PHENIX CITY, ALABAMA

SOLID WASTE MANAGEMENT PLAN-2025 Amendment

2025

DRAFT

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CHAPTER 1
INTRODUCTION

1.1 HISTORIC OVERVIEW

In 1989, the Alabama State Legislature passed Act 89-824 governing solid waste management in the State of Alabama (see Appendix A). This Act, codified in the Alabama Solid Wastes Disposal Act(1), Code of Alabama 1975, §22-27-40 through §22-27-48, required the Director of the Alabama Department of Environmental Management (ADEM), and cities and counties of the State of Alabama to develop and adopt comprehensive Solid Waste Management Plans (SWMP or "Plan") which forecast and describe the management of solid waste generated within a local government's jurisdiction over a 10-year period. This SWMP is to be utilized as a "roadmap" on how to manage solid waste facilities and services in the local jurisdiction by addressing all items required by the Alabama Solid Wastes Disposal Act.

As a result of Act 89-824 and additions to the Alabama Solid Wastes Disposal Act (now called the Solid Wastes and Recyclable Materials Management Act or SWRMMA), each county was originally required to develop and submit a SWMP to ADEM for approval in 1990. The requirements also call for each county to periodically submit an updated Plan that covers the management of solid waste generated in their jurisdiction for the next ten-year period. An ADEM-approved SWMP is required before a county or municipality can grant local approval on matters related to solid waste management within their jurisdiction, and is also required to be eligible for recycling grant funds. Municipalities within each county have the option of adhering to the county's SWMP or "opting out" of the county's plan by developing and submitting their own plan to ADEM.

In the 2004 SWMP Updates, the East Alabama Regional Solid Waste Disposal Authority's (EARSWDA) SWMP covered the municipalities of Chambers, Lee, and Russell Counties for the Planning Period of 2005 to 2014. Since an updated SWMP was due to be submitted to ADEM in 2014, and the EARSWDA was no longer in existence, each county decided to develop and submit individual SWMPs to ADEM.

Exercising its right to "opt out" of the 2014 Russell County SWMP, Phenix City, Alabama retained Engineering Service Associates, Inc. (ESA) to develop their required ten-year update. The *Phenix City Solid Waste Management Plan - 2014* addressed the concerns of the Solid Wastes and Recyclable Materials Management Act and meets the requirement for each government's SWMP to be periodically updated. For the 10 year update to the plan, Phenix City commissioned Municipal Consultants, Inc. to amend the existing Solid Waste Management Plan. The amended plan will be titled *"Phenix City Solid Waste Management Plan – 2025 Amendment."*

1.2 PURPOSE OF REPORT

The purpose of this Solid Waste Management Plan Amendment is to provide for the management of solid waste within the political jurisdiction of Phenix City for the period of 2025 to 2035. This Plan will address aspects of solid waste management such as generation, collection, transportation and disposal, and recycling, and will have general applicability for the circumstances and situations that may affect solid waste management in Phenix City. In particular, the SWMP will address the following issues required by Code of Alabama 1975, §22-27-47, as applicable:

- **Descriptions and explanations of the general origins and weight or volume of solid waste (household, commercial, industrial, construction/demolition, and special wastes) currently generated within the jurisdiction's boundaries.**
- **Current methods of collection and transportation of solid waste within the jurisdiction.**
- **Identification and descriptions of facilities where solid waste is currently being disposed of or processed, with estimated permitted capacities and remaining capacities of these facilities, including municipal solid waste**

(MSW) landfills, Industrial landfills, Construction/Demolition (C/D) landfills, incinerators, and recycling centers.

- **Identification and descriptions of current and/or planned recycling programs and the impact such recycling programs have on generated waste in the jurisdiction.**
- **Address the requirements of the federal Resource Conservation and Recovery Act, Subtitle D and explain those actions the jurisdiction should take to assure proper management of its waste under these requirements.**
- **Descriptions of current and/or planned procedures for the identification, elimination, and prevention of unauthorized dumps in the jurisdiction. Descriptions of the general origin and weight or volume of solid waste that is expected to be generated annually in the jurisdiction for the next ten (10) years.**
- **Provisions for the development or expansion of solid waste management systems that are consistent with the needs of the jurisdiction, while considering planning, zoning, population and development estimates, economics of jurisdiction and the protection of air, water, land and other natural resources.**
- **Identification of current and proposed future agreements between the jurisdiction and other units of local governments and/or authorities for the joint use or operation of solid waste facilities.**
- **Identification of current and proposed future contractual agreements with private operators of collection, processing, transportation, and/or disposal facilities for solid waste.**
- **Identification of proposed solid waste processing, disposal or recycling facilities, considering the needs of the area, the proximity to transportation routes and large solid waste generators, the cost and**

availability of public services, public health, safety and environmental impacts, and the social and economic impacts a proposed location would have on the affected community.

- **If applicable, an explanation of why a jurisdiction proposes to utilize a solid waste facility outside its jurisdiction.**

1.3 PLANNING PERIOD

All solid waste projections will be based on the planning period of January 1, 2025 – December 31, 2035. For reporting purposes, this SWMP shall expire January 1, 2036.

1.4 METHODOLOGY

This Update generally follows a format required by ADEM with its purpose being to develop a comprehensive Solid Waste Management Plan by addressing the collection, transportation, processing, disposal, and recycling of solid waste in Phenix City. The report is outlined in the Table of Contents and addresses all concerns for a completed Solid Waste Management Plan. The heading of each section includes the addressed task required by the Code of Alabama 1975,

§22-27-47.

The historical data utilized in this report was compiled for record year 2024. Preparation of the *Phenix City Solid Waste Management Plan – 2025 Amendment* included:

- **Meetings with ADEM to determine format and methodology of data to be included in the SWMPs.**
- **Review of previous Solid Waste Management Plans.**
- **Location and identification of existing solid waste facilities (landfills, transfer stations, recycling centers, etc.).**
- **Review of Alabama State Legislative documentation.**

- **Review of Environmental Protection Agency (EPA), Alabama Department of Environmental Management (ADEM) and local regulations governing solid waste management.**
- **Review of population data.**
- **Formal data collection and personal interviews with Phenix City personnel, contract haulers, and private solid waste facility owners and operators.**

1.5 MUNICIPAL APPROVAL OF SOLID WASTE FACILITES AND SERVICES

A local government must be subject to or covered by an approved SWMP in order to provide local approval of solid waste facilities and services within that jurisdiction. Phenix City may grant local approval of solid waste management facilities and services within their municipal limits (not including the police jurisdiction) if the City follows all federal, state, and local requirements related to the management of solid waste. If Phenix City does grant local approval of solid waste management facilities or services, the applying entity is not required to also obtain local approval from the Russell County Commission.

1.6 PUBLIC HEARING

As required by Alabama Law, a public hearing was held to solicit comments on the *Phenix City Solid Waste Management Plan – 2025 Amendment* prior to its approval and adoption by the City Council. Notice of the public hearing was given in a local newspaper at least thirty (30) days before the hearing date. Draft copies of the SWMP were made available to the public prior to the hearing. A copy of the public notice, public hearing sign-in sheets and the minutes of the public hearing are included in Appendix B. No comments were received during the public comment period or the public hearing.

1.7 CITY COUNCIL RESOLUTION

As required by Alabama Law, the *Phenix City Solid Waste Management Plan – 2025 Amendment* was adopted through a resolution by the City Council prior to submittal to the Alabama Department of Environmental Management (ADEM). A copy of this Resolution is included in Appendix C.

1.8 DEFINITIONS

A list of terms commonly used in the field of solid waste management is included for general information [2, 6]:

Buffer Zone

Neutral areas serve as a protective barrier separating two conflicting forces. An area that minimizes the impact of pollutants on the environment or public welfare. For example, a buffer zone is established between a composting facility and neighboring residents to minimize odor problems.

Buy-Back Center

A facility to which individuals bring recyclables in exchange for payment.

Commercial Waste

Waste materials originating in wholesale, retail, institutional, or service establishments, such as office buildings, stores, markets, restaurants, hotels, warehouses, and other non-manufacturing activities, excluding residential and industrial wastes.

Commingled Recyclables

Two or more recyclable materials collected together (i.e. not separated). In some types of collection programs, recyclable materials may be commingled, as long as they do not contaminate each other. For example, glass and plastic can be commingled, but glass and oil cannot.

Composting

The controlled biological decomposition of organic solid materials (i.e., grass clippings, food waste and lawn debris) under aerobic conditions.

Construction/Demolition (C/D) or Inert Landfill

A discrete area of land or an excavation that receives construction/demolition waste, and or rubbish and/or water treatment (alum) sludge, foundry waste meeting ADEM Rule 335-13-4-.26(3), and that is not a land application unit, surface impoundment, or injection well as those terms are defined in this (ADEM) Rule.

Construction and Demolition Waste

Materials resulting from the construction, remodeling, repair, or demolition of buildings, bridges, pavements, and other structures. Such wastes include masonry materials, sheet rock, roofing waste, insulation (not including asbestos), scrap metal, and wood products. Uncontaminated concrete, soil, brick, waste asphalt paving, ash resulting from the combustion of untreated wood, rock, and similar materials are excluded from this definition.

Corrugated Paper

Paper or cardboard having either a series of wrinkles or folds, or alternating ridges and grooves.

Cover Material

Material, either natural soil or geosynthetic material, used in a landfill to impede water infiltration, landfill gas emissions, and bird and rodent congregation. It is also used to control odors and make the site mire visually attractive. Landfills have three forms of cover: daily cover, intermediate cover, and final cover.

Drop-Off Collection

A method of collecting recyclable or compostable materials in which the materials are taken by individuals to collection sites, where they deposit the materials into designated containers.

Ferrous Metals

Metals derived from iron. They can be removed from commingled materials using large magnets at separation facilities.

Garbage

Putrescible animal and vegetable waste resulting from handling, preparation, cooking and consumption of food, including, but not limited to, waste from markets, storage facilities, handling and sale of produce and other food products and excepting such materials that may be serviced by garbage grinders and handles as household sewage.

Groundwater Monitoring Well

A well placed at an appropriate location and depth for taking water samples to determine groundwater quality in the area surrounding a landfill or other site.

