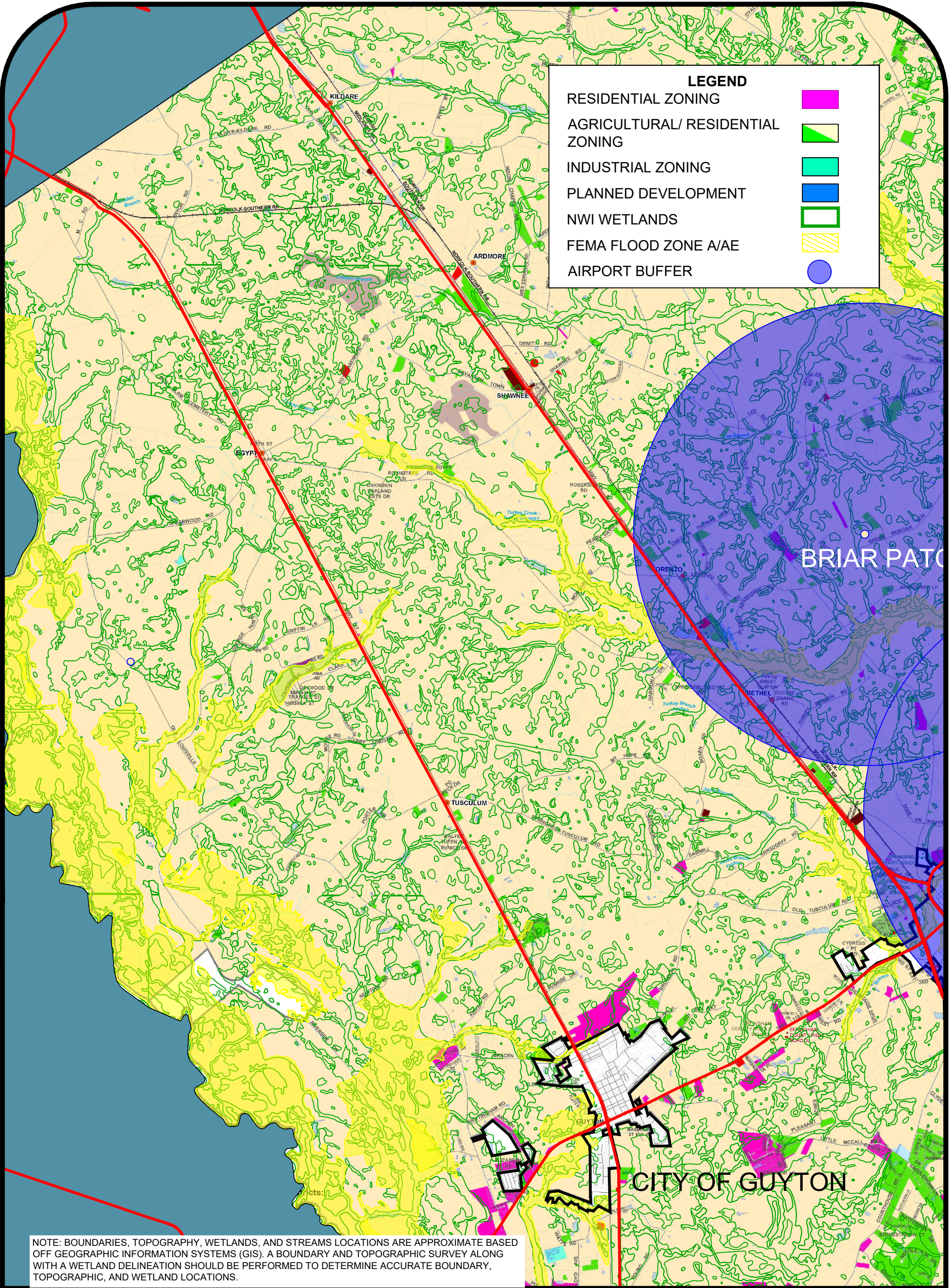
## Effingham County, Georgia



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Project No.: 21118-2051  
April 5, 2021

