

**MARENGO COUNTY
SOLID WASTE MANAGEMENT PLAN**



Prepared For:
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Table of Contents

<u>Section</u>	<u>Page</u>
I. Introduction	1
II. Waste Volume and Compositions	3
III. Existing Collection Methods	6
IV. Evaluation of Disposal Facilities	8
V. Elimination of Dumps	9
VI. Solid Waste Agreements and Authorities	11
VII. Recycling	12
VIII. Proposed Alternatives	13
IX. Economic Considerations	16
X. Conclusions and Recommendations	17
XI. Guidelines for Local Approval of New or Expanded Facilities	18
XII. Public Participation	20
XIII. RCRA Subtitle D Requirements	21
XIV. References	22
Appendices	
A. Letters of Approval	
B. Public Notice	
C. Proof of Publication	
D. Public Hearing Sign-in sheet	
E. Marengo County Resolution	

I. Introduction

A Solid Waste Management Plan (SWMP) is required of local governments by the Alabama Department of Environmental Management (ADEM) to plan for the collection and disposal of solid waste generated within its boundaries. A SWMP was last developed for Marengo County in 2015, which addressed the solid waste needs for Marengo County until 2025. This plan will serve as an update to the 2015 plan by analyzing the previous recommendations and providing suggested alternatives to serve the solid waste needs of Marengo County.

The goal of this Solid Waste Management Plan is to aid Marengo County, its municipalities, and ADEM in providing for the collection and disposal of solid waste generated within the county. The plan is meant to provide an overview of current waste volumes and characteristics, as well as to project the future solid waste needs of the county. In addition, the plan is intended to offer alternatives and recommendations for the County to implement to efficiently and economically meet their needs. Section X of this plan offers recommendations for Marengo County to meet the needs set forth in this plan. The plan will serve Marengo County for a 10-year period from 2026 to 2035. As required by Alabama Law, the Marengo County Commission will pass a resolution to accept this plan. This updated Plan will expire ten (10) years from the approval date of the Resolution included in Appendix E

A Solid Waste Needs Assessment was prepared by the Alabama Tombigbee Regional Commission (ATRC), which includes all of Marengo County. The last assessment, performed in 2003, was used as a guideline in preparing the Marengo County SWMP. The assessment used population and waste projections to determine the future solid waste needs of Marengo County and the region (Upon its completion and approval, a copy of this report will be made available to the ATRC for their use in future needs assessments).

Marengo County is located in west Alabama. It is bounded by Greene County and Hale County to the north, Perry County to the northeast, Dallas County to the east, Wilcox County to the southeast, Clarke County to the south, Choctaw County to the southwest, and Sumter County to the northwest. Marengo County is composed of eight (8) municipalities and one county government. Municipalities include the cities of Demopolis and Linden and towns of Dayton, Faunsdale, Myrtlewood, Providence, Sweetwater, and Thomaston. The county is in a sparsely populated, rural area.

According to the 2020 US Census, the population of Marengo County is 19,323 people. This is an approximately 8.1% decrease from the 2010 US Census figure of 21,027 people. Of the 2020 figure, approximately 48%, or 9,322 people, live outside of the eight municipalities. According to the 2020 US Census, populations of the eight municipalities are:

1.	City of Demopolis:	7,162
2.	City of Linden:	1,930
3.	Town of Thomaston:	326
4.	Town of Sweet Water:	228
5.	Town of Providence:	167
6.	Town of Faunsdale:	90
7.	Town of Myrtlewood:	70
8.	Town of Dayton:	28

A detailed list of current population data as well as population projections is shown below (**Figure I-1**).

Figure I-1
Marengo County Current and Projected Populations

Area	Census Data			Projected Population		
	2000	2010	2020	2025	2030	2035
Marengo County	22,539	21,027	19,323	18,332	17,618	17,540
Demopolis	7,540	7,483	7,162	6,795	6,530	6,501
Linden	2,424	2,123	1,930	1,831	1,760	1,752
Thomaston	383	417	326	309	297	296
Providence	311	223	167	158	152	151
Sweet Water	234	258	228	216	208	207
Myrtlewood	139	130	70	66	63	63
Faunsdale	87	98	90	85	82	82
Dayton	60	52	28	27	26	28
Category	Existing Population			Projected Population		
	2000	2010	2020	2025	2030	2035
Urban	11,178	10,784	10,001	9,487	9,118	9,080
Rural	11,361	10,243	9,322	8,845	8,500	8,460
Total	22,539	21,027	9,322	18,332	17,618	17,540