Hazardous Waste

Waste material that exhibits a characteristic of hazardous waste as defined in RCRA (ignitability, corrosivity, reactivity, or toxicity), is listed specifically in RCRA 261.3 Subpart D, is a mixture of either, or is designated locally or by the state as hazardous or undesirable for handling as part of the municipal solid waste and would have to be treated as regulated hazardous waste if not from a household.

Household Hazardous Waste (Special Definition and Guidance)

Household hazardous waste (HHW) is any material (gas, liquid, or solid) from a home that may pose a health threat to people, animals, or the environment if handled or disposed of improperly. HHW is corrosive, flammable, toxic, or reactive, and comes from everyday products used in the home, yard, or garden. Common examples include paint, household cleaners, motor oil, pesticides, pool chemicals, products containing mercury (fluorescent bulbs, mercury thermometers), and various chemicals. Because households produce these wastes in limited quantities they are not regulated as hazardous wastes under federal and state laws.

Household hazardous waste items should never be poured on the ground, in a stream, or in a storm drainage system. If a resident has HHW that needs to be disposed of, it is recommended they contact their local government to see if the community sponsors a Household Hazardous Waste collection program. The resident can also contact their solid waste collection agency for guidance on proper disposal of HHW. If no HHW collection program is available, residents should follow the recommendations made in ADEM's brochure "*Household*

Hazardous Waste – Practical Management for Every Home" (Brochure can be found on the internet at the following address: http://adem.alabama.gov/programs/water/nps/take/householdHW.pdf). Recycling or finding someone who can use the material is recommended, but if this is not possible, recommendations include solidifying liquids using cat litter, sawdust or other absorbent material, followed by placing in a leak resistant bag or container before taking it to a disposal facility.

Household Waste

Any solid waste, including, but not limited to, garbage, trash, and sanitary waste in septic tanks derived from households, including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day use recreation areas. Sanitary waste in septic tanks shall be considered as household waste only when it is disposed in a landfill or unauthorized dump.

Incinerator

A facility in which solid waste is combusted.

Industrial Landfill

A discrete area of land or an excavation that receives industrial solid waste and may in addition receive construction/demolition waste and/or rubbish.

Industrial Waste

Materials discarded from industrial operations or derived from manufacturing processes and that are not regulated as a hazardous waste.

Illegal or Unauthorized Dump

Any collection of solid wastes either dumped or caused to be dumped or placed on any public or private property, whether or not regularly used, and not having a permit from ADEM. Abandoned automobiles, large appliance or similar large items of solid waste shall be considered as forming an unauthorized dump within the meaning of this Division. The careless littering of a relatively few, smaller individual items such as tires, bottles, cans and the like shall not be considered an unauthorized dump, unless the accumulation of the solid waste poses a threat to human health or the environment. An unauthorized dump shall also

mean any solid waste disposal site which does not meet regulatory provisions of this Division.

Leachate

Liquid that has percolated through solid waste or another medium and has extracted, dissolved, or suspended materials from it. Because Leachate may include potentially harmful materials, leachate collection and treatment are crucial at municipal waste landfills.

Leachate Collection System

A network of pipes or geotextiles/geonets placed at low areas of the landfill liner to collect leachate from a landfill for storage or treatment. Flow of leachate along the liner is facilitated by the use of a soil drainage blanket or geonet.

Liner

A system of low-permeability soil and/or geosynthetic membranes used to collect leachate and minimize contaminant flow to groundwater. Liners may also absorb or attenuate pollutants to further reduce contamination.

Methane

An odorless, colorless, flammable, explosive gas produced by municipal solid waste undergoing anaerobic decomposition. Methane is emitted from municipal solid waste landfills.

Municipal Solid Waste (MSW)

MSW means household waste, commercial solid waste, nonhazardous sludge, conditionally exempt small quantity hazardous waste, and industrial solid waste.

Recycling

Any process by which materials are collected, separated, recovered, stored, or processed and reused or returned to use in the form of raw materials or products, but does not include the use of materials as a fuel, or for any use which constitutes disposal.

Residential Waste

Waste generated in single- and multiple-family homes.

Roll-Off Container

A large waste container that fits onto a tractor trailer that can be dropped off and picked up hydraulically.

Rubbish

Nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, and similar materials. Noncombustible rubbish includes glass, crockery, metal cans, metal furniture and like materials which will not burn at ordinary incinerator temperatures, not less than 1600 degree F. Uncontaminated concrete, soil, brick, waste asphalt paving, ash resulting from the combustion of untreated wood, rock, yard trimmings, leaves, stumps, limbs and similar materials are excluded from this definition.

Solid Waste

Any garbage, rubbish, construction or demolition debris, ash, or sludge from a waste treatment facility, water supply plant, or air pollution control facility, and any other discarded materials, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, or agricultural operations or community activities, or materials intended for or capable of recycling, but which have not been diverted or removed from the solid waste stream. The term “solid waste” does not include recovered materials, solid or dissolved materials in domestic sewage, solid or dissolved material in irrigation return flows, or industrial discharges which are point sources subject to the National Pollutant Discharge Elimination System permits under the Federal Water Pollution Control Act, as amended, or the Alabama Waste Pollution Control Act, as amended; or source, special, nuclear, or by-product materials as defined by the Atomic Energy Act of 1954, as amended. Also excluded from this definition are land applications of crop residues, animal manure, and ash resulting exclusively from the combustion of wood during accepted agricultural operations, waste from silvicultural operations, or refuse as defined and regulated pursuant to the Alabama Surface Mining Act of 1969.

Solid Waste Management

The systematic control of solid waste including its storage, processing, treatment, recovery of materials from solid waste, or disposal.

Source Reduction

The design, manufacture, acquisition, and reuse of materials so as to minimize the quantity and/or toxicity of waste produced. Source reduction prevents waste either by redesigning products or by otherwise changing societal patterns of consumption, use, and waste generation.

Special Waste

Those wastes requiring specific processing, handling or disposal techniques as determined necessary by the Department which are different from the techniques normally utilized for handling disposal. Examples of such waste types may include, but are not limited to mining waste; fly ash; bottom ash; sludges; friable asbestos; industrial waste; liquid waste; large dead animals or large quantities of dead animals; and residue, medical waste, foundry waste, petroleum contaminated wastes, municipal solid waste ash, or contaminated soil and water from the cleanup of a spill.

Subtitle D

The solid, nonhazardous waste section of the Resource Conservation and Recovery Act (RCRA) of 1976.

Tipping Fee

A fee charged for the unloading or dumping of material at a landfill, transfer station, recycling center, or waste-to-energy facility, usually stated in dollars per ton. (Sometimes called a disposal or service fee.)

Transfer Station

A permanent facility where waste materials are taken from smaller collection vehicles and placed in larger vehicles for transport, including truck trailers, railroad cars, or barges. Recycling and some processing may also take place at transfer stations.

White Goods

Large household appliances such as refrigerators, stoves, air conditioners, and washing machines.

Yard Trimmings

Leaves, grass clippings, prunings and other natural organic matter discarded from yards and gardens. Yard trimmings may also include stumps and brush, but these materials are not normally handled at composting facilities.

CHAPTER 2
SOLID WASTE GENERATION

Section 22-27-47(b)(1): Describe and explain the general origin, and weight or volume of solid waste currently generated within the jurisdiction's boundaries.

2.1 MUNICIPAL SOLID WASTE GENERATION

In some instances, household waste is commingled with commercial waste during collection and transportation; therefore, specific records for residential and commercial solid waste volumes or weights are not possible. In these cases, factors are used to determine specific solid waste amounts for each classification.

According to EPA's document "Municipal Solid Waste in the United States: 2010 Facts and Figures", when residential and commercial wastes are commingled, it is estimated that residential waste constitutes 55 to 65 percent of total MSW generation, with commercial waste constituting 35 to 45 percent of the total (4). For purposes of this report, where residential solid waste and commercial solid waste is commingled, the residential portion will be calculated at 60 percent of the total MSW production, and the commercial portion will be calculated at 40 percent of the total solid waste production.

2.1.1PURPOSE OF REPORT

Household waste such as garbage and trash is collected from residences in Phenix City exclusively by 121 Disposal Company as of January 1st, 2025. Waste Management (WM) held the previous household collection contract, so the tonnages collected for the 2024 year were provided by WM. WM reported approximately 12,150 tons of waste was generated in Phenix City in 2024. In addition, GFL owns and operates a transfer station in Phenix City that reported approximately 137 tons of residential waste was received at its facility in 2024. Therefore, the total residential waste reported for 2024 was 12,287 tons.

2.1.2 COMMERCIAL WASTE GENERATION

Phenix City does not provide commercial solid waste collection services within their municipal limits, so individual businesses typically either contract directly with private haulers for solid waste collection services or transport their solid waste to an MSW landfill or transfer station themselves. 121 Disposal Company, LLC, was the only company to report collection and transport of commercial waste. They reported collecting 650 tons of commercial waste in 2024 in Phenix City.

Additionally, GFL's Phenix City Transfer Station reported receiving 4,800 tons commercial waste from other haulers in 2024. This brings the reported commercial waste totals for 2024 to 5,450 tons. In comparing the residential waste to commercial waste, a ratio of 0.69:0.31 can be observed. This is higher than the expected ratio of 0.60:0.40, but that can be attributed to the waste collected by Waste Management. WM's tonnage provided was listed as MSW and not broken out into residential waste and commercial waste. Since WM was contracted for the residential waste pickup it can be assumed all 12,150 tons are residential waste, but it is possible that some of this waste was commercial waste from contracts outside of the City's residential contract. This potential discrepancy explains the variation of the ratio of residential waste to commercial waste.

2.1.3 MUNICIPAL SOLID WASTE GENERATION

By combining the Household Waste and the Commercial tonnages figures, the total amount of Municipal Solid Waste (MSW) generated in 2024 can be estimated. Approximately 17,737 tons of MSW was generated in Phenix City in 2024.

2.2 CONSTRUCTION & DEMOLITION WASTE GENERATION

Construction and demolition (C/D) wastes are typically generated by the construction, remodeling, repair or demolition of structures, roads, sidewalks, utilities, etc. Other inert material such as yard wastes (i.e. leaves, limbs, grass clippings) may also be considered as C/D waste. Since these wastes are relatively inert materials and C/D landfills do not have to

meet the strict design standards required for municipal household wastes, many municipalities and private entities operate their own C/D landfills.