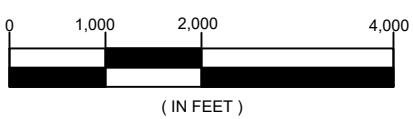




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EXHIBIT G



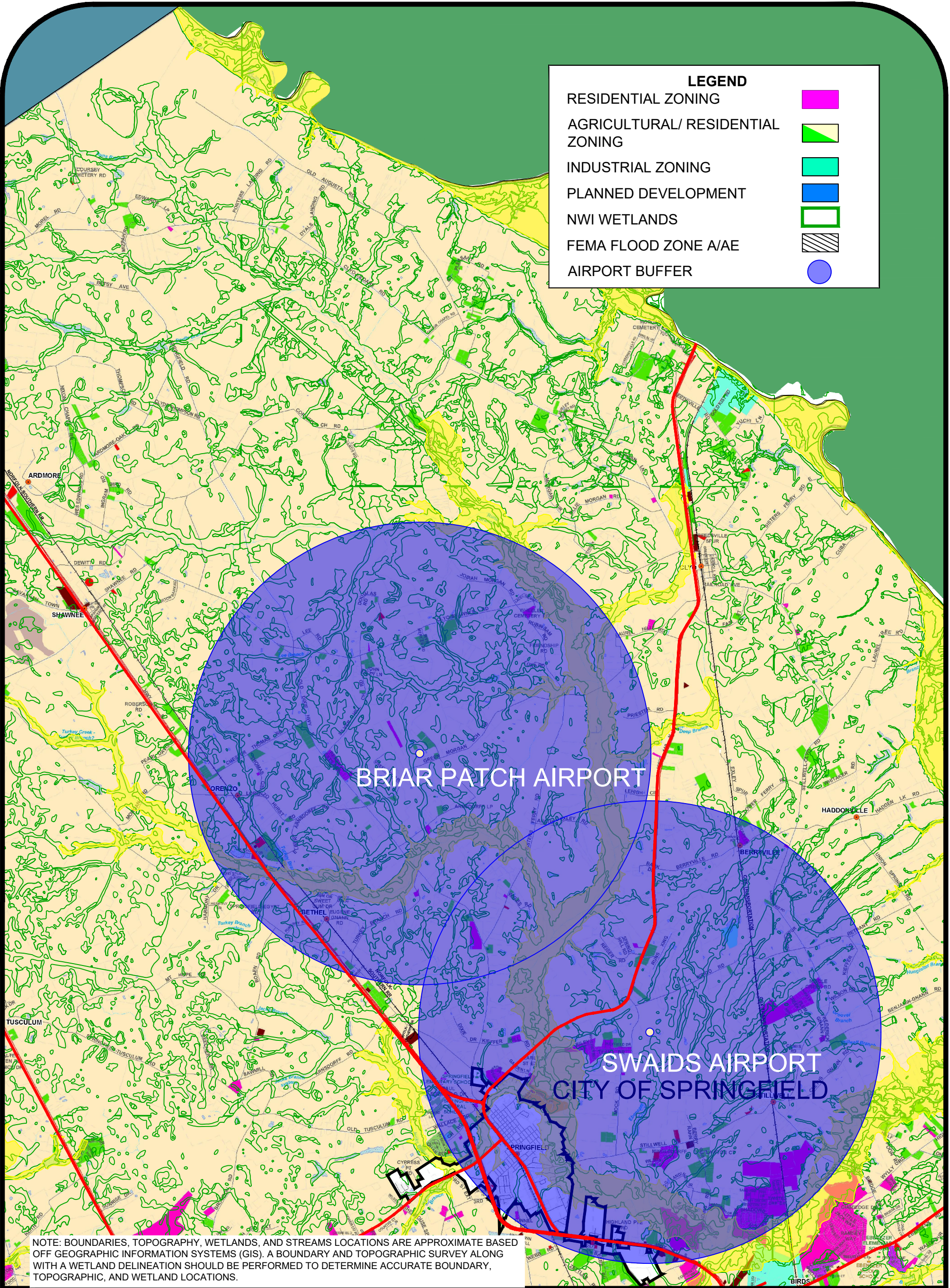
# Land Limitation Map Northwest Effingham County Solid Waste Management Effingham County, Georgia



Project No.: 21118-2051  
April 5, 2021

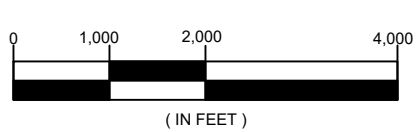
Prepared by  
Alliance Consulting Engineers, Inc.