Sources:

U.S. Census Bureau, 2020 Data

University of Alabama Center for Business and Economic Research, 2020

Municipality Projected Population Estimated as Percentage of Future County Population based on municipality's 2020 percentage of overall County population

The major industry in the county is the paper and food manufacturing, which employs approximately 17% of the available work force. Major paper, lumber and food industries in the county include Rock-Tenn Paper Company, Foster Farms, and Linden Lumber. Other large employers in the county include the Bryan W. Whitfield Memorial Hospital, Demopolis City Schools, Wal-Mart Super Center, and Marengo County Schools.

Marengo County has experienced an economic downturn over the past 25 years. The unemployment rate is in the recovery process, yet is still slightly above the national average (Alabama Department of Labor, May 2026 Data). The Economic Development Partnership of Alabama indicates that many residents of Marengo County commute outside the county for employment. This has also contributed to the population decline the county has experienced.

II. Waste Volume and Compositions

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

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.

Municipal solid waste consists of the solid material discarded by a community including excess food, containers and packaging, residential garden waste, other household discards, and light industrial debris. These materials are generally disposed of by the community in a permitted landfill. Hazardous waste including paints, oils, and radioactive substances present special disposal problems and are not included in municipal solid waste. According to the United States Environmental Protection Agency, the US generated approximately 4.43 lbs per day per capita of municipal solid waste in 2010 and 4.9 lbs per day per capita in 2018. A value of 5 lbs per person per day is commonly used for design purposes in developing solid waste plans. This number can vary greatly in an area based on illegal dumping, recycling programs, an area's average income, and the number and type of jobs within the community. Using Marengo County's 2020 Census population of 19,323, the expected waste to be generated from the county would be 16574 tons per year; however, recent data shows the total waste from 2025 to be approximately 6,400 tons per year. Table II-1 gives the average composition of solid wastes generated in the United States.

**Table II-1
Composition of Municipal Solid Waste, 2018 (EPA)**

Component	Percentage by Weight
Paper, Cardboard	23.05
Yard Waste	12.11
Food Waste	21.59
Metal	8.76
Glass	4.19
Plastics	12.20
Wood	6.19
Rubber, Leather, Textiles	8.96
Other (Ceramic, Stone, Dirt)	2.95
Total	100%

A key to evaluating the solid waste management needs for Marengo County is to determine the amount of existing and future wastes volumes to be generated. In addition, the composition of that waste generated must be taken into account. This data can be useful in making determinations as to the required landfill capacity and alternatives for collection and disposal. The composition of the waste will aid in determining the amount of potential recyclables as well as waste that could be disposed of in a Construction and Demolition (C & D) landfill instead of a Municipal Solid Waste (MSW) landfill.

Marengo County Commission is under contract with Waste Management, Inc. (formerly Advanced Disposal) to provide solid waste for all residences in rural Marengo County, Dayton, Myrtlewood, and Providence. The Town of Thomaston and the Town of Sweetwater both have an individual contract with Waste Management, however, the waste is collected on the same route as rural Marengo County and is included into the rural Marengo County tonnage per year. These areas will be referred to as rural Marengo County for the remainder of this plan. The City of Demopolis is under contract with Waste management which expires December 31, 2026. The City of Linden also has an individual contract with Waste Management for collection of solid waste. The City of Uniontown's Street and Sanitation Department in Perry County collects solid waste generated within the Town of Faunsdale. The waste collected for the Town of Faunsdale is collected with Uniontown's waste and therefore, the exact amount of waste for Faunsdale was not available.

The amount of industrial and construction demolition waste can vary greatly from one area to another. These wastes are directly affected by the number and type of large industries and the amount of growth and construction an area is experiencing. Waste that is transported to construction and demolition (C&D) landfills is usually collected and transported by a private homeowner, municipality, or a contract hauler. There are no C&D landfills in Marengo County where citizens can dispose of C&D waste.

The average annual solid waste collected in Marengo County for 2025 is 6,400 tons or approximately 1.81 lbs per person per day. This amount is considerably less than the national average discussed previously, which could be attributed to the rural nature of the area. Table II-2 gives a breakdown of the average annual waste collected in Marengo County.