In 2018, Phenix City issued Moratorium 2018-306 that limited the amount of waste that could be deposited at the Phenix City C/D Landfill due to limited remaining airspace. This moratorium restricted the use of the landfill to only Phenix City municipal operations. Because of this change, no waste would be deposited from other counties or city residents, and thus the tonnage reported by the landfill was drastically reduced. This tonnage likely shifted from the Phenix City C/D Landfill to the Pine Hollow Landfill. An expansion was made to the Phenix City C/D Landfill in 2023, therefore there is an option of opening the landfill back up to city residents as well as the other permitted counties because of increased capacity.

In 2024, approximately 2,052 tons of construction/demolition (C/D) waste was reported by the City as being generated in Phenix City and deposited at the Phenix City C/D Landfill. For the purpose of projecting future waste, the average C/D tonnage reported by the Phenix City C/D Landfill from 2022, 2023, and 2024 will be used to better represent the waste that can be expected in the future. This average is 2,658 tons.

In addition, Pine Hollow Landfill, previously Pine Hollow Inc. C/D Landfill, which receives waste from Phenix City, reported 48,237 tons were received from Phenix City in 2024.

Therefore, the total C/D Waste generated for 2024 from Phenix City was approximately 50,895 tons.

2.3 INDUSTRIAL WASTE GENERATION

An industrial landfill is typically owned and operated by the specific industry for which it is permitted, with the solid waste collection and transportation typically being provided by that industry. According to the Alabama Department of Environmental Management (ADEM), there are currently no Industrial Solid (ISW) Landfills in Phenix City.

Most waste generated from other businesses that might be considered industrial may primarily be commercial-type waste. Therefore, these waste volumes are included in the commercial waste totals reported in Section 2.1.2.

2.4 SPECIAL WASTE GENERATION

"Special waste" primarily consists of waste which is not regulated as hazardous waste and has physical or chemical characteristics, or both, that are different from municipal, demolition, construction and wood wastes and which potentially requires special handling. Examples include: tires, contaminated soil, raw animal manure, incinerator ash, industrial or manufacturing process waste and sludge, wastewater and water treatment plant sludge and large quantities of dead animals. One type of Special Waste Phenix City disposed of in 2024 was tires. Tires require a specific method of disposal and can not be permanently disposed of at MSW or C&D sites without proper handling. The total tonnage of tires disposed of by Phenix City in 2024 was 16.76 tons as seen in the tables below.

Table 2.4.1

Phenix City Tire Disposal

Date	C/D Yards Received	Small Tires	Large Tires	Inert Material	Dirt
1/31/2024	1198	284			
2/29/2024	1472	118		80	
3/31/2024	1779	50	4		
4/30/2024	2493	92			
5/31/2024	1429	98	11		
6/30/2024	1066	111	11		
7/31/2024	1425	40	1		
8/31/2024	1541	171	8		
9/30/2024	865	130	1		
10/31/2024	935	241	4		
11/30/2024	1100	253	1		
12/31/2024	1016	121			11

Table 2.4.2

Phenix City Tire Disposal Rates

Russell County & Phenix City Tire Disposal		
Average Weight of Car Tire*	22.5	lbs.
Average Weight of a Tractor Tire*	150	lbs.
Weight from small tires	38,452.5	lbs.
Weight from large tires	51,150	lbs.
Total weight of tires recycled (Russell County)**	44.80	tons
Total weight of tires recycled (Phenix City)**	16.76	tons

*from EPA volume to weight conversion factor

**Phenix City was responsible for 37.4% of the waste deposited at the GFL Landfill, apply this same ratio to tires

The total Special Waste generated for 2024 from Phenix City was approximately 16.76 tons. This value should be treated as a minimum because some waste that may be classified as Special Waste may have been disposed of as MSW in small amounts from households.

CHAPTER 3
SOLID WASTE COLLECTION AND TRANSPORTATION

Section 22-27-47(b)(2): Identify current methods of collection and haulage (transport) of solid waste within the jurisdiction.

3.1 MUNICIPAL SOLID WASTE (HOUSEHOLD AND COMMERCIAL)

Phenix City requires mandatory participation in municipal solid waste collection services. 121 Disposal Company currently collects almost all the household waste in Phenix City and takes it to the GFL Phenix City Transfer Station. 121 Disposal operates a curbside residential collection service.

In addition, 121 Disposal Company collects some of the estimated commercial waste generated in the City and transports it to the GFL Transfer Station in Phenix City. Other haulers also utilized this facility for their commercial waste disposal generated both inside and outside of Phenix City in 2024.

3.2 CONSTRUCTION & DEMOLITION WASTE

Construction/demolition (C/D) wastes are typically collected and transported to a C/D landfill by the generator of the waste or by a contract hauler. Other inert material such as yard wastes may also be taken to a C/D landfill for disposal.

3.2.1 GENERATOR

Most C/D waste is collected and transported to the City's C/D landfill by the generator of the waste using pickup trucks, dump trucks, and/or trailers. In some cases, a contract hauler may provide this service, though none were identified.

3.2.2 MUNICIPAL COLLECTIONS

The Phenix City Public Works Department collects C/D waste and yard waste in the city limits when scheduled by the resident or business and transports this waste to the Phenix City C/D Landfill for disposal.

3.3 INDUSTRIAL WASTE

Most other waste generated from businesses that might be considered industrial is primarily commercial-type waste and is collected and transported to an MSW landfill along with other residential and commercial solid waste.

121 Disposal Company collects industrial waste from 375 customers and transports it to the GFL's Transfer Station in Phenix City. In addition, industries have contracted with other haulers or hauled their waste themselves to the GFL Transfer Station. This waste is ultimately disposed of in the Stones Throw Landfill in Tallapoosa County.

3.4 SPECIAL WASTE

Special waste is typically collected and transported to a Municipal Solid Waste (MSW) landfill by either a municipality, county, business, or contract hauler. Various methods are used for the transport of Special Wastes but typically involve dump trucks or appropriate containerization (i.e. drums) and transport in trucks or tractor trailers. Roll off containers may also be used in the collection and transport of special wastes.

The tires disposed of were hauled to the Pine Hollow C/D Landfill for temporary storage and future pickup by others.

CHAPTER 4
SOLID WASTE FACILITIES

Section 22-27-47(b)(3): *Identify and describe the facilities where solid waste is currently being disposed or processed and the remaining available permitted capacity of such facilities and the capacity which could be made available through the reasonable expansion of such facilities. The plan shall also explain the extent to which existing facilities will be used during the life of the plan and shall not substantially impair the use of their remaining capacity.*

4.1 MUNICIPAL SOLID WASTE LANDFILLS

Municipal Solid Waste (MSW) Landfills typically receive household and commercial solid waste from municipalities, businesses, private homeowners, and contract solid waste haulers. Only one MSW landfill is currently being used for the disposal of municipal solid waste generated in Phenix City. It is anticipated that this facility will continue to be utilized during the life of this Plan.

4.1.1 STONES THROW LANDFILL (PERMIT NO. 62-11)

The Stones Throw Landfill is located at 1303 Washington Boulevard in Tallassee, Alabama. The permittee is GFL and is currently permitted to receive 1,500 total tons of waste per day. The Stones Throw Landfill Permit was renewed May 9th of 2025. The permit has 130.37 acres suitable for disposal, and 124.57 of those acres are zones for Municipal Solid Waste, while the remaining 5.8 acres is used for C/D.

The Stones Throw Landfill had an expansion in 2024 with the construction of Cell 7. Cell 7's construction consisted of a composite liner, a 12-inch-thick compacted Soil Liner, geosynthetic clay liner (GCL), a 60-mil high density polyethylene micro spike textured membrane, a recomposite drainage media layer, and a 12-inch-thick native protective soil cover. GFL receives 1468.12 tons a day, equating to 355,285.75 tons per year. From Section 2.1, it can be assumed that Phenix City disposes of 17,737 tons per year at this location,

accounting for 4.99% of the landfill's yearly intake. As of June 5, 2025 the estimated remaining airspace at the Stone's Throw Landfill was 17,361,961 cubic yards. This remaining airspace equates to a lifespan of approximately 33 years and will provide a disposal site for the duration of this amendment.

4.2 CONSTRUCTION & DEMOLITION WASTE LANDFILLS

There are currently two C/D landfills in Phenix City, and the Stones Throw Landfill has the ability to accept C/D Waste. It is anticipated that Phenix City will only use the two C/D specific landfills for all C/D waste disposal.

4.2.1 PHENIX CITY C/D LANDFILL (PERMIT NO. 57-08)

The Phenix City C/D Landfill is located on Landfill Rd. in Phenix City, Russell County. This landfill is owned and operated by Phenix City. The approved service area for this landfill is Phenix City as well as the entirety of Russell County, but Moratorium 2018-306 restricts the use of the Phenix City C/D Landfill to strictly City forces. The current permit allows for a daily disposal of 240 tons.

In 2012, the remaining landfill life was estimated to be 9 years, but after the existing landfill was modified and expanded in 2023, the landfill life expectancy is now approximately 20 years. When future expansion is necessary, existing and surrounding property (if the City is able to purchase) could potentially be used for another expansion. From 2022 to 2024, the landfill received an average of 2,658 tons of waste per year. This waste originated in the City and was collected by City forces. No waste was disposed of directly at the landfill by City residents or residents of Russell County. With the landfill expansion in 2023, the City retains the possibility to return back to allowing waste directly from residents of the City and Russell County in the coming years at the discretion of the City.

The landfill site also serves as the home for the City's current electronics recycling program. The City collects any old or unused electronics disposed of by City residents and stores them in a designated area at the landfill for future pickup by outside sources. The City is working

to expand and upgrade the electronics recycling storage area at the landfill through available grant funding programs and other funding sources.

4.2.2 PINE HOLLOW LANDFILL (PERMIT NO. 57-07)

The Pine Hollow Landfill is located on Brickyard Rd., Russell County. The landfill is permitted for Barbour, Chambers, Lee, Macon, and Russell Counties in Alabama and 6 counties in adjacent Georgia. It is now owned and operated by PH Land, LLC. With the change in ownership, the name of the landfill also changed from Pine Hollow Inc. C/D Landfill to Pine Hollow Landfill. The permitted daily capacity is 500 tons per day.