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EXHIBITH



# Land Limitation Map

## Northeast Effingham County

## Solid Waste Management

## Effingham County, Georgia



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Effingham County abides by the rules and regulations set forth by the EPD and the State of Georgia in terms of solid waste management. In addition, Effingham County has issued a Land Use Ordinance for the County. All proposed solid waste facilities located within the County must abide by these Ordinances as well as all EPD and State regulations protecting the health and safety of Effingham County citizens. Future solid waste management facilities include new, replacement, and expansion facilities. All facilities must not only meet regulatory requirements, but also be conceived in an effort to provide economical and effective disposal of solid waste for Effingham County residents. To accomplish these goals, Effingham County will only allow the siting of a new, replacement, or expansion facility in accordance with the Plan.

Regulatory Requirements that dictate the planning, development, and operations of solid waste management in Effingham County include:

- Effingham County Code of Ordinances provides criteria for the siting of hazardous waste or solid waste landfills.
- Effingham County 2020-2040 Joint Comprehensive Management Plan adopted October 24, 2019 outlines Effingham County, City of Guyton, Rincon, and Springfield's vision for future land use. Industrial Land Use Designation is the most suitable for Landfill Areas.
- City of Guyton Zoning Ordinances dated August 2010 establishes a Waste Management District which provides land for waste treatment and disposal in locations which meet strict criteria for protection of other city land uses and the environment.
- City of Rincon Code of Ordinances dated March 21, 2017 establishes rules and regulations for the storage, collection, and disposal of residential, commercial, and industrial waste.
- City of Springfield Code of Ordinances dated July 28, 2020 establishes rules and regulations for solid waste, and references the Georgia Comprehensive Solid Waste Management Act.
- DNR Rule 391-3-16 – Rules for Environmental Planning Criteria provides criteria for the protection of Water Supply Watersheds, Groundwater Recharge Areas, Wetlands, River Corridors, and Mountains.

- DNR Rule 391-3-4-.05 Criteria for Siting provides criteria for a site proposed as a solid waste handling facility. Criteria including zoning, Disposal Facility Siting Decision, Airport Safety, Floodplains, Wetlands, Fault Areas, Seismic Impact Zones, Unstable Areas, Closure of Existing Municipal Solid Waste Units, Significant Groundwater Recharge Areas, and Hydrological Assessment.
- Title 12 – Conservation and Natural Resources, Chapter 8 Waste Management, Article 2 – Solid Waste Management, Part 1 – General Provisions establishes policy for Solid Waste Management in the State of Georgia.

The applicable setbacks, siting criteria, and buffers outlined in the aforementioned regulations are summarized in the table below. The referenced regulations shall be reviewed in full prior making landfill siting decisions.

Table 16: Criteria for Siting	
Criteria	Criteria Description
Zoning	The site must conform to all local zoning / land use ordinances
Airports	New MSW Landfill Units shall not be located within 10,000 feet of any airport runway used by turbojet aircraft or within 5,000 feet of any airport runway used by piston-type aircraft
Floodplain	Solid Waste Handling Facility located in the 100-year floodplain shall not restrict the flow of the 100-year flood
Wetlands	A Solid Waste Handling Facility shall not be located in wetlands
Fault Areas	New Landfill units and lateral expansions shall not be located within 200 feet of a fault area.
Seismic Impact Area	New Landfill units and lateral expansions shall not be located in seismic impact zones.
Significant Groundwater Recharge Area	A New Landfill Unit or Lateral Expansion shall not have any part of the site located within two (2) miles of any area that has been designated by the Director as a significant groundwater recharge area.
Water Supply	All Public Water Supply wells or Surface Water Intakes within two (2) miles and private water supplies within one-half mile of a landfill must be identified and located.
Surface Water	Municipal Solid Waste Landfills shall not be situated within two (2) miles upgradient of any surface water intake for public drinking water.
Restricted Military Space	Municipal Solid Waste Landfill Units shall not be located within two (2) miles of a federally restricted military air space