**Table II-2
Marengo County Waste Totals**

Source of Waste	Tons of Waste
Marengo County Residential	3,150
Demopolis Residential	2,565
Linden Residential	685
Total	6,400

This Solid Waste Management Plan must address the solid waste needs of Marengo County for the next 10 years. In order to accomplish this, projections must be made of the waste to be generated in that time period. Using the projected population trends and past increases in solid waste generation, estimates can be made. According to data from the 2015 plan, Marengo County generated an average of 6,425 tons per year of solid waste. In 2025 the total waste fell to 6,400 tons per year.

Table II-3 gives a breakdown of population and solid waste projections for Marengo County for the next 10 years. The population figures for 2025, 2030, and 2035 were obtained from the University of Alabama Center for Business and Economic Research. Population projections for intermediate years were interpolated by the author. The solid waste projections over the next 10 years are based on percentage decreases in population. It should be noted that population data is generally not a reliable measure for future waste projections, but considering there are no long-range economic projections available from the Regional Planning Commission, population will be the only variable used in predicting future solid waste projections.

Table II-3
Population and Solid Waste Projections

Year	Population Projections	Solid Waste Projections (Tons)
2025	18,332	6,400
2026	18,189	6,350
2027	18,046	6,300
2028	17,904	6,251
2029	17,761	6,201
2030	17,618	6,151
2031	17,602	6,145
2032	17,587	6,140
2033	17,571	6,134
2034	17,556	6,129
2035	17,540	6,123

III. Existing Collection Methods

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

Waste Management is under contract with Marengo County to provide solid waste collection to all residences within rural Marengo County. In addition, Demopolis, Linden, and Thomaston have individual contracts with Waste Management to provide collection services. The town of Sweetwater is under contract with Waste Management for the collection of solid waste within the town limits. Solid waste generated within the town limit of Faunsdale is collected by the City of Uniontown in Perry County. All residences are provided house-to-house collection on a weekly basis. The county and municipalities pay their collectors a set fee for the services and collect from the residences on a monthly or quarterly basis.

Waste Management also provides collection services for businesses, industries and institutions through individual contracts. Dumpsters are provided to these private entities and collected based on individual needs. There is a tipping fee charged for the collection from these businesses.

Records of waste volume and compositions were obtained from Waste Management for 2025. Marengo County Commission is under contract with Waste Management to collect solid waste from rural Marengo County. Solid waste is collected on a weekly basis from approximately 2,465 residences in Marengo County. The total solid waste collected by Waste Management from rural areas within the county for 2025 was 3,150 tons.

The City of Demopolis is under contract with Waste Management for the collection of its residential waste on a biweekly basis from 2,892 residents. The total solid waste collected by Waste Management from the City of Demopolis for 2024 was 2,565 tons. The City of Linden is under contract with Waste Management for the collection of its residential waste on a weekly basis from 899 residents. The total solid waste collected by Waste Management from the City of Linden for 2024 was 685 tons. The Town of Thomaston is also under contract with Waste Management for the collection of its residential waste on a weekly basis from 213 residents. The total solid waste collected by Waste Management from the Town of Thomaston for 2025 was unavailable because it were collected alongside rural Marengo County's waste.

The Town of Faunsdale's solid waste is collected by the City of Uniontown in Perry County. The City of Uniontown serviced approximately 130 residents within the town limits on a weekly basis. Records of the waste collected were unable to be determined for this report. The City of Uniontown charges the Town of Faunsdale per household.

The Town of Sweetwater is under contract with Waste Management to service 113 households. Records of the waste collected were unavailable because they were collected with rural Marengo County's waste.

Waste Management also provides collection services for businesses, industries and institutions through individual contracts. Waste Management can provide large dumpsters on a temporary or permanent basis, depending on the need of the business. No services are provided to businesses from Waste Management as a part of the county and municipalities' contracts. Waste Management operates a transfer station located in the Linden Industrial Park in Linden, Alabama. All waste collected by Waste Management in the county is hauled to the transfer station to prevent long hauls to the landfill by individual trucks. The waste collected from the individual trucks is dumped into a loading area at the transfer station. When enough waste has accumulated it is loaded into a tractor

trailer and hauled to the landfill. Management also allows the public to dispose of any residential or commercial solid waste at the transfer station for a fee.