The Landfill received approximately 48,236 tons of waste from Phenix City in 2024 according to the City. The estimated life for this facility is greater than 30 years as estimated by the landfill owner.

4.3 INDUSTRIAL LANDFILLS

According to the Alabama Department of Environmental Management (ADEM), there are no Industrial Solid Waste (ISW) Landfills in Phenix City. In addition, the Stone's Throw Landfill facility in Tallapoosa county accepts industrial process wastes that could be transferred from the GFL transfer station in Phenix City. It is anticipated that these facilities will continue to be utilized during the life of this Plan.

4.4 SOLID WASTE TRANSFER STATIONS

There is currently one transfer station located in Phenix City. GFL's Phenix City Transfer Station collects solid waste from Phenix City and other areas, and sends it on to the Stones Throw Landfill. GFL currently contracts with commercial clients in Phenix City for commercial and industrial waste collection only. These waste streams are taken to this facility, then to Stones Throw Landfill. This transfer station has a design capacity of 450

tons/day and received a total of 60,039 tons in 2024 from all sources. It received 4,935 tons from Phenix City in 2024.

4.5 INCINERATORS

There are currently no solid waste incinerators located in Phenix City; however, the decision to construct an incinerator in the jurisdiction shall remain a valid solid waste management option available to the City.

CHAPTER 5
RECYCLING

Section 22-27-47(b)(4): Provide a description of current or planned recycling programs and an analysis of their impact on waste generated within the jurisdiction. Particularly regarding recycling, the plan shall describe and evaluate:

a. ***Potential benefits of recycling, including the potential solid waste reduction and the avoided cost of municipal waste processing or disposal.***

b. ***Existing materials recovery operations and the kind and weight or volume of materials recycled by the operations, whether public or private.***

c. ***The compatibility of recycling with other waste processing or disposal methods used in the jurisdiction including methods of collecting recyclables.***

d. ***Options for cooperation or agreement with other jurisdictions for the collection, processing and sale of recyclable materials.***

5.1 GENERAL

Waste minimization and recycling efforts, which ultimately decrease the amount of solid waste deposited into landfills, are important aspects of solid waste management. In areas with adequate recyclable markets, typical recyclable materials include:

- **Plastics – plastic containers (type 1 or type 2 milk, soap, juice, water, etc.), grocery sacks (type 2 or 4); and other plastics (toys, plastic hangers, baskets, etc.)**
- **Glass – unbroken glass containers, bottle glass**
- **Metals – ferrous (steel and tin food containers, scrap metal); non-ferrous (aluminum, brass, copper)**

- **Paper – white office paper, corrugated cardboard, newspapers, phone books, mixed paper (dry magazines and packing, junk mail)**
- **White Goods – large household appliances (washing machines, refrigerators, heat pumps, air conditioners)**
- **Batteries – dry cell, rechargeable, automotive, button, lead-acid**
- **Motor oil**
- **Tires**
- **Computers, printers, cartridges, and computer accessories**
- **Building Materials**
- **Cell Phones**
- **Polystyrene Packing Material ("Peanuts")**

5.2 BENEFITS OF RECYCLING

The benefits of recycling efforts include:

- **Reduces the amount of solid waste that is being handled and processed by solid waste collectors.**
- **Reduces the amount of waste that requires disposal, therefore reserving valuable landfill space for those materials that must be disposed of in landfills.**
- **Reduces the amount of materials such as white goods, tires and motor oil that may otherwise end up in the environment, groundwater, or waterways.**
- **Reduces energy use and associated pollution and greenhouse gas emissions.**
- **Saves valuable resources such as raw materials and natural resources which are used in the production of materials that could be recycled.**

- **Reduces overall cost for municipal waste processing and disposal.**
- **Provides business and job opportunities.**

5.3 CURRENT RECYCLING PROGRAMS

A few entities in Phenix City currently participate in recycling. By offering these recycling programs, valuable landfill space and natural resources that are used in the production of these materials are saved. In addition, the cost to process or dispose of this solid waste has been avoided due to the materials being recycled. The method of collecting recyclables and its compatibility with other waste processing or disposal methods is described below.

5.3.1 MUNICIPAL RECYCLING PROGRAM

Phenix City's recycling program consists of two collection centers: a centrally located drop-off center near the Municipal Building located at 709 12th Street, and a drop-off center near the Roy Martin Center located at 1100 Airport Road to the north end of the City.

5.3.2 PRIVATE INDUSTRY PROGRAMS GROCERY INDUSTRY

Several supermarkets/grocery stores in Phenix City currently recycle plastic bags and corrugated cardboard, with some stores having their own cardboard baling machines. The material is typically picked up at each store location; however, records of recycled amounts are not kept. None was willing to provide any further information.

5.3.3 RECYCLING BROKERS

SA Recycling, previously known as Blaze Recycling and Metals, LLC, collects metals only for recycling in Phenix City. Most of their business consists of shredding ferrous metals, though they do collect other metals. They transport these metals to their processing center in Georgia for disposition. SA Recycling provided data for their entire company. As a whole they recycled 1,325 tons of aluminum and 242,531 tons of ferrous metal. SA recycling is

present in 16 states, so the total population of those states was taken to find an average recycling amount per person which was 0.014 lbs. of aluminum recycled per person and 2.63 lbs. of ferrous metal recycled per person. Applying these values for the population of Phenix City, it can be estimated that 0.3 tons of aluminum and 54.46 tons of ferrous metal were recycled in Phenix City in 2024.

5.4 PLANNED RECYCLING PROGRAMS

Since the benefits of recycling have been recognized by Phenix City, they have actively began expanding their recycling programs. Phenix City has been applying for ADEM Recycling grants to fund the purchase and installation of a new recycling building at the Phenix City C/D Landfill. This building will house larger electronics for recycling pickups. Phenix City Plans to continue applying for these grants to upgrade the recycling building to handle more equipment in the future.

5.5 JOINT VENTURES FOR RECYCLING

In a further effort to increase recycling within the City, Phenix City has also entered into a joint recycling venture with Russell County January 2nd of 2025. Both the City and Russell County collect and store scrap tires at a GFL landfill site. GFL will pickup and haul the tires off site on a monthly basis.

5.6 ELECTRONICS RECYCLING

Phenix City has also begun recycling electronics ranging from laptops, TVs, mobile phones, to much more. Phenix City has contracted XSi to haul recycled electronics. The reported recycling does not list tonnages but does list quantities. In recent years the electronics recycling has consisted of recycled computer parts sent out on pallets. Per the EPA's "Volume-to-Weight Conversion Factors" the average density of computer-related electronics is 354 lbs. per cubic yard. For the recycled electronics, a density of 354 tons per cubic yard

will be assumed. In 2024, 16 pallets of computer electronics were recycled by Phenix City, equating to approximately 4.2 tons as seen in the table below.

Table 5.6

Electronics Recycling Rates

Electronics Recycling By Xsi		
2/6/2024 - Pallets of Computer Equipment	8	pallets
7/30/2024 - Pallets of Computer Equipment	8	pallets
Density of Computer Equipment (per reference (8))	354	lbs. / $yd.^3$
Average Volume on a Pallet (assuming 75% of pallet is full)	1.48	$yd.^3$
Estimated lbs. of electronics recycled	8391	lbs.
Estimated tons of electronics recycled	4.20	tons

5.7 RECYCLING STATIONS

Phenix City has also started tracking paper and carboard recycled through different facilities. In 2024, there was one Federal Recycling facility that tracked the tonnage of paper and carboard recycled. In 2024 there was no reported cardboard recycled, and 150.52 tons of paper recycled. This site has previously recycled cardboard and may do so in the future. The recycling results can be seen in the table below.

Table 5.7

Paper and Cardboard Recycling Rates

Material Recycled	lbs.	tons
Cardboard Recycled 10/1/2021 - 9/30/2022	8,460	4.23
Cardboard Recycled 10/1/2022 - 9/28/2023	460	0.23
Cardboard Recycled 10/2/2023 - 9/30/2024	0	0
Paper Recycled 10/1/2021 - 9/30/2022	141,040	70.52
Paper Recycled 10/1/2022 - 9/30/2023	197,020	98.51
Paper Recycled 10/2/2023 - 9/30/2024	301,040	150.52
Daily Recycling from 10/2/2023 - 9/30/2024	824.77	0.412384
Estimated Recycling for 2024	301,040.00	150.52

5.8 IMPACT OF RECYCLING ON WASTE GENERATED

According to survey results, approximately 209.18 tons of materials were removed from the waste stream through recycling efforts in Phenix City. Therefore, the overall tonnage of solid waste disposed of in a landfill was reduced by this amount thereby conserving valuable landfill space. Waste management costs (collection, transportation, processing and disposal) are also reduced by recycling these materials.

CHAPTER 6
RCRA SUBTITLE D REQUIREMENTS

Section 22-27-47(b)(5): Address the requirements proposed under Subtitle D of the federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6941 as amended and identify and explain those actions the jurisdiction should take to assure proper management of its wastes under these requirements.

6.1 RCRA SUBTITLE D REQUIREMENTS

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA was enacted in 1976 to:

- **Protect human health and the environment from the potential hazards of waste disposal;**
- **Conserve energy and natural resources;**
- **Reduce the amount of waste generated; and**
- **Ensure that wastes are managed in an environmentally sound manner.**

Enacted in 1984, the Subtitle D amendment to RCRA deals with nonhazardous solid waste management and designates the state and local governments as the primary planning, permitting, regulating, implementing, and enforcement agencies for the management and disposal of household and industrial or commercial non-hazardous solid wastes. Minimum nationwide standards have been developed under Subtitle D that include specific requirements for the proper design and operation of MSW landfills and other solid waste disposal facilities. These requirements include location restrictions, facility design (liner, leachate collection, run-off controls, etc) and operating criteria, groundwater and landfill gas monitoring requirements, corrective action requirements, financial assurance requirements, and closure and post-closure care requirements. Most states (including Alabama) have

adopted these criteria into their state solid waste management programs. In addition to the minimum federal criteria, states may also impose requirements that are more stringent than the federal requirements.

6.2 JURISDICTIONAL ACTIONS TO ASSURE PROPER MANAGEMENT OF SOLID WASTES

Phenix City requires mandatory residential solid waste collection. All municipal solid waste is disposed of in an MSW landfill that has been designed in accordance with Subtitle D regulations. The City also enforces local, State and Federal regulations relating to solid waste management, with small claims court and civil court being used as necessary to enforce littering and solid waste regulations.