	which is used for a bombing range.
Limits of Solid Waste Facilities within Given Area	No permit shall be issued for any Solid Waste Handling Facility if any part of the premises proposed for permitted would lie within any geographic area that is within two (2) miles of three (3) or more landfills within the state.
Limits of Solid Waste Facilities within Adjoining County	No Permit shall be issued for a Municipal Solid Waste Disposal facility in any city or county if any part of the site is within one-half mile of the boundaries of an adjoining city or county without approval from the governing authority from the adjoining city or county.
Historical Sites	No permit shall be issued for a Solid Waste Disposal facility within 5,708 yards of any of the sites currently designated in Georgia as a National Historic Site
Property Boundary	A minimum 200-foot buffer shall be provided between the property line and the waste disposal boundary
Dwelling	A minimum 500-foot buffer between the waste disposal boundary and any occupied dwelling and the dwelling's operational private, domestic water supply well in existence of the date of permit application.

Effingham County is seeking to establish additional Criteria for Siting with the approval of the Solid Waste Management Plan. The intention of this additional criteria is to ensure that solid waste handling facilities are constructed and operated in a way that is in accordance with Effingham County's goals and values. These additional criteria are outlined and summarized in the table below.

Table 17: Proposed Criteria for Siting	
Criteria	Description
Dwelling	A minimum 1,000-foot buffer between the waste disposal boundary and any occupied dwelling and the dwelling's operational private, domestic water supply well in existence of the date of permit application.
Water Supply	The Boundary of the fill area shall not be located within the distances designated below from any well used as a source of water for human consumption that is in a hydrologic unit potentially affected by the landfill: 500 feet from a well hydraulically upgradient of the landfill 750 feet from a well hydraulically cross gradient of the landfill 1,000 feet from a well hydraulically downgradient of the landfill

School/ Day-care/ Church /Hospital/ Public Park	A minimum 1,000-foot buffer between the waste disposal boundary and any School, day-care center, church, hospital, and publicly owned recreational park area
Surface Water	A minimum 200-foot buffer between the waste disposal boundary and any surface water or wetland excluding ditches, sediment ponds, or other operational features.
Wetland	A minimum 50-foot buffer between the waste disposal boundary and any wetland, unless the permittee has obtained the permits and / or authorizations required by all other state and federal laws.
Groundwater Separation	A minimum 3-foot vertical separation of naturally occurring or engineered material shall be maintained between the base of the constructed liner and the seasonal high water table
Utilities	Waste Material shall not be placed on or within any property rights-of-way or within 50-feet of utility equipment or structures (water lines, wastewater lines, storm drains, telephone lines, electric lines, natural gas lines) without approval of the impacted utility.

### **C. LAND LIMITATION NEEDS AND GOALS**

Effingham County is seeking to govern the siting and operation of a solid waste handling facility within its borders to be consistent with the goals and objectives set forth in the Solid Waste Management Plan. In order to accomplish this goal, Effingham County has identified the following needs and goals:

1. Effingham County is currently in the process of amending the Effingham County Code of Ordinances to accommodate and provide restrictions for the development of Solid Waste facilities.
2. Effingham County is seeking to require Waste Disposal Facilities be sited along paved state highways built to GDOT Standards.

### **D. PLAN CONSISTENCY**

Upon receiving the request to site or expand a solid waste handling facility, the local governing authority shall review the written statement of consistency and shall determine if the proposed facility or facility expansion is consistent with the Solid Waste Management Plan, the county or city zoning regulations, the Comprehensive Growth Management Plan, and State Regulations. Effingham County is in the process of updating the Effingham County Code of Ordinances to accommodate and provide restrictions for the development of Solid Waste facilities. Solid Waste facilities will not

be sited within any jurisdiction in Effingham County without the local government's assurance that the proposed facility meets the Solid Waste Management Plan and local Zoning Regulations. At which time all requirements are met, and the determination is made that the proposed solid waste facility is consistent with the plans and regulations, the Board of Commissioners or the City of Guyton, Rincon or Springfield, will notify in writing the developer and/or owner of the proposed Solid Waste facility whether the proposed facility or expansion is consistent with the Plan. If the proposed facility is not consistent with the Plan, the developer may address the inconsistencies and resubmit their request for another review. Upon the developer and/or owner receiving notification from the local governing authority that the proposed Solid Waste facility or expansion is consistent with the Plan, the developer and/or owner may proceed with their application for a Solid Waste permit or permit by rule.