The Cities of Demopolis and Linden offer solid waste collection in addition to the services provided by Waste Management. Demopolis picks up tree and limb debris from the rights of way within the city limits for residents. The yard waste is then transferred to a facility on N Cedar Street, where it is incinerated using an air curtain incinerator. The City of Linden picks up C&D waste along with tree and limb debris along the rights of way and transports it to the Waste Management Transfer Station located at the Linden Industrial Park.

All other solid waste is transported to the nearest C&D landfill by individuals personally. Collection of these wastes is the responsibility of the individual or private company and is not provided by the County or local municipalities. All waste disposed of at this site must be brought to the landfill by the individual or business. Depending upon the amount of waste being transported, the waste is usually hauled to the landfill in privately owned vehicles, trailers or large dump trucks. Disposal of solid waste is not permitted by the County other than at the locations listed above.

IV. Evaluation of Disposal 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.

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.

Municipal solid waste is generally disposed of in a permitted landfill facility. All newly constructed municipal solid waste landfills require liners, which prevent the leachate from the waste from contaminating adjacent soil and groundwater. Leachates are liquid wastes from a landfill containing dissolved and suspended solid matter. Waste is placed in layers, typically 2 to 3 ft. thick, and is compacted before soil is added as a cover. A landfill is typically evaluated according to its remaining capacity. Municipal Solid waste collected by Waste Management is currently disposed of in the Pine Ridge Landfill in Meridian, MS.

There are no public landfills located in Marengo County. All waste collected by Waste Management in Marengo County is transferred from the Linden transfer station to the Pine Ridge Landfill, located in Meridian, Mississippi. The Pine Ridge Landfill, which is owned and operated by Waste Management, is a 67-acre facility that is currently permitted by the Mississippi Department of Environmental Quality to accept a maximum of 172,000 tons of waste per year. The Solid Waste Annual Report for the Pine Ridge Landfill in December 2025 states that there is currently 33.2 years of remaining life for this landfill. The Solid Waste Annual Report also states that the Pine Ridge Landfill facility can accept 3,151,946 more tons of solid waste before reaching maximum capacity. Considering the modest amount of solid waste that Marengo County generates annually, the Pine Ridge Landfill will have enough capacity to accommodate Marengo County's solid waste needs for the next 10 years.

There are currently three industrial landfills in Marengo County. Rock-Tenn Mill Company, LLC owns both a lime mud and solid waste landfill. The permitted volume for both of these landfills is 250 cubic yards per day. These landfills are located in Demopolis, and are solely for private use by Rock-Tenn Mill Company, therefore they are not considered in this report in evaluating the solid waste needs of Marengo County. Also located in Demopolis is CEMEX, Southeast, LLC Industrial landfill. It is permitted to accept 600 tons per day, and also solely for private use and will not be considered in this report.

V. Elimination of Dumps

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

Illegal dumping creates environmental and health hazards and must be addressed as a part of this report. Illegal dumping can occur throughout the county both on public right of way and on private property. The disposed waste can pollute streams and rivers and affect the quality of groundwater. Participation in the solid waste collection system is mandatory of all residents of Marengo County.

One of the objectives of this Solid Waste Management Plan is to address illegal dumping in Marengo County and offer suggestions for their elimination. The solid waste plan compiled for Marengo County by the Marengo County Solid Waste Officer in 2015 did not report any illegal dump sites along the public right of way within the county. This did not include any illegal dumpsites located on private property within the county.

The Marengo County Solid Waste Officer stated that there are currently two known illegal dumping sites within the county. The first illegal dumping site is located on County Road 12 and the second site is located along Old Highway 80. The increase in illegal dumping may be contributed to the rising costs of waste collection fees, especially in rural areas.

Participation in a solid waste collection program is mandated for all residents through Alabama Law 89-824, which was passed in 1989. Prior to the writing of this plan, Marengo County has contracted for house-to-house collection of solid waste at all residences within the county. Due to excessive accumulation of waste near the dumpsters, all county-provided dumpster sites which were previously located throughout the county were removed. These changes dramatically reduced the amount of illegal dumping due to the convenience it created for the public.

A key to the elimination of illegal dumps throughout the county is public education. The public must be made aware of the adverse effects the waste will have on their surrounding environment. One method that can be used to educate the public of the environmental consequences of illegal dumping is through the Marengo County School System. Local officials can make presentations and students can be encouraged by teachers and school officials to take the necessary steps to protect the environment for the future. Other methods for public education can include signs throughout the county encouraging residents not to litter and organized clean-ups of dump sites in the county.