CHAPTER 7
UNAUTHORIZED DUMPS

Section 22-27-47(b)(6): Propose procedures for the identification and elimination of unauthorized dumps in the jurisdiction:

7.1 PROCEDURES FOR IDENTIFYING UNAUTHORIZED DUMPS

Unauthorized or illegal dumps are typically reported by citizens, City employees, or law enforcement officials, as well as monitoring of known dump sites. The City actively investigates illegal dumpsites and prosecutes illegal dumpers in accordance with Alabama's Criminal Littering statute, 13A-7-29. This law provides for a "rebuttable presumption" of guilt for those whose names appear in the garbage on some official document, such as a utility bill or tax record. Suspects are interviewed to allow them an opportunity to explain why their name was in the refuse prior to charges being filed. Suspects are also encouraged to clean up their site in return for non-prosecution or the recommendation of a lighter sentence from the judge. Also, the City has passed ordinances making it illegal to dump refuse on City Rights of Way, City Property, or on any property not belonging to the person dumping the refuse.

7.2 PROCEDURES FOR THE ELIMINATION OF UNAUTHORIZED DUMPS

City employees are typically used to clean up most unauthorized dump sites when found. In addition, the City has teamed with Auburn University and local volunteers to help eliminate illegal dump sites. Once a problematic area has been cleaned, fencing or other barriers and/or "no dumping" signs can be installed.

Qualifying unauthorized dumpsites can also utilize ADEM's Solid Waste Fund (SWF) Site Remediation Program to clean up and properly dispose of illegally dumped material.

CHAPTER 8
SOLID WASTE GENERATION PROJECTIONS

Section 22-27-47(b)(7): Describe and explain the general origin and weight or volume of solid waste reasonably expected to be generated within the jurisdiction annually during the next 10 years. The assessment shall describe the primary variables affecting this estimate and the extent to which they can reasonably be expected to affect the estimate.

8.1 GENERAL

Historically, nationwide per capita municipal solid waste generation rates increased steadily from 1960 (2.68 lbs/capita/day) to 1999 (4.65 lbs/capita/day), essentially leveled off between 1999 and 2005, and have decreased slightly or remained steady each year since then, resulting in a 2010 national estimate of 4.43 lbs/capita/day (5). Municipal Solid Waste generation increased steadily from 2010 to 2017, and sharply rose from 2017 to 2018. As of 2017 the municipal solid waste generation per capita per day was estimated at 4.5 lbs/person/day, which was a slight increase from 2010. In 2018, the EPA enhanced its food measurement methodology which allowed food waste to be more accurately tracked through the waste system. As of 2018, the municipal solid waste generate per capita has risen to 4.9 lbs/capita/day. Most of this increase can be attributed to the EPA enhancing its food measurement methodology. (7) According to the EPA document, *The Decision Makers' Guide to Solid Waste Management, Vol. II*, when estimating future solid waste generation quantities, "unless there is information to the contrary, it is best to assume no change in the generation rate and to develop future projections based on population projections alone"(2). Based on this statement, the solid waste totals given in Chapter 2 will be used to calculate various per capita waste generation rates and to project future solid waste quantities for the planning period of this SWMP.

8.2 POPULATION ESTIMATES AND WASTE GENERATION RATES

Current population estimates were obtained using data from the U.S. Census Bureau and the University of Alabama's Center for Business and Economic Research (CBER) (3). According to the 2020 Census by the U.S. Census Bureau, Phenix City had a population of 38,816 people. Since CBER only estimates future population changes for counties and not municipalities, the estimates given for Russell and Lee Counties (on a proportionate basis) will be applied to Phenix City and used to estimate the population for 2024, and also to project population estimates through the end of the planning period.

CBER provides estimates online for county populations from 2023 to 2028. These estimates were used to determine yearly population totals as well as yearly population growth. These yearly population growths were used to estimate the Phenix City population in 2024 so that a waste generation rate can be established for the most current year. Applying these percentages proportionately to the City's 2020 Census population results in a 2024 Phenix City population estimate of 41,352. Using this population estimate and the 2024 waste totals provided in Chapter 2, a current waste generation rate, in pounds per capita per day (PCD), can be determined and then used to project total waste stream quantities over the planning period of this SWMP.

Table 8.1

Waste Generation Rates

Type of Waste	2024 Waste Totals (in Pounds)	Estimated 2024 Population	2024 Waste Generation Rate (PCD)
MSW	35,474,000	41,352	2.35
Construction/Demolition	101,790,000		6.74
Industrial	0		0
Special	33,511		0.0022

8.3 ESTIMATED WEIGHT OR VOLUME OF SOLID WASTE GENERATED ANNUALLY

In order to project future municipal solid waste quantities, the population trends of the area must also be analyzed. An accurate prediction of the increase/decrease in population, in conjunction with future population density and land use, is essential for planning long-term solid waste management. For the purposes of this SWMP, Phenix City's population estimates will be determined for the years 2025 through 2035, hence correlating with the planning period of this SWMP. The proportional average of the Russell and Lee County CBER population projections will be used to calculate future Phenix City estimates.

Table 8.2

CBER Population Projections

Year	Russell County Population Change	Lee County Population Change	Phenix City Population Change	Phenix City Population
2024	0.671%	1.33%	0.78%	41,352
2025	0.676%	1.33%	0.79%	41,677
2026	0.684%	1.34%	0.80%	42,008
2027	0.686%	1.34%	0.80%	42,343
2028	0.684%	1.34%	0.80%	42,680
2029	0.680%	1.34%	0.80%	43,019
2030	0.680%	1.34%	0.80%	43,360
2031	0.680%	1.34%	0.80%	43,705
2032	0.680%	1.34%	0.80%	44,402
2033	0.680%	1.34%	0.80%	44,755
2034	0.680%	1.34%	0.80%	45,112
2035	0.680%	1.34%	0.80%	45,472

For each one-year period, the trends given in the table above can be applied to the U.S. Census 2020 population for Phenix City to project population and waste generation estimates for the years 2025-2035.

Table 8.3

Future Waste Generation Estimates (in Tons/Year)

Year	Estimated Population	MSW Projections	C/D Projections	Industrial Projections	Special Waste Projections
2025	41,677	17,876	51,294	0	16.89
2026	42,008	18,018	51,702	0	17.02
2027	42,343	18,162	52,115	0	17.16
2028	42,680	18,307	52,530	0	17.29
2029	43,019	18,452	52,947	0	17.43
2030	43,360	18,598	53,367	0	17.57
2031	43,705	18,746	53,791	0	17.71
2032	44,402	18,895	54,217	0	17.85
2033	44,755	19,045	54,649	0	17.99
2034	45,112	19,197	55,084	0	18.13
2035	45,472	19,350	55,522	0	18.28

Waste Generation Estimates were derived from waste tonnages reported in Chapter 2 and from population data reported in Table 8.1 for 2024.

It should be noted that population data is generally not a reliable measure of future commercial, and industrial solid waste production rates, since population growth or decline is not a direct measure of growth and decline in the business sector. However, since there are no long-range economic projections available, this is the only method available for estimating future commercial and industrial solid waste generation. Additionally, businesses and industries continually investigate techniques and technology to reuse and recycle waste products that are generated by their core processes.

8.4 VARIABLES THAT MAY AFFECT WASTE GENERATION ESTIMATES

Several variables exist that may affect the future solid waste quantities predicted above.

8.4.1 POPULATION TRENDS

As previously mentioned, only countywide growth rates are available to project future population estimates in Alabama municipalities. It is reasonable to assume that Phenix City's population may not track exactly with the countywide growth rates throughout the entire planning period of this SWMP. This would affect future waste generation amounts proportionally to the population differences.

8.4.2 MUNICIPAL SOLID WASTE VARIABLES

The calculated per capita household and commercial waste generation rate factors were used to calculate the projected waste amounts for the planning period of this Solid Waste Management Plan. One assumption affecting these estimates is that the per capita waste generation rate remains constant over the planning period. Greater economic growth with concurrent job and income growth would result in more waste being generated through increased consumer spending. Conversely, if recycling programs become more widespread and/or more effective in diverting waste from disposal, then the amount of MSW generated could decrease. Unpredictable factors such as the 2020 Covid pandemic can also have significant impacts on the MSW generated. Some cities witnessed residential waste increase by 20%-30% due to people staying home during time and relying more delivery services. (9)

8.4.3 CONSTRUCTION & DEMOLITION WASTE VARIABLES

Construction/Demolition (C/D) waste quantities are primarily driven by the economy and weather. Fluctuations in the economy, especially in residential housing and commercial office construction, have a large effect on C/D waste generation. A growing economy almost always results in additional demand for residential and commercial buildings. This activity would result in an increase in the amount of C/D waste generated in the future.

Additionally, severe weather can cause considerable damage to trees and buildings, especially in disaster areas, resulting in a short-term increase in C/D waste for disposal. Cleanup following storms typically lasts for one to two months, but can last for several months, or even years, in severe cases. This disaster waste is very hard to predict or quantify and could have a significant effect on future C/D waste generation.

8.4.4 INDUSTRIAL WASTE GENERATION VARIABLES

Estimates of future industrial waste quantities based on current generation rates and population projections are highly speculative. As in municipal waste generation, greater economic growth with concurrent job and income growth could result in more industrial waste being generated through increased need for consumer goods. Additionally, since many industries continually investigate techniques and technology to reuse and recycle waste products generated by their core processes, future industrial waste generation amounts could vary significantly from those calculated in this report. Although there has been industrial growth in Phenix City since the previous SWMP, the growth has not warranted the construction of an Industrial Landfill. The growth of industry in Phenix City has included both additions to existing industries as well as new industries.

8.4.5 SPECIAL WASTE

Since the amount of special waste that would be disposed of in an MSW landfill are highly variable from year to year but tend to be small in volume, changes in future amounts of special waste are not expected to significantly affect the total amounts of solid waste generated in Phenix City in the future.