**VII. EDUCATION AND PUBLIC INVOLVEMENT ELEMENT****A. INVENTORY AND ASSESSMENT OF EXISTING PROGRAMS**

The success of a Solid Waste Management Plan in being able to reduce waste is largely dependent upon public involvement and support. The following programs are active in Effingham County and are utilized to educate citizens on waste reduction, litter control, and provide an avenue for public participation in solid waste management programs.

**1. University of Georgia - Effingham County Extension Office**

The University of Georgia – Effingham County Extension Office delivers educational programming for the citizens of Effingham County in the areas of: Agricultural and Natural Resources, 4-H Youth Development, and Family and Consumer Sciences. The UGA Extension mission is to extend lifelong learning to Georgia citizens through unbiased, research-based education in agriculture, the environment, communities, youth, and families. The Extension Office hosts education programs for citizens teaching home composting and the value of the natural environment. As indicated in the Waste Stream Analysis, food waste and yard waste comprise the largest waste stream for residential MSW.

**2. The University of Georgia - Mary Kahrs Warnell Forest Education Center**

The University of Georgia – Mary Karhs Warnell Forest Education Center focuses on providing natural resource educational programming to kindergarten through 12<sup>th</sup> grade students, teachers, parents, youth-serving organizations, and the general public. Programs at the Warnell Center are hands-on and incorporate activities from award-winning environmental education curricula such as Project Learning Tree, Project WILD, Project WET, and the Beetles Project. The Warnell Center educates approximately 8,000 – 10,000 students annually.

**3. Keep Georgia Beautiful**

The Keep Georgia Beautiful Foundation is the state affiliate of Keep America Beautiful. The Keep Georgia Beautiful Foundation supports more than 70 local affiliates across Georgia and strive to increase their impact by engaging additional communities and individuals in an effort to end litter, reduce waste, promote recycling, and beautify communities. Keep Georgia Beautiful has

collected 1.3 million pounds of litter and debris, recycled over 153 million pounds of litter and debris, and has cleaned and improved over 429,121 miles of streets, parks, and trails. Keep Georgia Beautiful hosts several events that are open to Effingham County Citizens.

**4. GDOT Keep it Clean Georgia**

Keep it Clean Georgia is a Georgia Department of Transportation campaign that motivates Georgians, and those visiting the Peach State to not only avoid littering, but to also play an active role in helping protect and maintain Georgia's rich landscapes. The Keep it Clean Georgia Campaign provides resources available to download and print that can be provided to educate Effingham County citizens on preventing litter.

**B. EDUCATION AND PUBLIC INVOLVEMENT NEEDS AND GOALS**

In order to achieve the goals set forth in this Solid Waste Management Plan. Effingham County is seeking to increase educational programs and public involvement in Solid Waste Management, Waste Reduction, Waste Recycling, and Litter Prevention. In order to accomplish this goal, Effingham County has identified the following needs and goals:

1. Effingham County will assess the desire for a Solid Waste Advisory Committee or Task Force from community members. This assessment can take place during public readings for the Solid Waste Management Plan.
2. Partner with Effingham County School District and the Georgia Recycling Coalition to educate students on Recycling and waste reduction.
3. Participate in Keep America Beautiful's "Recycle Bowl", a nationwide recycling competition for elementary, middle, and high school students. This competition is open to all schools, and kicks off annually each October.
4. A Contact that is under the employment of the County or Municipality shall be established to answer questions from private citizens and customers regarding their waste collection, recycling, and yard waste collection services.
5. Recycling Containers will be provided at all County and City Hosted Events.

**VIII. IMPLEMENTATION STRATEGY**

An Implementation Schedule for relevant current programs and future planned programs is a key to the success of the Solid Waste Management Plan. The Table Below includes specific actions for each program that address the needs and goals expressed in the previous planning elements and will help Effingham County achieve the waste disposal reduction goal. In addition, the table will demonstrate the ten (10)-year collection capability and disposal capacity, and will identify specific administrative responsibilities, contractual arrangements, and budgeting necessary to implement the Plan.