A second key is to provide all residences with house-to-house waste pick-up at affordable rates. Some residents who are forced to pay high fees for collection and must go out of their way to have the waste collected will often seek alternative ways to dispose of the waste such as illegal dumping or burning. Marengo County has accomplished this by contracting with Waste Management and having each municipality receive house-to-house collection of solid waste on a weekly basis. Marengo County must work to ensure these services continue and that fees residents are required to pay do not dramatically increase.

It is recommended that Marengo County continues its efforts throughout the ten-year period of this plan to eliminate all illegal dumps within the county. Providing enough manpower to adequately monitor all sites with law enforcement would be virtually impossible, however, all law enforcement throughout the county should be made aware of the location of these dumps and encouraged to periodically monitor them. Citizens of Marengo County, especially those living and owning property near the sites should also be encouraged to monitor the sites and report any illegal dumping to

appropriate authorities. The county should also consider implementing increased punitive fines for illegal dumping as a deterrent.

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VI. Solid Waste Agreements and Authorities

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.

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.

The Marengo County Solid Waste Department is directed by the Marengo County Commission. Municipalities within the county include the City of Demopolis, City of Linden, Town of Thomaston, Town of Providence, Town of Sweet Water, Town of Myrtlewood, Town of Faunsdale, and Town of Dayton. Faunsdale has an agreement with Uniontown for the collection of their solid waste. Sweetwater has an agreement with Waste Management for collection of their solid waste. Demopolis is currently in the process of renegotiating their contract with Waste Management. All other municipalities as well as Marengo County currently have agreements with Waste Management for house-to-house pick up. Data was not available for agreements between Waste Management and privately owned businesses and industries.

VII. 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.*

Recycling is an important step in developing an effective solid waste management plan for a community. Recycling programs can eliminate 25% to 50% of the waste generated by a community. Programs can consist of collection of materials for reuse, as well as composting of yard wastes. It is estimated that approximately 20% of the solid waste from a community is made up of yard wastes. Other recyclable wastes including plastics, paper and cardboard must be collected and transported to a facility capable of recycling the materials.

Recycling can be accomplished both at the source and at the point of disposal. Collection programs can be established to pick up recyclables at each residence, business, and institution with the resident having the responsibility to separate the items from other waste. Recycling centers can also be set up at one or more locations in the county, providing a location where recyclable wastes can be brought. In addition, recycling containers can be set up at all transfer stations and landfills to allow customers bringing wastes to these locations to participate in the program.

In addition to providing collection services, educational tools can be utilized to promote recycling activities. Local schools can be used to educate children on the importance of recycling for the protection of the environment. The recycling director for the county can visit each school within the county to educate the students on the importance of recycling and protecting the environment for the future. Public education methods can also be utilized by the county and local municipalities.

There are currently no recycling programs in Marengo County. As noted in the 2015 Plan, Alabama Act 89-824 recommends that each county develop a recycling plan to reduce waste volume by 25%. In order to meet the 25% goal, Marengo County should implement a county-wide plan and encourage participation for all local municipalities. A proposed plan of action for reaching this goal is described in Section VIII of this report.

VIII. Proposed Alternatives

In compiling the Solid Waste Management Plan for Marengo County, it is important to evaluate alternatives in order to ensure the county has the proper plans in place to adequately serve its resident's solid waste needs. Alternatives must be evaluated for solid waste collection, disposal, and recycling programs. An analysis must be made of the current system to determine any deficiencies and areas where the county can seek to improve. Several factors must be taken into account including the county's anticipated growth, their ability to meet current and future regulatory requirements, and their ability to provide quality service to the residents at affordable rates.

The first area that was analyzed was the collection of solid waste within the county. Currently, Waste Management collects the majority of solid waste generated within Marengo County on a contract basis. Waste Management charges the residents and participating municipalities in Marengo County with individual contracts a monthly fee for waste collections. Waste volumes collected from commercial businesses were not reported and therefore will not be considered in this plan.

One alternate for the collection of solid waste would be for the county and municipalities to collect waste at all residences and businesses. In order to accomplish this, a County-wide Solid Waste Authority would need to be established to oversee the collection services and aid the municipalities in all management aspects. Costs of the collection system would depend greatly on the location of the disposal facility. There is currently a transfer station within the county that helps to shorten haul distances for the individual trucks. This alternate would have the advantage of giving control of the system to the county and local governments for cost and quality control. One disadvantage to this alternate is the required initial investment to start the collection system.