CHAPTER 9
DEVELOPMENT OR EXPANSION OF SOLID WASTE MANAGEMENT SYSTEMS

Section 22-27-47(b)(8): P*rovide for the development or expansion of solid waste management systems in a manner that is consistent with the needs of the area, taking into account planning, zoning, population and development estimates, and economics of the jurisdiction and the protection of air, water, land and other natural resources..*

9.1 GENERAL

Proper solid waste management requires an integrated approach to addressing the needs of the jurisdiction while being protective of public and environmental health, safety and welfare.

9.1.1 SOLID WASTE DISPOSAL NEEDS OF THE AREA

The current or projected solid waste disposal need for the City can be reasonably assessed by evaluating the remaining disposal capacity for those landfills currently serving Phenix City. As shown in Chapter 4, there appears to be adequate solid waste disposal capacity available to the City throughout the planning period of this SWMP,. As capacity at this landfill diminishes, the City needs to determine if expansion is available on-site, or if another landfill will need to be permitted and constructed. The City could also decide to use other nearby C/D or MSW landfill for the disposal of C/D waste collected in its jurisdiction.

Considering the above, the City may decide it would be advantageous to site a landfill in its jurisdiction due to collection, transportation and/or disposal costs, host government benefits (i.e. fees, taxes, etc.), increased control over solid waste management decisions, changes in the items discussed below, or other unforeseen issues. Therefore, the option to site a future landfill (either MSW, Industrial or C/D), solid waste processing facility, recycling facility, or

other similar facility shall remain available to the jurisdiction throughout the planning period of this SWMP.

9.1.2 PLANNING AND ZONING CONSIDERATIONS

Planning and Zoning is the principal means for the City to guide its future growth and achieve a logical pattern of land use and development for the City. Some of the generally accepted, specific objectives of Planning and Zoning are:

- **To conserve the taxable value of land and buildings.**
- **To prevent overcrowding of land and buildings.**
- **To control pollution, noise, dust, smoke, vibration, odor, flashes of light or danger of explosion.**
- **To lessen or avoid congestion in the public streets.**
- **To promote the public health, safety, comfort, morals, and general welfare of the public and the community.**

The Planning and Zoning Department typically ensures that all new development meets specific guidelines and requirements related to the adequacy of roads, parking, traffic flow, setbacks, drainage, utilities, etc. Any proposed solid waste transfer stations, disposal facilities or processing facilities shall also be located in areas that are appropriately zoned for each type of facility.

9.1.3 LOCAL ECONOMICS AND POPULATION / DEVELOPMENT ESTIMATES

The entire nation is still recovering from the 2020 Covid pandemic both socially and economically. Changes to the waste generation occurred nationwide due to the pandemic as referenced earlier. During the pandemic, household waste increased substantially due to an increased reliance on delivery services, while infrastructure investment was decreased

leading to a potential slowdown in industrial and C/D waste. Although there is no way to perfectly predict future waste, it does appear that Phenix City has enough disposal capacity in their current plan to navigate through significant unforeseen circumstances. With Phenix City's ability to navigate through the Covid pandemic as well as its aftermath, no significant changes appear to be necessary to the Solid waste management system.

Future population estimates indicate that the population of Phenix City is expected to increase moderately (8.25%) over the next ten-year period. With moderate changes expected in the population and with uncertain changes in development, there is expected to be moderate changes in the amount of municipal or industrial solid waste generated within the City over the period of this Update. This is not anticipated to require additional solid waste facilities to serve Phenix City. However, unforeseen circumstances may require additional facilities be considered to be located within the City limits by the municipal government.

9.1.4 PROTECTION OF AIR, WATER AND NATURAL RESOURCES

State and Federal Regulations regarding the siting, design, construction and operation of solid waste processing and disposal facilities are in place to protect air, water and natural resources. These Regulations which safeguard against health, safety and environmental concerns involve:

- **Buffer zones**
- **Minimum separation from groundwater**
- **Storm water run-on/run-off**
- **Liners, if applicable**
- **Leachate collection systems, if applicable**
- **Gas monitoring systems, if applicable**
- **Daily cover of solid waste**

In regard to landfills, the use of properly installed cover material greatly reduces landfill odors and windblown debris. In addition, groundwater is less likely to become contaminated due to the installation of clay liners, geotextile fabric and leachate collection systems. Creeks, streams and other environmentally sensitive areas are protected from excessive stormwater runoff through the use of detention or retention ponds. By following ADEM and EPA guidelines, safeguards against health, safety, and environmental concerns can be achieved while protecting air, water, land and other natural resources.

9.2 CONSIDERING HOST GOVERNMENT APPROVAL FOR PROPOSED NEW OR EXPANDED SOLID WASTE FACILITIES

The Phenix City Council shall consider approval of proposed solid waste facilities in the City. Appendix A contains the application that must be submitted by a proposed solid waste facility when requesting host government approval. An Application Fee equal to 20 percent of the application or permit fee required by ADEM will be required to be submitted with the application (unless waived by the host government) and the entity proposing the solid waste facility shall supply the information requested in the application. It is important to note that the City will not be reviewing the application for technical compliance with Subtitle D requirements. This level of technical review is reserved for ADEM. Instead, the host government shall provide a review by whatever method it deems necessary to assure the proper management of solid wastes generated within its jurisdiction.

CHAPTER 10
JOINT USE OF SOLID WASTE FACILITIES

Section 22-27-47(b)(9): Identify any current agreements between the jurisdiction and other units of local government or public authorities for the joint use of solid waste processing or disposal facilities and evaluate the need for and feasibility of entering joint agreements in the future.

10.1 CURRENT AGREEMENTS

Phenix City is currently in a joint tire recycling agreement with Russell County as previously stated. This existing agreement has been successful and shows that future joint agreements could benefit both Phenix City and future partners.

10.2 EVALUATION OF NEED FOR FUTURE JOINT AGREEMENTS

Phenix City does not currently anticipate the need for joint agreements between the City and any other unit of local government. Although the joint agreement may not be necessary, the tire recycling program as shown that joint agreements can be beneficial to both parties.

CHAPTER 11
PRIVATE COLLECTION, PROCESSSING AND/OR DISPOSAL CONTRACTS

Section 22-27-47(b)(10): Identify any current contractual agreements with private entities for the collection, processing or disposal of solid waste and evaluate the need for and feasibility of entering into such agreements in the future.

11.1 CONTRACTS WITH PRIVATE SOLID WASTE CONTRACTORS

Phenix City currently has a contract with 121 Disposal Company to provide collection and transport/disposal services for municipal solid waste generated in the City limits.

11.2 EVALUATION OF NEED FOR FUTURE AGREEMENTS WITH PRIVATE SOLID WASTE CONTRACTORS

Contractual agreements for solid waste collection services will most likely vary throughout the life of this Plan. Since Phenix City currently has no plans to begin collecting municipal solid waste in its jurisdiction, the City plans to continue the practice of contracting with a private contractor to provide these services.

CHAPTER 12
SITING FOR SOLID WASTE PROCESSING OR DISPOSAL FACILITIES AND RECYCLING PROGRAMS

Section 22-27-47(b)(11): Identify the general location within a county where solid waste processing or disposal facilities and recycling programs may be located, and identify the site of each facility if a site has already been chosen. In identifying general locations for facilities in the plan, each jurisdiction shall consider at least the following:

a. ***The jurisdiction's solid waste management needs as identified in its plan;***

b. ***The relationship of the proposed location or locations to planned or existing development, to major transportation arteries and to existing state primary and secondary roads.***

c. ***The relationship of the proposed location or locations to existing industries in the jurisdiction or state that generate large volumes of solid waste and to the areas projected by the state or local regional planning and development commission for development of industries that will generate solid waste;***

d. ***The costs and availability of public services, facilities and improvements which would be required to support a facility in this location and protect public health, safety and the environment;***

e. ***The potential impact a facility in the proposed location or locations would have on public health and safety, and the potential that such locations can be utilized in a manner so as to minimize the impact on public health and safety; and***

f. ***The social and economic impacts that a facility at the proposed location would have on the affected community, including changes in property values, community perception and other costs.***

12.1 GENERAL

When siting solid waste processing, disposal or recycling facilities, a balance must be struck between the need for environmentally sound waste disposal capacity and recycling ability and the concerns of local citizens and municipalities. Siting factors to consider include: public health and safety, accessibility, drainage, soils, proximity to groundwater and surface water, potential for surface subsidence (underground mining or karst topography), hauling distance and adjacent land use.

12.1.1 SPECIFIC REQUIREMENTS AND CONSIDERATIONS

In the consideration of future facilities, the jurisdiction shall consider the following specific items. The jurisdiction shall determine if these items have been addressed in a logical and complete manner.

1. **The consistency of the proposal with the jurisdiction's solid waste management need as identified in its SWMP. In considering future facilities, the SWMP should be reviewed to determine if the proposed facility fills a need as described in the Plan, or fills a need not existing at the time of the Plan's preparation. These considerations should be evaluated by the jurisdiction early in the process.**

2. **The relationship of the proposal to local planned or existing development, to major transportation arteries and to existing state primary and secondary roads. The proximity of a proposed solid waste project to existing or planned major transportation routes is crucial. All solid waste facilities are dependent upon good roads to facilitate access to and from.**

Additionally, the type of facility dictates the required proximity. Transfer stations should be located near major arteries as the haul trucks operate best on highways. Recycling centers should be located for ease of access by the public, bearing in mind that material haul trucks need access as well. Landfills are best located in rural or industrial areas, hidden from view of the general public, yet not too far from major arteries and primary state roads so haul and collector trucks can have adequate access.