<b>Table 18: Implementation Plan</b>				
<b>Activity</b>	<b>Year</b>	<b>Party Responsible</b>	<b>Estimated Cost</b>	<b>Funding Source</b>
<b>Waste Reduction</b>				
Promote County Extension Home Composting Virtual Lecture	2021 - 2031	Effingham County	N/A	UGA Extension
Revise Procurement Policy to increase source reduction	2021	Effingham County	N/A	Effingham County Solid Waste Management
Source Reduction in Government and School Buildings	2021 - 2031	Effingham County	N/A	Effingham County School District
<b>Waste Collection</b>				
Waste Collection Contract	2021 - 2031	Effingham County / Atlantic Waste	\$3,438,778	Effingham County Solid Waste Management
Waste Collection Contract	2021 - 2031	City of Rincon	-	City of Rincon Solid Waste Management
Waste Collection Contract	2021 - 2031	City of Guyton	-	City of Guyton Solid Waste Management
Waste Collection Contract	2021 - 2031	City of Springfield	-	City of Springfield Solid Waste Management
Public Outreach to identify areas where collection is lacking	2022	Effingham County	N/A	Effingham County Solid Waste Management

Annual Special Waste Collection Drive	2021 - 2031	Effingham County	N/A	Effingham County Solid Waste Management
Annual Litter Clean-up Event	2021 - 2031	Effingham County	N/A	Effingham County Solid Waste Management
Municipal Measurement Program	2021	Effingham County	N/A	Effingham County Solid Waste Management
<b>Waste Disposal</b>				
Continue Post-Closure Care at Effingham County Landfill	2021 - 2031	Monitoring Consultant	\$18,000	Effingham County Solid Waste Management
Waste Disposal Contract	2021 - 2031	Effingham County / Atlantic Waste	*Lump Sum in Waste Collection	Effingham County Solid Waste Management
Waste Disposal Contract	2021 - 2031	City of Rincon	*Lump Sum in Waste Collection	City of Rincon Solid Waste Management
Waste Disposal Contract	2021 - 2031	City of Guyton	*Lump Sum in Waste Collection	City of Guyton Solid Waste Management
Waste Disposal Contract	2021 - 2031	City of Springfield	*Lump Sum in Waste Collection	City of Springfield Solid Waste Management
Update Emergency Debris Management Plan	2021	Effingham County	N/A	Effingham County
<b>Land Limitation</b>				
Update Code of Ordinances	2021	Effingham County	Existing Budget	Effingham County
Hold Public Meeting for Citizen Input	2021	Effingham County	N/A	Effingham County
<b>Education and Public Involvement</b>				
Establish Point of Contact for Solid Waste	2021	Effingham County	N/A	Effingham County
Establish Point of Contact for Solid Waste	2021	City of Rincon	N/A	City of Rincon
Establish Point of Contact for Solid Waste	2021	City of Guyton	N/A	City of Guyton
Establish Point of Contact for Solid Waste	2021	City of Springfield	N/A	City of Springfield
Annual Recycle-Bowl	2021 - 2031	Effingham County Board of Education	N/A	N/A / School District

## REFERENCES AND CONTACTS

	<p><b>Effingham County</b>          601 North Laurel Street          Springfield, Georgia 31329          Mr. Eric W. Larson          Assistant County Manager          (912) 754-2123 x 4101 ofc.  <a href="mailto:elarson@effinghamcounty.org">elarson@effinghamcounty.org</a></p>
	<p><b>City of Guyton</b>          310 Central Boulevard          Guyton, Georgia 31312          Mr. Mike Eskew          Interim City Manager          (912) 856-0547  <a href="mailto:Mike.eskew@cityofguyton.com">Mike.eskew@cityofguyton.com</a></p>
	<p><b>City of Rincon</b>          302 South Columbia Avenue          Rincon, Georgia 31326          Mr. Jason Stewart, AICP          Director of Planning &amp; Development Services          (912) 826-5745  <a href="mailto:jstewart@cityofrincon.com">jstewart@cityofrincon.com</a></p>
	<p><b>City of Springfield</b>          130 South Laurel Street          Springfield, Georgia 31329          Mr. Matthew Morris          City Manager          (912) 754-7617  <a href="mailto:mmorris@springfieldga.org">mmorris@springfieldga.org</a></p>
	<p><b>Georgia Department of Natural Resources          Environmental Protection Division</b>          Atlanta Tradeport, Suite 104          4244 International Parkway          Atlanta, Georgia 30354          Mr. Keith Stevens          Manager, Solid Waste Permitting Unit          Solid Waste Management Program          (404) 362-2539  <a href="mailto:Keith.stevens@dnr.ga.gov">Keith.stevens@dnr.ga.gov</a></p>