A second alternate for collection of solid waste is to continue to contract with a private company. The current contract with the City of Demopolis expires on December 31, 2026. The current contract with the City of Linden expires on December 31, 2027. The current contract with rural Marengo County expires on October 31, 2027. The current contract with the Town of Sweetwater expires on March 31, 2028. The current contract with the Town of Thomaston expires on May 31, 2028. The county and municipalities can choose to continue with the same company or solicit bids from other companies for the services. An advantage to this alternate is that it puts the responsibility of operating the system including maintaining equipment and personnel on the private company. A disadvantage to this alternate is that it does not give the local governments control over the quality of service and costs to the residents.

The second area analyzed was the disposal location of solid waste generated from the county. Currently, all municipal solid waste generated in Marengo County is disposed on in the Pine Ridge landfill in Meridian, Mississippi. The landfill is owned and operated by Waste Management, Inc. Although the residents of Marengo County are not directly charged a tipping fee for disposal of waste, the cost is factored in to the fees paid for collection. Considering there are no C&D landfills in Marengo County, all construction and demolition wastes are disposed of individually by the customers.

One alternate for solid waste disposal is for Marengo County to construct a regional landfill in cooperation with adjoining counties and municipalities. Several standards must be evaluated in order to determine if the county or surrounding region would benefit from constructing a landfill. The existing and future solid waste management needs including planned developments must be evaluated. The new landfill must be sited based on proximity to major transportation arteries as well as proximity to major industries and municipalities that will generate large waste volumes. In

addition, all environmental, social and economic impacts must be analyzed to determine the effect the landfill would have.

In order to construct a regional landfill, a regional solid waste authority would need to be established, which would include parties from all interested counties. In addition, all municipalities within Marengo County would need to enter into an agreement with the authority and have representation to protect their interests. The regional authority would work together with the various counties and municipalities to determine the best possible location and size of the proposed landfill. The site selected by the previous authority, as well as additional sites would need to be evaluated to determine the best environmental and economic location. The authority would be required to ensure the landfill was designed and constructed according to all current EPA and ADEM standards. Any proposed site would need to be evaluated for potential environmental consequences and methods would need to be set in place to protect the surrounding air, water, and other natural resources.

In addition to the solid waste authority, the State SWMP recommends that a Citizens Solid Waste Advisory Committee be formed. The committee would be comprised of citizens throughout the county and all municipalities with concern for the future of Marengo County. This committee could aid the authority and county in locating a proposed landfill site by giving feedback as to the social and economic impacts the facility might have. This citizens committee could be formed by volunteers or appointed by each municipality and the county.

A second alternate to solid waste disposal is to continue utilizing the existing collection and disposal system. The county could continue to contract the collection through a private company and allow that company to dispose of the waste at an approved landfill site of their choosing. Currently, collection and disposal of most of the waste in Marengo County is handled by Waste Management. The problem that exists with this alternative is that the private company contracted would be a for-profit organization. This could cause the price per customer to be higher than that of a county operated system. In addition, the county would not have as much control as they would when operating their own collection and disposal system.

Without the participation of adjoining counties, it would not be economically feasible for Marengo County to construct and operate a landfill MSW facility. Marengo County currently generates approximately 6,400 tons per year of municipal solid waste. Projections show the county's waste decreasing to 6,123 tons per year by the year 2035. Given these figures, it is currently more economical for Marengo County to contract a private company for solid waste disposal. The possibility of a landfill facility in Marengo County should be reevaluated if there is a dramatic increase in waste generated or if other counties express interest in participating in the project.

The third area that was analyzed was the recycling program for Marengo County. There are currently no recycling programs within the county. Marengo County and all municipalities within the county would benefit greatly from a strong recycling program. An increase in recycled solid waste would decrease the waste that is currently disposed of in landfills and could ultimately decrease collection and disposal costs. In addition, recycling provides numerous environmental advantages for the residents of Marengo County. Well established recycling programs can eliminate up to 50% of solid waste that would otherwise occupy landfill space.

One alternate for Marengo County is to establish a county-wide recycling program. The county would hire a recycling director and staff to collect, separate and transport the material to the appropriate recycling centers. The county would purchase portable containers to be placed

throughout the county for use by all residents. In addition, a building would be needed to provide a central location for handling all recyclable materials.