3. **The location of a proposed facility in relationship to existing industries in the state that generate large volumes of solid waste, or the relationship to the areas projected for development of industries that will generate solid waste. Ideally, a facility intended to service an industry should be located as close as possible to the industry. This is sensible from a cost standpoint, but it also minimizes the impact on the community and public health and safety. Absent that, it should be located near major arteries or primary state roads in an appropriate area of the jurisdiction (see Item 2. above).**

4. **Costs and availability of public services, facilities and improvements required to support a proposed facility and protect public health, safety and the environment. A solid waste facility or recycling facility will require certain public services as a minimum. Water service is vital for fire protection, sanitation, and housekeeping. Water service can be public water system extensions or on-site wells. Sewage treatment facilities close at hand is convenient for leachate and wash down water treatment as well as sanitation treatment. If these are not close by, then liquid waste will need to be captured and hauled to the facilities or sewer extensions constructed. Alternatively, on site treatment can be considered.**

5. **The potential impact of a proposed facility on public health and safety, and provisions made to minimize the impact on public health and safety. Aspects of public health and safety to be considered were discussed above and will be reiterated here. The proposed facility plan should address transportation safety by evaluating existing roads and traffic controls with proposed upgrades; wastewater, leachate and washdown water capture, transport and treatment must be addressed; stormwater and erosion control systems must be adequately designed and detailed to protect surface and groundwater resources; and adequate safeguards to prevent contamination of air and water resources, nuisance odors, and aesthetic eyesores must be considered. Finally, provisions to minimize or prevent the public from coming in contact with solid waste must be provided (access control).**

6. **The social and economic impacts of a proposed facility on the affected community, including changes in property values, and social or community perception. Social impacts of a proposed solid waste facility or recycling center can be difficult to quantify. The jurisdiction shall evaluate the proposed project's location, impact on public safety and public facilities, and shall also consider the opinions and concerns of community representatives and the general public. Economic impact positives such as jobs and revenue shall be weighed along with possible negative perceptions.**

12.2 SITING FOR FUTURE SOLID WASTE PROCESSING OR DISPOSAL FACILITIES

The Phenix City Council will determine if future landfills, processing facilities or recycling facilities will be sited in their jurisdiction, or if expansions or modifications to existing facilities which require Host Government consideration will be approved in their jurisdiction. If a new facility is determined to be needed during the planning period of this SWMP, the

items described above shall be considered to determine the best location for that facility. Locations near major transportation routes such as Interstates and U.S. Highways would be important to the selection of a possible area. The expansion of an existing facility would best occur on site if possible.

12.3 CURRENTLY PROPOSED SOLID WASTE PROCESSING/DISPOSAL OR RECYCLING FACILITIES

Phenix City is currently in the process of building and expanding a recycling facility to house larger electronics and hold more electronics to be recycled at the Phenix City C/D Landfill. Phenix City is constantly applying for ADEM recycling grants to continue making progress on this facility.

CHAPTER 13
UTILIZING SOLID WASTE FACILITIES OUTSIDE THE JURISDICTION

Section 22-27-47(b)(12): For any facility expected to serve the jurisdiction's future needs that is located or is proposed to be located outside the jurisdiction, the plan shall explain in detail the reasons for selecting such a facility.

13.1 FACILITY USE OUTSIDE OF JURISDICTION

Since there are no municipal solid waste (MSW) landfills located in Phenix City, all municipal solid waste generated within the City is currently being disposed of in landfills located outside of the local government jurisdiction. All of the residential and commercial waste generated within Phenix City is collected by private companies who typically also operate their own solid waste facilities and therefore transport the waste collected to their solid waste facility (landfill or transfer station) for ultimate disposal. The decision on which solid waste facility to use is made by the collection agency and is typically based on economics, as well as the location of and ease of transportation to a facility.

As seen in Chapter 8, the total anticipated MSW quantities for Phenix City in 2035 is approximately 48.6 tons per day (TPD). The Environmental Research and Education Foundation (EREF) conducted a study of tipping fees across different sized landfills in 2019.(10) These MSW landfills were categorized into small, medium, and large landfills. The smallest category of landfill received approximately 65,000 tons a year, which is significantly higher than the current projection for MSW tonnage in 2035 (19,350 tons). Therefore, it is currently more economical for Phenix City to utilize nearby existing municipal solid waste facilities than to consider construction and operation of its own facilities.

REFERENCES

(1) **Website, Alabama State Legislature: www.legislature.state.al.us/CodeofAlabama/1975/coatoc.htm, Section 22-27-47.**

(2) **USEPA, August 1995. *Decision Makers' Guide to Solid Waste Management, Volume II*. EPA530-R-95-023.**

(3) **U.S. Census Bureau and Center for Business and Economic Research, The University of Alabama, Fall 2012.**

(4) **USEPA, December 2011. *Municipal Solid Waste in the United States: 2010 Facts and Figures*. EPA-530-F-11-005.**

(5) **Website, Alabama Department of Environmental Management (ADEM) Landfill Lists:**

MSW: www.adem.state.al.us/programs/land/landforms/MSWLFMasterList08-11.pdf

C/D and ILF: www.adem.state.al.us/programs/land/landforms/CDILFMasterList08-11.pdf

(6) **ADEM Admin. Code r. 335-13-1-.03 Definitions. Revised April 3, 2012.**

(7) **USEPA - *National Overview: Facts and Figures on materials, Wastes, and Recycling* https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-**

materials#:~:text=These%20Facts%20and%20Figures%20are,pounds%20per%20person%20per%20day.

(8) **USEPA - Volume-*to-Weight Conversion Factors U.S. Environmental Protection Agency Office of Resource Conservations and Recovery April 2016***
https://www.epa.gov/sites/default/files/2016-04/documents/volume_to_weight_conversion_factors_memorandum_04192016_508fnl.pdf

(9) Bhargavi N Kulkarni, V Anantharama ***- Repercussions of the Covid-19 Pandemic on Municipal Solid Waste Management: Challenges and Opportunities***
https://pmc.ncbi.nlm.nih.gov/articles/PMC7331525/

(10) Debra L. Kantner and Bryan F. Staley, Ph.D, P.E. – *Analysis of MSW Landfill Tipping Fees – April 2019*
https://nrcne.org/wp-content/uploads/2019/12/EREF-MSWLF-Tipping-Fees-2019-FINAL-revised.pdf

APPENDIX “A”

APPLICATION FOR HOST GOVERNMENT APPROVAL

HOST GOVERNMENT APPLICATION
FOR
PROPOSED SOLID WASTE FACILITY IN PHENIX CITY

This application is to be filled out and submitted to the host government for consideration of a proposed solid waste facility or the modification of permits for existing facilities (as described in Alabama Code § 22-27-48). Failure to provide all requested information may result in the application being rejected as incomplete. Time frames will begin only after the participating jurisdiction has determined that the application is complete.

A. Unless waived by the proposed Host Government, an Application Review Fee equal to 20% of ADEM's permit fee for the proposed facility will be required to be submitted with the application. The fee shall be made payable to the proposed Host Government with a written request for host government approval to locate a solid waste facility, or make modifications to the permit of an existing facility (if the modifications require Host Government Approval), within the legal boundaries of the approving jurisdiction. If an application is received for the same facility within 18 months of it being denied or rejected by the local governing body, the Application Review Fee shall be equal to 50% of the ADEM's permit fee.

B. Once an application is determined to be complete, a Public Hearing date will be set. The City of Valley will place a legal advertisement in a local newspaper to run at least one time identifying time and date of a Public Hearing. A Public Notice describing the date and time of the Public Hearing shall also be displayed in an area typically used for governmental public notifications (i.e. City Hall hallway).

C. The advertisement is required to run in the newspaper not less than 30 days and not more than 45 days before the Public Hearing.

D. At least two competent representatives of the proposed facility shall be present at the Public Hearing.

E. The Approving Jurisdiction will consider the proposal and will determine whether to approve or disapprove the site based on all information provided including the considerations set forth in Alabama Code § 22-27-48.

F. The City Council will rule on the completed application within 90 days of its receipt.

G. If any portion of the described review process is found to be in conflict with the requirements of Alabama Code § 22-27-48, or any updated statute, the regulatory requirements shall supercede the requirements of this Plan.

DATE OF APPLICATION SUBMITTAL: _____

1. PROPOSED NAME OF FACILITY: _____

_____

2. APPLICANT:

Name _____

Address _____

_____

Telephone _____

If applicant is a Corporation, list Officers: _____

_____

_____

If applicant is a Partnership, list principals:

_____

_____

Principal Stockholders: _____

_____

_____

3. PROPOSED FACILITY TYPE:

_____MSW LANDFILL

_____C & D LANDFILL

_____INDUSTRIAL LANDFILL

_____PROCESSING FACILITY (Describe)

_____OTHER (Explain)

_____

_____

3. CONTACT PERSON(S): (if different from No. 2)

Name (1) _____ (2)_____

Address _____ _____

_____ _____

Telephone _____ _____

4. LANDOWNER: (if different from No. 2)

Attach a copy of the agreement from landowner giving permission to use site for the intended purpose.

Name _____

Address _____

_____

Telephone _____

5. SITE DESCRIPTION:

a. Location: Township _____Range _____

Section _____¼ Section(s) _____

b. Attach location map with the site clearly identified. Acceptable maps include a USGS 7.5 or 15 minute series, a county highway map published by the State DOT, or approved equivalent.

c. Attach a legal property description and boundary plat of the proposed facility prepared by a land surveyor.

d. Size of disposal facility (actual area to be utilized) _____acres.

e. Total area of property (if different from d.) _____acres.

6. ADJACENT LANDOWNERS:

a. Submit a list of all adjacent landowners including name and current mailing address.

b. Submit a map identifying the proposed disposal site and all adjacent landowners listed in (a) above. State the source of your information.

7. WASTE DESCRIPTION:

a. Describe and list all waste streams to be accepted at the facility. Be specific (household solid waste, wood boiler ash, foundry sand, discarded tires, dried sludge, limbs and stumps, etc.)

_____

_____

_____

_____

b. What is the estimated maximum daily volume of waste to be received at the facility? _____
_____(indicate tons/day or yd^3/day)

c. What geographic area or specific industry will waste be accepted from? (be specific) _____
_____
_____
_____

d. Haulage of waste to the facility will be by whom? _____
_____
_____

e. Describe the principle type of transportation vehicle to be used to transport waste:
_____
_____
_____

f. Approximately _____vehicles per day (max.) will be generated as additional traffic on the main collector road to this solid waste facility.

g. Describe all proposed environmental monitoring systems (i.e. groundwater, explosive gas, leachate collection, liner systems). _____
_____
_____
_____
_____
_____

8. SITING STANDARDS:

a. Is the facility located within the 100-year flood plain?

YES _____NO _____

Provide a current flood insurance rate map with the site identified.

b. Is the facility located so as to protect surface and groundwater?

YES _____NO _____

Explain on an attached sheet.

c. Is a discharge to surface water proposed that may require an NPDES Permit?

YES _____NO _____

Explain on an attached sheet.

d. Is a discharge of dredged material or fill material into waters of the state proposed which may require a permit under Section 404 of the Clean Water Act?