 <p><b>Georgia Department of Community Affairs</b></p>	<p><b>Georgia Department of Community Affairs</b> 60 Executive Park South, NE Atlanta, Georgia 30329 Ms. Jennifer Fordham Regional Representative (404) 679-4840 <a href="mailto:Region12@dca.ga.gov">Region12@dca.ga.gov</a></p>
 <p><b>ATLANTIC</b> waste services</p>	<p><b>Atlantic Waste Services</b> 125-B Pine Meadow Drive Pooler, Georgia 31322 Mr. Ben Wall President (912) 964-2000 <a href="mailto:ben@atlanticwaste.com">ben@atlanticwaste.com</a></p>
 <p><b>WM</b> WASTE MANAGEMENT</p>	<p><b>Waste Management</b> 2174 Highway 78 Dorchester, South Carolina 29437 Mr. Russell Hightower Government Affairs and Public Sector Manager (803) 528-3634 <a href="mailto:rhightower@wm.com">rhightower@wm.com</a></p>
 <p><b>WASTE PRO</b> Caring For Our Communities™</p>	<p><b>Waste Pro USA, Inc.</b> 1512 Adams Industrial Drive Elberton, Georgia 30635 Mr. Brett Bennett (843) 645-4100 <a href="mailto:bbennett@wasteprousa.com">bbennett@wasteprousa.com</a></p>
 <p><b>EOM</b></p>	<p><b>EOM Operations</b> 601 North Laurel Street Springfield, Georgia 31329 Mr. Clyde Dyson (912) 445-1890 <a href="mailto:cdyson@eomworx.com">cdyson@eomworx.com</a></p>

	<p><b>Municipal Measurement Program</b> mmp@re-trac.com <a href="https://www.municipalmeasurement.com/">https://www.municipalmeasurement.com/</a></p>
	<p><b>Georgia Recycling Coalition</b> 50 Hurt Plaza Southeast Atlanta, Georgia 30303 (404) 586-0044 <a href="https://georgiarecycles.org/">https://georgiarecycles.org/</a></p>
	<p><b>Keep Georgia Beautiful Foundation</b> 60 Executive Park South Atlanta, Georgia 30329 (404) 679-4910 <a href="https://www.kgbf.org/">https://www.kgbf.org/</a></p>
	<p><b>UGA Extension Office Effingham County</b> 501 North Richland Avenue Rincon, Georgia 31326 Mr. Blake Carter (912)-754-8040 <a href="mailto:Blake.carter25@uga.edu">Blake.carter25@uga.edu</a></p>



April 19, 2021

Eric W. Larson, PE, AICP, CFM, CPSWQ  
Assistant County Manager  
Effingham County Board of Commissioners  
601 N. Laurel Street  
Springfield, GA 31329

Eric,

In response to Effingham County's request for ten (10) years of landfill capacity assurance at Superior Landfill, Waste Management is happy to provide you with this letter confirming that the Company will provide capacity assurance for a minimum of ten (10) years for waste volumes generated within Effingham County. This capacity is available at Superior Landfill located at 3001 Little Neck Road, Savannah, Georgia.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Donnard Johnson', with a long horizontal flourish extending to the right.

Donnard Johnson  
District Manager  
Superior Landfill  
Waste Management

cc: Wesley Corbitt, Chairman, Effingham County Commission  
Timothy Callanan, Effingham County Manager  
Teresa Concannon, Effingham County  
Emily Palmaira, Effingham County consultant, Alliance Consulting Engineers