In preliminary planning for a county-wide recycling plan, a general location for processing must be determined. The facility would need to be located in an area that is easily accessible to major transportation routes as well as centrally located to large industries. The major industries in Marengo County are spread between Demopolis and Linden and are all within 30 minutes of Demopolis. Since a large part of the county's population is also located within the city of Demopolis, and this area is bisected by highways 43 and 80 which provide access to larger metropolitan areas, it would make sense to locate the facility in this general area. It is also set at the confluence of Tombigbee River and the Black Warrior River with the Port of Demopolis located in the city. In addition to these factors, Marengo County must also consider the public safety, public health, social, and economic impacts the facility will have.

The proposed recycling program would need to be phased in by the county over a 3 to 5 year period. The county could start the program at a basic level and add locations and methods of collection each year. One possibility for the county is to start the program by contracting with a private company who would collect the materials at various points throughout the county and transport them to the appropriate recycling centers.

A second alternative for recycling is to implement a composting system. As mentioned in section VII, yard waste can account for as much as 20% of a community's total solid waste. By committing a portion of the total yard waste to recycling, Marengo County could easily reach the 25% goal. Composting can be achieved both on an individual and community-wide basis. Citizens and business owners can create small composts to handle grass clippings, leaves and small limbs. The county or municipalities can create more large-scale composts to be used by the citizens and city departments. Yard waste and tree debris could be collected by the municipalities or county, or could be transported to the compost site by the public. The compost material would result in dramatic landfill area savings and could ultimately be sold by the county.

IX. Economic Considerations

In order for Marengo County to choose the best alternatives for solid waste collection and disposal, all economic aspects must be considered. The county must work to provide the best possible service for all residents at affordable rates. As a part of this solid waste plan, economic factors are evaluated for collection, disposal, and recycling of solid waste. These factors, coupled with the environmental considerations noted throughout the report will form a composite basis for determining which options the county should pursue.

The first economic consideration is for the collection of solid waste in the county. Presently, the county and municipalities spend \$180,361.00 per month for weekly house-to-house pick up of the 6,712 households within the county. This is a significant increase from \$139,000.00 per month, which was the amount that county and municipalities paid per month in 2015. In order for the county to implement a collection service, estimates would need to be made for the required equipment, personnel, and management. Coordination would be required with each municipality to determine how collection in these areas would be handled. Due to the complexity of the issue, no cost estimates for a collection system were made as a part of this report. The county, however, should further explore this option and determine if it would benefit the residents economically.

The second economic consideration is for disposal of all solid waste. Currently, tipping fees are calculated into the amount that residents pay for solid waste collection. The cost per household for the construction of a regional landfill would depend greatly on the number of other counties participating in the landfill.

The third economic consideration is for a recycling program in Marengo County. Data from 2026 shows pricing for materials as \$70-\$120/ton for cardboard, \$80-\$85/ton for newspapers, \$0.76/lb. for aluminum, and \$0.10/lb for glass. To reach the 25% goal for recycling, the county would need to recycle approximately 1,600 tons per year. It is estimated that of that 1,600 tons, 40% or 640 tons would be yard waste, 30% or 480 tons would be cardboard, 15% or 240 tons would be newspapers, 3% or 48 tons would be magazines, and the remaining 12% or 192 tons would be glass and plastic.

X. Conclusions and Recommendations

Marengo County currently generates approximately 6,400 tons per year of solid waste. For design purposes, a value of 7,000 tons per year can be expected for the next 10-year period. The majority of all solid waste generated in the county is collected and disposed of by Waste Management on a contract basis. The total cost of collection and disposal for all solid waste in Marengo County is approximately \$180,361.00 per month. Solid waste is disposed of in the Pine Ridge Landfill located in Meridian, Mississippi.

Three aspects of the solid waste system were evaluated as a part of this plan. First, solid waste collection alternatives were presented including maintaining the current system with private collection and providing collection by the county or local municipality. Second, disposal alternatives were also discussed including utilizing private landfills and the possible construction of a regional landfill. Finally, recycling programs were analyzed and suggestions made to implement increased recycling and public education.

XI. Guidelines for Local Approval of New or Expanded Facilities

Section 22-27-47(b)(8): Provide 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.

The Marengo County Commission, as well as leaders from all municipalities within the county must evaluate the alternatives for solid waste collection, disposal and recycling and determine the best course of action to take over the next ten-year period. Several key factors must be used as guidelines for the leaders to use in making their determinations.