YES _____NO _____

e. The bottom elevation of solid waste shall be a minimum of five feet above the seasonal high groundwater table or bedrock. The minimum depth to (CIRCLE ONE: Bedrock, groundwater) at this site is _____feet. (Attach map showing location)

f. Are any sink holes, ponds, springs, swamps, streams, or drainage courses located within the disposal area?

YES _____NO _____

If YES, explain._____

_____

_____

_____

_____

g. Identify any airport runway located within 10,000 feet of the site?

_____

_____

h. How many landfills (or similar type facility) are within a ten (10) mile radius of this proposed facility? _____

_____

_____

i. Does the entrance to the facility meet current standards for sight distance?_____

_____

_____

j. Will any stormwater runoff be directed to a road right-of-way? If so, describe.

_____

_____

_____

9. GENERAL:

a. Describe how the property boundaries will be clearly and permanently marked.

_____

_____

b. Describe and/or show your planned progression of fill from beginning operation through closure. _____

_____

_____

_____

c. The life expectancy of the facility is _____years.

d. How will indiscriminate dumping be prevented (gates, fencing, etc.)? _____

_____

_____

e. Describe what equipment will be utilized in the disposal operation. _____

_____

_____

_____

f. Describe what personnel will be utilized in the disposal operation. _____

_____

_____

_____

g. The applicant is responsible for compliance with all other requirements identified by applicable statutes and the ADEM Administrative Code.

10. Alabama Code § 22-27-48:
Describe how the proposed facility shall meet each of the criteria set forth in Alabama Code § 22-27-48.

a. The consistency of the proposal with the jurisdiction's solid waste management need as identified in its plan;

b. The relationship of the proposal to local planned or existing development or the absence thereof, to major transportation arteries and to existing state primary and secondary roads;

c. The location of the proposed facility in relationship to existing industries in the state that generate large volumes of solid waste, or the relationship to the areas projected for development of industries that will generate solid waste;

d. Cost and availability of public services, facilities and improvements required to support the proposed facility and protect public health, safety and the environment;

e. The impact of proposed facility on public safety and provisions made to minimize the impact on public health and safety; and

f. The social and economic impacts of the proposed facility on the affected community, including changes in property values, and social or community perception.

CERTIFICATION:

I, _____, certify under penalty of law that this document and all attachments submitted are to the best of my knowledge and belief, true, accurate, and complete.

SIGNATURE : _____
(Corporate Officer, Partner, Mayor, Chairman, etc.)

_____
(Printed Name and Title)

APPENDIX “B”

PUBLIC NOTICE and COMENTS

B-1: NOTICE OF PUBLIC HEARING

B-2 PUBLIC HEARING MINUTES

B-3 PUBLIC HEARING SIGN-IN SHEET

B-4 PUBLIC COMMEN SIGN-IN SHEET

B-1: NOTICE OF PUBLIC HEARING

B-2: PUBLIC HEARING MINUTES

B-3: PUBLIC HEARING SIGN-IN SHEET

B-4: PUBLIC COMMENT SIGN-IN SHEEET

APPENDIX “C”

RESOLUTION ADOPTING THE 2025 SOLID WASTE MANAGEMENT PLAN

APPENDIX “D”

ADEM APPROVAL LETTER

APPENDIX “E”

TABLES AND CALCULATIONS

E-1 – 2024 MSW TONNAGE

E-2 – 2024 C/D TONNAGE

E-3 – 2024 SPECIAL WASTE TONNAGE

E-4 – RECYCLING TONNAGE

E-5 – CENSUS DATA

E-6 – WASTE PROJECTIONS

E-1 – 2024 MSW TONNAGE

2024 MSW Waste Generated		
Location	**Type of Waste**	**Tons**
GFL Transfer Station - Phenix City	Household	137
GFL Transfer Station - Phenix City	Commercial	4,800
121 Disposal Company	Commercial	650
Waste Management	MSW	12,150
	Total	**17,737**

2025 Reported Tonnage from 121 Disposal		
Total since February 1st as of August 25th	4,513	tons
Average Daily Tonnage	47	tons/day
Expected Yearly tonnage	17,155	tons

E-2 – 2024 C/D TONNAGE

2024 C&D Waste Generated	
Location	**Tons**
Phenix City C&D Landfill*	2,658
Pine Hollow Landfill (Waste from Phenix City)	48,237
Total	**50,895**

*this is an average of the tonnage from 2022, 2023, and 2024

E-3 – 2024 SPECIAL WASTE TONNAGE

Russell County & Phenix City Tire Disposal 2024					
Date	**C&D Yards Received**	**Small Tires**	**Large Tires**	**Inert Material**	**Dirt**
1/31/2024	1198	284			
2/29/2024	1472	118		80	
3/31/2024	1779	50	4		
4/30/2024	2493	92			
5/31/2024	1429	98	11		
6/30/2024	1066	111	11		
7/31/2024	1425	40	1		
8/31/2024	1541	171	8		
9/30/2024	865	130	1		
10/31/2024	935	241	4		
11/30/2024	1100	253	1		
12/31/2024	1016	121			11

Russell County & Phenix City		
Average Weight of Car Tire*	22.5	lbs.
Average Weight of a Tractor Tire*	150	lbs.
Weight from small tires	38452.5	lbs.
Weight from large tires	51150	lbs.
Total weight of tires recycled (Russell County)**	44.80	tons
Total weight of tires recycled (Phenix City)**	16.76	tons

*from EPA volume to weight conversion factor

**Phenix City was responsible for 37.4% of the waste deposited at the GFL Landfill, apply this same ratio to tires

E-4 – 2024 RECYCLING TONNAGES

Tonnage from Recycling Stations		
Material Recycled	lbs.	tons
Cardboard Recycled 10/1/2021 - 9/30/2022	8,460	4.23
Cardboard Recycled 10/1/2022 - 9/28/2023	460	0.23
Cardboard Recycled 10/2/2023 - 9/30/2024	0	0
Paper Recycled 10/1/2021 - 9/30/2022	141,040	70.52
Paper Recycled 10/1/2022 - 9/30/2023	197,020	98.51
Paper Recycled 10/2/2023 - 9/30/2024	301,040	150.52
Daily Recycling from 10/2/2023 - 9/30/2024	824.77	0.412384
Estimated Recycling for 2024	301,040.00	150.52

Electronics Recycling By Xsi		
2/6/2024 - Pallets of Computer Equipment	8	pallets
7/30/2024 - Pallets of Computer Equipment	8	pallets
Density of Computer Equipment (per reference (8))	354	lbs. / $yd.^3$
Average Volume on a Pallet (assuming 75% of pallet is full)	1.48	$yd.^3$
Estimated lbs. of electronics recycled	8391	lbs.
Estimated tons of electronics recycled	4.20	tons

E-5 – CENSUS DATA

Russell County		
Year	**Population**	**% Change**
2023	63,186	NA
2024	63,610	0.671%
2025	64,040	0.676%
2026	64,478	0.684%
2027	64,920	0.686%
2028	65,364	0.684%
2029	65,808	0.680%
2030	66,256	0.680%
2031	66,707	0.680%
2032	67,160	0.680%
2033	67,617	0.680%
2034	68,077	0.680%
2035	68,540	0.680%
avg. Change 2023-2028		0.680%

Lee County		
Year	**Population**	**% Change**
2023	176,044	NA
2024	178,377	1.33%
2025	180,746	1.33%
2026	183,175	1.34%
2027	185,636	1.34%
2028	188,130	1.34%
2029	190,658	1.34%
2030	193,212	1.34%
2031	195,801	1.34%
2032	198,425	1.34%
2033	201,084	1.34%
2034	203,779	1.34%
2035	206,509	1.34%
Avg. Change 2023-2028		1.34%

Phenix City - Russell County		
Year	**Russell County**	**Phenix City (54.1%)**
2023	63,186	34,184
2024	63,610	34,413
2025	64,040	34,646
2026	64,478	34,883
2027	64,920	35,122
2028	65,364	35,362
2029	65,809	35,603
2030	66,256	35,844
2031	66,707	36,088
2032	67,160	36,334
2033	67,617	36,581
2034	68,077	36,830
2035	68,540	37,080

Phenix City - Lee County		
Year	**Lee County**	**Phenix City (3.89%)**
2023	176,044	6,848
2024	178,377	6,939
2025	180,746	7,031
2026	183,175	7,126
2027	185,636	7,221
2028	188,130	7,318
2029	190,658	7,417
2030	193,206	7,516
2031	195,789	7,616
2032	198,407	7,718
2033	201,059	7,821
2034	203,747	7,926
2035	206,471	8,032

Total Phenix City Population			
Year	**Russell County**	**Lee County**	**Total**
2023	34,184	6,848	41,032
2024	34,413	6,939	41,352
2025	34,646	7,031	41,677
2026	34,883	7,126	42,008
2027	35,122	7,221	42,343
2028	35,362	7,318	42,680
2029	35,603	7,417	43,019
2030	35,844	7,516	43,360
2031	36,088	7,616	43,705
2032	36,334	7,718	44,052
2033	36,581	7,821	44,402
2034	36,830	7,926	44,755
2035	37,080	8,032	45,112

E-6 – WASTE PROJECTIONS

Waste Generation Rates			
Type of Waste	2024 Waste Totals (lbs.)	Estimated Population	2024 Waste Generation Rate (PCD)
MSW	35,474,000	41,352	2.35
C&D	101,789,500		6.74
Industrial	0		0.00
Special	33,511		0.0022

Future Waste Generation Estimates					
Year	Estimated Population	MSW Projections	C&D Projections	Industrial Projections	Special Waste Projections
2024	41,352	17,737	50,895	0	16.76
2025	41,677	17,876	51,294	0	16.89
2026	42,008	18,018	51,702	0	17.02
2027	42,343	18,162	52,115	0	17.16
2028	42,680	18,307	52,530	0	17.29
2029	43,019	18,452	52,947	0	17.43
2030	43,360	18,598	53,367	0	17.57
2031	43,705	18,746	53,791	0	17.71
2032	44,052	18,895	54,217	0	17.85
2033	44,402	19,045	54,649	0	17.99
2034	44,755	19,197	55,084	0	18.13
2035	45,112	19,350	55,522	0	18.28