In evaluating alternatives for new or expanded facilities, including a county operated landfill and a recycling center, the commission must determine if the needs set forth in the Solid Waste Management Plan have been addressed. New or expanded facilities must be sized according to current and projected waste volumes to ensure they will meet economically the county's needs over the ten-year period. In analyzing alternatives for collection of waste, the county must evaluate the existing conditions including cost per customer and level of service in order to determine if changes should be made. Any proposed changes to the existing system must be consistent with the plan adopted by the county and municipalities.

In locating potential sites for solid waste facilities within the county, the commission must evaluate all existing and planned development and infrastructure. The commission should work closely with other agencies, including any industrial development boards and regional planning agencies to determine if other development has been planned in or around potential sites. Potential sites must also be evaluated for their proximity to existing industries that generate large volumes of waste.

Currently, the existing industries within Marengo County do not generate large quantities of solid waste that must be disposed of in a MSW landfill. Prior to determining the location of new sites, the commission must reevaluate these figures as well as determine any areas that are proposed for the development of industries. The commission should also consider the location of existing and proposed major transportation routes in locating the sites. Coordination should be made with local, state and federal transportation authorities to determine any potential conflicts and proposed routes.

Prior to constructing new facilities including a landfill, transfer station or recycling center, the commission must evaluate the potential impacts on the surrounding public health, public safety and the environment. The county must work closely with ADEM and EPA to determine the guidelines for construction and operating such facilities. Costs for providing these services should be included in the overall budgeting of new facilities to ensure sufficient funding is in place. Once a potential site is located, environmental impact studies should be performed to determine the possible impacts the facility will have. As a part of these studies, social and economic impacts of the proposed facility should also be evaluated. The proposed location should be found to have minimal impacts on the surrounding property values and social perception.

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

- Stormwater run-on/run-off
- Liners, if applicable
- Leachate collection systems, if applicable
- Gas monitoring systems, if applicable
- Daily cover of solid waste

Planning and Zoning are the principal means for the county to guide its future growth and achieve a logical pattern of land use and development for the county. 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 public health, safety, comfort, morals, and general welfare of the public and the community.

The Planning and Zoning Department or Commission 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.

The entire nation has been significantly affected by an economic downturn over the past several years. While slight economic growth is starting to occur, it is not expected to increase to the extent that would significantly impact solid waste management systems and remaining disposal capacities in the area during the life of this SWMP.

A solid waste facility or recycling facility will require certain public services at 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 are 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.

Even considering the information presented above, unforeseen circumstances during the next ten years may lead to the need for additional solid waste disposal or processing facilities in the County due to increased population or commercial development. The County may also wish to consider locating additional solid waste processing or disposal facilities within its jurisdiction due to host government benefits (i.e. fees, taxes, etc.) that would be received from these types of facilities.

XII. Public Participation

Marengo County must seek to involve the public in the approval of this Solid Waste Management Plan. A copy of the draft plan was made available at the Commission's office for public review. There was a 30 day review period where public comment regarding the plan was accepted. A public hearing was set for XX.XX.XXXX and held in the Marengo County Courthouse. A copy of the draft plan was also sent to all municipalities within the county for their review and comments. All information received from the municipalities was evaluated by GMC, and incorporated into the final plan. The municipalities will be encouraged to pass a resolution in support of the plan and adhere to the recommendations in any future changes in handling their solid waste.

The public should also be involved in any changes to the existing solid waste management and collection system including collection contracts, siting of landfills, and proposed changes in recycling. One possible way this can be accomplished is by the development of a Citizens Solid Waste Advisory Committee. Although the ultimate decision to make changes to the system would remain with the Marengo County Commission, the advisory committee would be allowed to make recommendations and aid the county in evaluating alternatives. The committee would be made up of citizens from all municipalities and rural areas within the county. The committee would be responsible for organizing additional public hearings and should be made aware of all proceedings before changes are made.

XIII. 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.

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 includes 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. This Plan is in compliance with RCRA, 42 U.S.C. § 6941.

All eight (8) municipalities in Marengo County require mandatory residential solid waste collection for households in their jurisdiction and, several of these municipalities have a contract with a private solid waste collection agency for these services. In addition, the Marengo County Commission provides household solid waste collection services in the unincorporated parts of the county through a contract with a private solid waste collection agency. All municipal solid waste collected is disposed of in an MSW landfill that has been designed in accordance with Subtitle D regulations.

XIV. References

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